सत्यमेव जयते

State Initiatives on
PATIENT SUPPORT SYSTEMS FOR TB ELIMINATION IN INDIA

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Pura course | Pakka ilaaj

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Foreword

TB in India has witnessed immense traction in the public health space in recent years. The Government of India announced the 2015 TB elimination target, following which the National Strategic Plan 2017-25 (NSP) was launched in 2017. Apart from rejuvenating the stamina of the program, the NSP addresses a crucial aspect of disease control and elimination– patient needs. In this context, the RNTCP has introduced the Nikshay Poshan Yojana, a step towards recognizing and catering to a patient's socio-economic circumstances while undergoing treatment.

TB has multi-faceted social determinants and implications that call for robust and holistic elimination strategies. The disproportionate burden of TB among the poor, its co-morbidity with undernutrition, HIV/AIDS and the exorbitant socio-economic suffering accompanying the disease makes intra-sectoral commitment and inter-sectoral action indispensable. Apart from unwavering strategic commitment to the program, we must continuously exchange regional and state based experiences, and build upon our learnings.

This report on 'State Initiatives on Patient Support Systems for TB Elimination in India' provides findings and recommendations from state-based initiatives on patient support systems (PSS) including nutrition support, economic support in cash or kind and psycho-social support. It provides learnings that States can adopt to introduce or scale-up existing patient support systems. Further, the documentation indicates the criticality of inter-sectoral coordination in the implementation of these support forms.

Through the release of this report, I take the opportunity to urge everyone to strengthen and unite their efforts for achieving a TB-free India by 2025. The efforts will surely provide spill-over benefits for all programs as ultimately, health is intrinsically linked with other sectors.

I believe that with collective efforts across sectors and accountability, India will defeat TB. Let us capitalize on this opportune moment to build upon each other's learnings and steadily move towards creating a healthy nation.

(Sanjeeva Kumar)

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Message

In India, Tuberculosis is the biggest public health challenge. Even as the number of deaths due to be TB has reduced from 480,000 in 2015 to 423, 000 in 2016, there are still estimated 2.8 million new infections occurring annually in India. Cases of Multi-Drug Resistant Tuberculosis (MDR-TB) have increased from 130,000 in 2015 to 147,000 in 2016. As the challenges posed by the disease continue to mutate and evolve, our response to the TB must also be more innovative.

The National Strategic Plan 2017-25 (NSP) for elimination of TB envisions a *TB-free India with zero deaths, disease and poverty due to TB* - an ambitious and achievable goal complemented by a well-rounded strategy that not only expands the medical interventions and services, but for the first time, addresses the social, economic and psychological circumstances associated with the disease.

Tuberculosis has serious social and economic implications on patients and is five times more common among the economically weaker population as compared to the other section of society. The NSP has proposed the introduction of Patient Support Systems (PSS) to limit and eliminate out-of-pocket expenditure during the treatment period with the provision of economic incentives to support a patient's nutritional needs and create linkages to other social welfare programs. The NSP emphasizes the importance of counseling and community based support.

In April 2018, the *Nikshay Poshan Yojana* was launched for distribution of incentives for nutritional support to TB patients via Direct Benefit Transfer (DBT). The scheme will provide nutritional support to all notified TB patients registered on the NIKSHAY portal at the rate of Rs. 500 per month for the entire duration of their treatment. The program has always strived to build on its learning and introduction of patient support systems is no different. This report on "State Initiatives on Patient Support Systems for TB Elimination in India" is a documentation of such initiatives across 16 States and has been compiled with the aim of giving the program a ready reckoner for introducing, strengthening and scaling up of patient support system as an intrinsic part of TB programming.

I am certain States will use the evidence collected from across the country to strengthen their programs and patient support systems, and increase adherence to TB treatment. This will help achieve the overarching goal of a TB free India by 2025.

15 June, 2018

(Vikas Sheel – JS RNTCP)

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Message

Hon'ble Prime Minister Shri Narendra Modi ji has committed to Ending TB by 2025, five years ahead of the Sustainable Developments Goals (SDGs). To operationalize this vision, in 2017 the Government put forth its highest-ever budget towards TB elimination efforts. The National Strategic Plan (NSP) 2017-25 provided vision and vigor to the Revised National Tuberculosis Control Program (RNTCP). The program recognizes the relevance of individual patient contexts and places their socio-economic, emotional and physical needs at the heart of TB programming.

To materialize our commitment to serving patient needs and circumstances, the Government of India has announced a budget allocation of ₹600 crore under the Nikshay Poshan Yojana. The scheme was launched in April 2018 with the objective of distributing incentives for nutrition support to TB patients. The benefits of the scheme, which covers all TB patients across the country, will be delivered by way of a DBT based incentive of ₹500 per patient per month for the duration of treatment. The NSP envisages improving detection and treatment rates on the path to eliminating TB. Confronting the socio-economic determinants that allow TB to persist and thrive, such as undernutrition, poverty and social stigma, is pivotal in progressing towards this target by 2025.

Our 'patient centric' endeavor will need participation from other health and development programmes such as non communicable disease, nutrition, and urban planning as well as inter-ministerial support. The cross sectoral support will ensure that challenges in eliminating TB can be addressed in a comprehensive manner. This report documents ongoing patient support initiatives across sixteen States in India. It is a compendium of learnings, which must be sustained, strengthened and built upon.

We are grateful for the inputs provided by State/District TB Officers that supported the compilation of this report. I trust that State officers, other departments as well as development partners will come together to use this report as a guiding step in introducing and scaling up patient support systems.

(Dr. K S Sachdeva)

Contents

List of Abbreviations

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activists
AWW	Anganwadi Worker
BMI	Body Mass Index
BPL	Below Poverty Line
CGMSC	Chhattisgarh Medical Services Corporation
CTD	Central TB Division
DBT	Direct Benefit Transfer
DFY	Doctors For You
DOTS	Directly Observed Treatment, Short Course
DTC	District TB Centre
EBC	Economically Backward Classes
EDA	Economic Development Assistance
ICDS	Integrated Child Development Services
IEC	Information, Education and Communication
JSS	Jan Swasthya Sahyog
MDR	Multi Drug Resistant
MOHFW	Ministry of Health and Family Welfare
MPHW	Multipurpose Health Worker
MSBY	Mukhyamantri Swasthya Bima Yojana
MSRTC	Maharashtra State Road Transport Corporation
NGO	Non-governmental Organization
NHM	National Health Mission
NRC	Nutrition Rehabilitation Centres
NSP	National Strategic Plan

OBC	Other Backward Classes
PDS	Public Distribution System
PHC	Primary Health Centre
PIP	Programme Implementation Plans
PMDT	Programmatic Management of Drug resistant Tuberculosis
PPM	Public Private Mix
PRI	Panchayati Raj Institutions
PSS	Patient Support System
RNTCP	Revised National Tuberculosis Control Programme
RSBY	Rashtriya Swasthya Bima Yojna
RTGS	Real Time Gross Settlement
SC	Scheduled Caste
SDG	Sustainable Development Goal
SEBC	Socially and Educationally Backward Classes
SHG	Self-help Group
ST	Scheduled Tribe
STC	State TB Cell
STO	State TB Officer
STS	Senior Treatment Supervisor
TB	Tuberculosis
TBHV	TB Health Volunteer
THALI	Tuberculosis Health Action Learning Initiative
TSG	Treatment Support Group
TU	Tuberculosis Unit
UHC	Universal Health Coverage
WHO	World Health Organization

Executive Summary

For centuries now, Tuberculosis (TB) has been plaguing the health of individuals all around the world. In 2016, TB affected over 1 crore people and claimed 17 lakh lives globally.[1] India alone shoulders a quarter of this global TB burden, with 28 lakh active infections and 423,000 deaths occurring annually.[2] Most of these deaths can be prevented through early diagnosis and adequate treatment.[3]

The adverse physical impact of TB is accompanied by serious social and economic implications for patients, a fact that is best propounded in the bidirectional relationship between poverty, undernutrition, and TB. The disease is five times more common among economically weaker populations, whose physical, economic, and social marginalization causes conditions conducive for the disease to thrive and act as barrier to treatment completion. The debilitating battle against TB often forces patients out of employment. The ensuing wage loss combined with direct and indirect costs of treatment drive households into poverty. A compromised nutritional status increases susceptibility to the disease, delays recovery, and can even contribute to death among TB patients. TB, in turn, reduces appetite and induces wasting among patients. Malnourishment in TB patients doubles the likelihood of death due to the disease.[4]

Strategies for eliminating TB successfully should actively address these socio-economic determinants and consequences of the disease. To accelerate the decline of TB we need to adopt a holistic, patient centric approach that takes into account patients' economic, social, physiological and emotional needs.

In this context, the National Strategic Plan 2017-25 (NSP), shaped by WHO's End TB Strategy and the Sustainable Development Goals (SDGs) agenda framework, blends

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[1] *Global Tuberculosis Report, WHO, 2017*

[2] *Global Tuberculosis Report, WHO, 2017*

[3] *Global Tuberculosis Report, WHO, 2017*

[4] *Bhargava A., Chatterjee M., Jain Y., Chatterjee B., Kataria A., Bhargava M., et al. (2013). Nutritional status of adult patients with pulmonary tuberculosis in rural Central India and its association with mortality. PLoS One. Retrieved from*

health and social interventions.[5,6] In addition to advancing existing programme components (case detection, diagnostics, drugs), the NSP introduced new strategies for TB programming in India. Patient Support Systems (PSS) are envisaged to support patients during the treatment period with the provision of incentives, nutrition support as well as creating linkages to other social welfare programmes.

This vision and strategy of PSS, as proposed in the NSP, aligns well with the growing commitment towards advancing Universal Health Coverage (UHC) in India. PSS aims to decrease the financial burden on patients resulting from catastrophic treatment costs and, at the same time, improve treatment adherence and disease outcomes. In this manner, it embodies the UHC approach to ensure that affordable, high quality health care is available and accessible for all those in need across socio-economic strata and geographical locations.[6,7]

Sixteen states – Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Himachal Pradesh, Jharkhand, Kerala, Maharashtra, Meghalaya, Madhya Pradesh, Punjab, Tamil Nadu, and Telangana – were found to have already been implementing some form of PSS. In-person and telephonic interviews with State TB Officers were conducted to collate information on these ongoing patient support initiatives. The findings and recommendations drafted in this report have been derived based on this information. Interviews were also conducted with 83 patients across 15 states to incorporate beneficiary perspective on the PSS models under study.

States striving to successfully introduce or strengthen PSS can take guidance from the state based initiatives that were synthesized into findings and recommendations.

Findings

Nutrition support

Fourteen out of the 16 documented states provide supplementary nutrition to TB patients. Nutrition support is aimed at supplementing patients' nutritional needs through the inclusion of calorie-dense, nutrient-rich items in different types of food based assistance. Thirteen states provide nutrition support in the form of dry ration given as monthly food kits. As awareness about the entitlements increases, patients are more likely to visit health facilities to inquire about the food packages. This offers a window of opportunity to counsel patients on the importance of nutrition uptake, measure weights and assess treatment adherence. Further, it allows for follow up with patients to monitor and ensure treatment completion. Patients have expressed a 'feel good factor' when consuming items that are otherwise out of their reach such as eggs, milk powder, peanuts, and soya bean oil.

Nutrition support across the 14 states was predominantly targeted at drug-resistant (DR) TB patients (in Assam, Bihar, Himachal Pradesh, Jharkhand, Madhya Pradesh, Punjab, Tamil Nadu and Telangana) and patients from low income groups (in Jharkhand, Kerala Madhya Pradesh, Meghalaya, Telangana and Tamil Nadu). Chhattisgarh has been a pioneer in introducing nutrition support for all TB patients across the state. Eleven of the 14 states providing nutrition receive support

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[5] *Central TB Division, MoHFW. (2017). National Strategic Plan for Tuberculosis Elimination 2017-25. New Delhi: Ministry of Health and Family Welfare.*

[6] *WHO. (2015). Implementing the end TB strategy: the essentials. Retrieved from WHO: http://www.who.int/tb/publications/2015/end_tb_essential.pdf?ua=1*

[7] *Health and Healthcare. (2013). Delhi Human Development report 2013. Retrieved from http: delhi.gov.in/wps/wcm/connect/cea5b0004110b01d9849f9136af5079a/04+chap+04.pdf?MOD=AJPERES&lmod=277504148&CACHEID=cea5b0004110b01d9849f9136af5079a*

from external agencies. Support from external sources tends to be limited to a specific number of beneficiaries and regions, as they are available for a shorter duration, with limited funds. External support, by way of funds and manpower, allows STCs to retain focus on the programme's core pillars of case finding, diagnostics and treatment and not become preoccupied with supply chain management. For instance, NGOs in Meghalaya, Madhya Pradesh, Tamil Nadu and Telangana procure and deliver the food supply. Owing to the success of NGO run projects, the State TB Cell in Telangana is considering the expansion of nutrition support to the entire state.

Through this process, the NGOs can interact with beneficiaries and can devote attention to observing practices and challenges or raising awareness on the importance of adequate nutrition and treatment uptake. In the remaining states that run initiatives sans external support, the state RNTCP machinery holds the responsibility for the procurement and distribution of food. In some instances, states leverage linkages with existing government schemes for the purpose of providing nutrition support. Telangana utilizes the Integrated Child Development Service (ICDS) scheme to provide double ration to children below the age of six years suffering from TB. Similarly, Punjab is on the path to linking DR-TB patients with enhanced ration through Public Distribution System (PDS), under the *Antyodaya Anna Yojana* (AAY).[8]

While cash support via Direct Benefit Transfer (DBT) is proposed under the NSP, states have expressed a preference for in-kind nutrition support, due to an existing concern about whether the beneficiary will use this monetary assistance toward nutrition. While cash transfers are believed to be the most feasible intervention, further evidence is needed on its efficacy and impact.

Links with other social welfare schemes

Support under existing social welfare schemes targets socially and economically weaker populations. For instance, Chhattisgarh has been attempting to reduce high treatment costs by providing special Multi-drug Resistant (MDR) TB packages under *Rashtriya Swasthya Bima Yojana* (RSBY) and *Mukhyamantri Swasthya Bima Yojana* (MSBY). This covers costs for inpatient care within the overall insurance cover of ₹50,000 per family per annum.[9,10] On the other hand, Gujarat, Jharkhand, Kerala, and Tamil Nadu link patients to state based welfare schemes that provide regular monetary support.

Gujarat's Social Welfare Benefit Scheme provides ₹500 per patient per month to those belonging to socially and economically marginalized backgrounds (SC, ST, OBC among others) for the entire duration of treatment (~six months). Jharkhand too provides support to patients from marginalized socio-economic groups through provision of ₹10,000 per patient. In Kerala, a pension plan of a monthly sum of ₹1,000 is provided to all TB patients with an annual family income below ₹1,00,000, being treated at a government facility. The Chief Minister's Uzhavar Pathukappu Thittam (UPT) scheme in Tamil Nadu provides a monthly pension of ₹1,000 to small and marginal farmers, inland fisherman, and plantation labourers aged 18-65 years suffering from TB.

Maharashtra provides economic assistance to patients in the form of travel cost waivers. TB patients availing treatment at government health facilities are entitled to free travel in buses operated by the Maharashtra State

[8] *Launched in 2000, Antyodaya Anna Yojana (AAY) is a central scheme that provides ration to poorest of poor families at highly subsidized rates. In Punjab, the linkage with AAY is scheduled to be implemented in early 2018.*

[9] *While RSBY covers beneficiaries belonging to BPL families, MSBY extends coverage to each and every member of the population.*

[10] *As of October 2017, the RSBY/MSBY package of ₹30,000 per family per annum has been revised to ₹50,000 per family per annum.*

Road Transport Corporation (MSRTC). Between 2014 and 2017, 27,945 TB patients have benefitted under this initiative with a total waiver of ₹11,82,970.[11]

Economic assistance in-kind

Recognizing the financial difficulties TB-affected families incur, Kerala, Maharashtra, Tamil Nadu, and Telangana provide economic assistance in the form of in-kind support. District TB Cells in Trivandrum and Wayanad districts in Kerala have initiated housing support for TB patients. The Arubah Project in Telangana provides Economic Development Assistance (EDA) to TB patients unable to re-join work post treatment, owing to physical weakness. EDA is given in the form of vocational training, livestock, and payment of school tuitions, among others. Similarly, in Tamil Nadu, patients from low-income families receive dry rations through linkages with local Rotary and Lion Clubs.

Psycho-social support

Psycho-social factors include stigma, social discrimination, and low awareness, as well as treatment interrupters and naysayers in the community who hinder treatment-seeking behaviour and treatment completion. It was observed that community based groups are created to undertake mobilization activities to address the negative psycho-social implications of TB. The groups typically comprise of PRI members, AWWs, ASHAs, and TB Health Visitors among others. Apart from linking the patient to available nutrition and economic support, these groups serve the crucial role of providing counselling support, monitoring treatment adherence and improvements.

While no state exclusively focuses on establishing community based groups, such initiatives have shown impact on treatment uptake and completion. Patient support models in Assam, Chhattisgarh, Kerala, Tamil Nadu, and Telangana have elements of counselling and community mobilization. Community based "TB Care Groups" are formed under the Aruba Project (World Vision). Consisting of women, SHGs, AWWs, ASHA and Panchayat members, the groups come together periodically to discuss messaging for raising awareness and share status of TB patients in the community. Project Axshya in Telangana provides home-based counselling to MDR-TB patients, touching upon social stigma, depression, side-effect management and treatment adherence. Field staff also sensitizes households on their entitlements and linkages to applicable social welfare schemes.

Cured TB patients participate in community mobilization and sensitization activities. In Assam and Telangana, cured individuals serve as champions for treatment uptake by sharing their experiences and challenges with other TB patients. District TB Centres in select districts of Assam organize advocacy meetings at the community level. Further, the STO undertakes efforts in larger cities to encourage TB patients to join as DOTS providers. Similarly, the State TB programme in Chhattisgarh employs cured TB patients as "Axshya Saathis", encouraging them to share their stories at the time of food disbursement.

The active participation of local governance also plays a crucial role in forming an enabling environment for treatment uptake. Select districts in Kerala have established local Treatment Support Groups (TSGs), which are chaired by the Gram Panchayat President or local opinion leader, and consist of volunteers. The groups support TB patients that find it challenging to continue treatment for various reasons. Patients are connected to counselling

[11] *The government is exploring the possibility of providing these services via DBT to ensure greater transparency.*

services, food support, pension assistance and travel support as needed. Once cured, the supported beneficiary becomes a TSG member. The success of TSGs is reflected in the reduction of loss to follow up, which has also prompted the scaling up of TSGs to all districts in Kerala.

Target beneficiaries

Eight of the 16 documented states provide support exclusively to DR-TB patients. Support is largely targeted towards the socially and economically weaker sections including below poverty line patients, and marginalized communities such as Scheduled Tribes, Scheduled Castes and Other Backward Classes. While all TB patients need to be supported with adequate socio-economic assistance, targeting PSS towards those most in need (DR-TB patients or BPL) allows the STC to advance equity in terms of improved access to services and safeguard better treatment outcomes. Children are at risk of contracting TB from an affected parent and subsequently withdraw from studies and employment owing to weakness. Telangana was the only state in our study with a support initiative for young TB patients (double ration under ICDS).

Resource requirements

Of the 16 states documented, Chhattisgarh, Himachal Pradesh and Maharashtra run patient support mechanisms sans external fund support. In FY 2017-18, the Government of Chhattisgarh earmarked ₹12 crores for the *Mukhyamantri Kshay Poshan Yojana*. The same amount will be earmarked in FY 2018-19 as well. In Himachal Pradesh, the nutrition initiative is supported by financial aid from the state government funds. In Maharashtra, the waiver of travel costs is implemented by way of the Department of Public Health reimbursing MSRTC for the expense.

With regard to states that rely on external funding sources, the type of services provided is diverse. However, such support is provided for a shorter period and with limited funding. These limitations raise questions about the sustainability of such initiatives.

Monitoring and evaluation

No structured monitoring mechanism was observed as part of the study. But all documented states providing nutrition support measure the weight of patients during food package distribution and interact with beneficiaries during collection of food or home visits. Assam, Jharkhand, and Telangana are the only states that employ some form of regular mechanisms to measure progress and monitor outcomes.

In the absence of structured monitoring mechanisms, the efficacy and impact of various initiatives is inferred largely through field staff observations. For instance, under the UPT scheme in Tamil Nadu, the Senior TB Supervisor and TB Coordinator conduct home visits to investigate whether the provided funds are being used for TB-associated expenses. Their feedback is submitted to the DTO and then shared with the District Collector. This limited form of feedback does not allow for conclusive linkages between the support provided and the outcomes observed.

Recommendations

The above findings across various thematic areas of support allowed us to arrive at a set of action oriented recommendations that are meant to drive conversation around setting up and strengthening patient support systems across the country.

1. **Make nutrition support an integral part of patient's therapy:** The provision of nutrition support can bring down mortality rates and unfavourable outcomes. In light of the available state experiences in implementing supplementary nutrition-based support, the proposed DBT support

must be complemented by in-kind food provision. Disbursement of food packages at a health facility provide an opportunity for interaction with the patient as well as a chance to counsel and follow up on treatment. Food baskets must be designed as per available guidelines, keeping in mind the local tastes as well as supply chain management. Service delivery can be assigned to a relevant government department or implemented with external support. Local NGOs and CBOs would be of assistance in service delivery and in improving awareness on entitlements and preventive behaviours among beneficiaries. Over time, budgetary allocation towards in-kind nutrition support should also increase so that benefits can be extended to all TB patients. A monitoring and evaluation mechanism should be put in place to track progress and understand the success of DBT vs. in-kind support.

2. **Provide economic support in various forms during and after treatment:** As the economic implications of TB are catastrophic and long-term, addressing the socio-economic determinants of the disease among the poor is crucial for breaking the cycle of poverty and disease. As proposed by the NSP, patients should be linked to existing social welfare schemes, wherever applicable, that will be facilitated through inter-departmental linkages. Patients must be counselled to use economic assistance towards treatment costs and general wellbeing only. Handholding by relevant authorities is necessary in cases where beneficiaries do not possess Aadhaar cards or bank accounts. State TB Offices and the Department of Revenue are encouraged to communicate regularly to ensure the timely disbursal of monetary support. All diagnostics and inpatient care for TB patients should be addressed under the RSBY/NHPS as well as state-based insurance support wherever available. Support should be extended to cover outpatient care as well. Apart from support during treatment, post treatment linkages with programmes that re-integrate patients into the workforce should be explored. Lastly, efforts must be made to create greater awareness on available entitlements.

3. **Integrate psycho-social support as key component of patient support:** At the community level, psycho-social support must be provided to counter the ill effects of social stigma and discrimination and alter perceptions about TB. Guidelines must be developed for IEC and BCC activities that ensure optimal messaging. BCC campaigns must be launched aligning with the guidelines to address the prevailing perceptions at the individual and community level. Counselling for TB-affected households must be a core component of models to help cope with their emotional needs and boost morale. Drawing on the success of TSG in Kerala, creation of such groups must be facilitated across all states. Cured TB patients should be encouraged to share their treatment experiences with the community. Simultaneously, adequate attention should be paid to prevent contagion. Strengthening and engaging local governance is necessary for addressing knowledge gaps, raising awareness and dispelling misconceptions about the disease.

4. **Foster cross sectoral ownership of patient support systems to ensure success of the initiative:** Given the interdependence of TB on poverty, malnutrition, sanitization, and urbanization, it is crucial to consider the often-neglected factors that fall outside the purview of the health department. State TB Forum and District TB Forum should be constituted to gather Members of the Legislative Assembly

(MLAs), policy makers, civil society representatives, District Magistrates, Chief Medical Officers and community-based organizations to unite efforts towards efficient prevention, care and elimination of the disease. Relevant Ministries and corresponding state departments must co-own different components of patient support. State-based consultations can be organized to discuss the roles and responsibilities of respective departments. Collaborations between State TB Programme representatives, development partners and NGOs can unite efforts to eliminate TB.

5. **Set up and implement patient support systems in an outcome oriented manner:** The Union Budget 2018-2019, for the first time, laid out an Output-Outcome monitoring framework.[12] A structured monitoring and evaluation framework is needed to ensure a causative link between patient support systems and improved treatment outcomes. A log frame for PSS under RNTCP that clearly marks the target outputs and outcomes for each form of support is recommended in this regard. Further, programmatic evaluations will be integral in identifying and overcoming any inefficiencies.

[12] *Ministry of Finance. (2018, February). Output Outcome Framework for Schemes 2018-19. Retrieved from India Budget: http://www.indiabudget.gov.in/OutcomeBudgetE2018_2019.pdf*

Patient Support Systems: Moving from Evidence to Policy to Practice

Despite being curable, Tuberculosis (TB) is one of the top ten causes of death worldwide. A quarter of the global TB burden is in India, with 28 lakh new cases emerging each year.[13] Adding to these alarming numbers is drug-resistant (DR) TB – a form of the disease which does not respond to first-line TB drugs, making treatment more expensive and challenging, and less likely to succeed. It is estimated that 1.47 lakh new drug-resistant cases emerge in India each year. However, most TB deaths could be prevented by early diagnosis and adequate treatment.

TB has a bidirectional relationship with poverty and undernutrition

Few diseases better underline the relationship between health and wealth than TB. While it cuts across social classes, TB is five times more common among the economically weaker population.[14] Crowded housing, indoor air pollution and poor sanitation offer ideal conditions for the disease to thrive; they also act as barriers to treatment completion. Undernutrition is another risk factor as it weakens immunity, aggravates the severity of the disease, and reduces an individual's response to the treatment, thereby delaying recovery. The link between the two are undeniable – data shows that undernourishment doubles fatalities linked with TB.[15]

Apart from being more common among the poor, TB also drives people to poverty. It has been found to disproportionately affect people in the most productive years of their life (15-59 years) and reduce their yearly incomes by as much as 50%.[16] Further, with less than 20% of individuals protected by insurance, treatment costs rob individuals of ~40% of their household income.[17] This double burden of wage loss and increased health costs, threatens the financial stability of millions each year.

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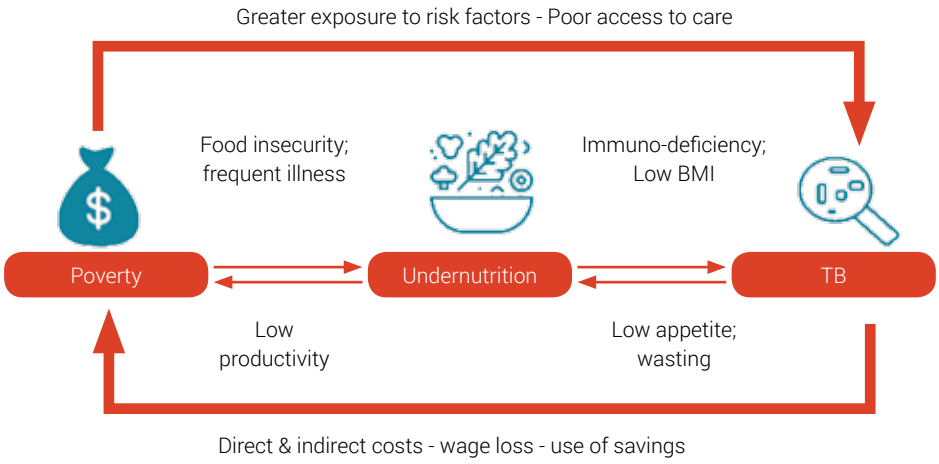
[13] *Global Tuberculosis Report, WHO, 2017*

[14] *Oxlade and Murray (2012). Tuberculosis and Poverty: Why Are the Poor at Greater Risk in India? PLoS One.*

[15] *Bhargava A., Chatterjee M., Jain Y., Chatterjee B., Kataria A., Bhargava M., et al. (2013). Nutritional status of adult patients with pulmonary tuberculosis in rural Central India and its association with mortality. PLoS One. Retrieved from http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0077979*

[16] *Tanimura T., Jaramillo E., Weil D., Raviglione M., Lönnroth K., (2014). Financial burden for tuberculosis patients in low- and middle-income countries: a systematic review. European Respiratory Journal. 43: 1763-1775. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24525439*

[17] *Muniyandi M., (2016). Controlling Tuberculosis: An Economic Perspective Social Science Spectrum, 2(1). Retrieved from http://www.socialspectrum.in/index.php/sp/article/view/55/46*



A poor & malnourished patient is less likely to respond to treatment and has a greater chance of relapse

Therefore, TB elimination strategies cannot stop at the mass delivery of medicine. Diagnosis and care must be complemented by patient-support mechanisms that provide nutrition, ameliorate catastrophic costs, and create an enabling environment for treatment completion. A patient who does not have to worry about treatment expenses, foregone income and stress is more likely to complete treatment and be cured.

Patient Support Systems: A safety net that can break the cycle of poverty and disease

In this regard, the 'National Strategic Plan (NSP) for TB Elimination (2017-25)' has proposed Patient Support Systems, to address a patient's needs, reduce out-of-pocket costs, improve nutrition levels, and help patients cope with the stress and stigma that accompany this disease. Specifically, the NSP is initiating a cash transfer based patient support system through which TB patients will be entitled to ₹500 Direct Benefit Transfer (DBT) per month for nutrition support over the course of treatment, and an additional monthly incentive of ₹500 for treatment completion. The NSP encourages states to develop linkages with other programmes such as the Public Distribution System (PDS) and the Nutrition Rehabilitation Centres (NRCs) for enhanced nutrition support. The NSP also recommends other support mechanisms such as frequent counselling by a health worker or community volunteer, screening for adverse reactions to the treatment regimen and regular laboratory investigations to assess recovery levels.

In their individual capacities, several states are already implementing various forms of patient support systems. While they differ in approach, scope, and reach, all the initiatives are aimed at mitigating the effect of socio-economic risk factors (such as undernutrition, poverty and social stigma) on TB outcomes.

For the first time the NSP has placed patients at the centre of their endeavour to eliminate TB, by focusing on the physical, mental, and economic wellbeing of individuals – a landmark opportunity which cannot go unmarked. Building upon the state learnings, we need to ensure that every TB patient in India is provided with holistic care, regardless of their social and economic status.

The convergence of India's two visions: TB elimination and UHC

In many ways, the use of patient support mechanisms to eliminate TB aligns well with India's priority of steadily expanding Universal Health Coverage (UHC) to the entire population. UHC envisages that affordable, high quality health care is available and accessible for all those in need, irrespective of who they are, where they stay and how much money they have. The widespread proclivity of this disease to disproportionately affect the poor, and the tendency to push people into poverty due to high treatment costs and loss in income, make TB an ideal case on the need to provide UHC.

There are two primary reasons why patient support mechanisms should be considered as the building blocks for UHC. Addressing the socio-economic determinants, enablers and implications of TB, especially among underserved and vulnerable populations, is integral to closing gaps in reaching the most marginalized – a key benchmark of progress against UHC. Further, providing financial risk protection to ensure patients are not pushed into poverty due to high healthcare costs contributes significantly to breaking the cycle of illness and poverty, another key benchmark of progress against UHC.

Such a holistic 'patient-centric approach' to tackle TB in India will serve as a microcosm of the government's broader strategy to attaining UHC. **If India implements this approach successfully, it will be a critical and meaningful step toward UHC.**

Objectives of this Report

While the NSP is committed to introducing patient support systems, there is no overarching mechanism in place yet. This report documents ongoing state-based initiatives on the various patient support components as mentioned in the NSP, to inform the implementation of a holistic patient support system. Specifically, the objectives of this report are to:

- Capture ongoing patient support models at the state level, specifically with respect to nutrition support, economic assistance, psycho-social support, and auxiliary support.
- Synthesize learnings on the prominent features of existing models, and identifying what can be replicated or, conversely, prevented in future efforts.
- Present a set of tangible, action-oriented recommendations for introducing and strengthening TB patient support systems across the country.

Structure of the report

The **introduction** lays out the context, including the alarming TB burden in India and the need for patient support systems to address the socio-economic factors that impact TB outcomes. This is followed by a discussion on the patient-centric approach proposed by NSP 2017-25 and the objectives for this report.

The **methodology** describes the approach and process followed in creating this report. It lays out the set of activities undertaken to map the various state models of patient support and inform recommendations.

The **overview of patient support systems** presents a bird's-eye view of the various forms of ongoing support being implemented by sixteen states in India.[18] The matrix tabulates state-based PSS across key parameters, presenting key highlights from each model.

[18] *States documented: Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Himachal Pradesh, Jharkhand, Kerala, Maharashtra, Meghalaya, Madhya Pradesh, Punjab, Tamil Nadu and Telangana.*

The **findings** constitute observations and lessons based on opportunities and challenges faced by states in implementing ongoing initiatives, as well as on patient perspectives and experiences on the support being provided to them. These findings are presented under the following components accompanied by applicable state examples:

I. Nutrition support
II. Links with other social welfare schemes
III. Psycho-social support
IV. Economic assistance in kind
V. Target beneficiaries
VI. Resource requirements
VII. Monitoring and evaluation

The **recommendations** are intended to provide policymakers with key considerations and viable takeaways to set up or improve PSS in an efficient and sustainable manner. These recommendations draw upon the findings and are presented across the same thematic areas.

Lastly, the **state snapshots** provide in-depth representation of ongoing patient support systems being implemented across the sixteen states.

Methodology

This report is based on **desk research** and **stakeholder interviews,** and supplemented by **institutional knowledge** acquired over the years. **Standardized templates** were prepared and shared with each State TB Cell (STC) to **gather information on the ongoing patient support mechanisms**. Sixteen STCs reverted with responses on the template, which served as a starting point for documenting the initiatives and drafting the findings in this report.

Desk research and information received via these templates was supplemented and validated through **stakeholder interviews** conducted in-person as well as telephonically. **State visits** to Chhattisgarh, Telangana and Kerala allowed a deeper understanding of implementation mechanisms, scope, coverage, successes, and operational challenges. Additionally, **interviews with patients were conducted by the STCs** to capture patients' perspective and experience vis-à-vis the support being provided to them. A total of 83 patients were interviewed across fifteen states (Annexure 3).[19]

Research and analysis for this report concluded by March 31, 2018, prior to the introduction of **Nikshay Poshan Yojana.** The implementation and uptake of the scheme is, therefore, beyond the scope of this report. The draft report was shared with STCs from all 16 states under study for review and validation. A USAID workshop on "Enabling nutrition support for patients with Tuberculosis" held on April 14, 2018, served as a platform to present and discuss the study findings. Feedback received from participants at this workshop has been used to refine and enrich this report. The findings and recommendations from this report were subsequently presented to Deputy Director General (DDG) – TB, Dr. Sunil Khaparde, before finalization.

Limitations

While a number of states in the country are implementing various forms of patient support mechanisms for TB patients, few have a mature monitoring and evaluation system in place to track outcomes and impact, or understand programmatic inefficiencies.

Further, the majority of these initiatives, being at a nascent stage, have little documentation of their activities and progress, in some cases. Due to time constraints, stakeholder interviews were conducted with select State TB Officers.

[19] *Please note: Patient responses were transcribed in English directly. Quotes presented in this documented have been extracted and fine-tuned from the documentation received from State TB Cells.*

Linkages with the National Strategic Plan

As per NSP 2017-25, patient support systems will include the following:

1. Initial and frequent follow-up counselling of the patient and family members
2. Supervision of treatment by a trained treatment supporter (a health worker or community volunteer)
3. Locally-managed additional nutritional support
4. Retrieval of treatment interrupters
5. Screening for adverse reactions
6. Appropriate social support scheme
7. Psycho-social support
8. Co-morbidity management
9. Follow-up laboratory investigations

These nine parameters[20] are best understood as the defining components of the envisaged patient-centric approach. Based on this, a set of overarching parameters were developed to categorize and present the information received from the states. The tabulated data captures the type of support provided, geographical scope of implementation, target beneficiaries, implementation period, source of funding and mode of monitoring or follow ups.

Subsequently, the figure sketches out how the existing state-based initiatives tie in with the various types of patient support. The type of support being provided were found to include nutrition support, economic assistance, counselling support, community groups, linkages with other government schemes, vocational training and follow up mechanisms.

[20] *Please note: Co-morbidity management and follow up laboratory investigations have not been represented in the following figure since these were not found to be prominent features of the patient support models under study.*

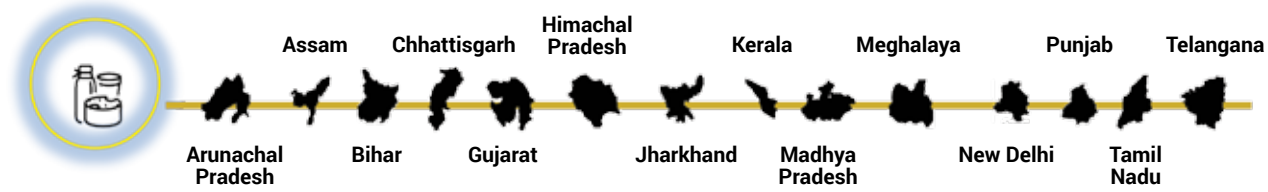
Overview of State based PSS

State	No. of PSS	Type of support per model	Geographical scope	Target beneficiary	Implementation Period	NGO assistance	Funding Source
Arunachal Pradesh	1	Nutrition support, counselling & DOTS services	In 1/21 districts	TB patients	NA	Y	External (NGO-Missionaries of Charity)
Assam	1	Nutrition support	In 14/32 districts	MDR-TB patients	2016-17	Y	External (Doctors for You)
Bihar	1	Nutrition support	In 4/38 districts	MDR-TB patients	Since 2016	Y	External (Johnson & Johnson)
Chhattisgarh	2	I. Economic assistance (insurance) II. Nutrition support	State-wide	I. MDR-TB patients II. TB patients	I. Since November 2012 II. Since July 2017	N	I. State/ Centre funded II. State funded
Delhi	4	I. Nutrition support II. Economic assistance III. Livelihood enhancement IV. Economic assistance (in-kind)	I. In 8/11 districts II. 11/11 districts III. In 2/11 districts IV. In 4/11 districts	I. Vulnerable TB patients, MDR-TB patients II. MDR-TB patients III. TB patients IV. Most vulnerable TB patients	2017-18	Y	I. Janssen Foundation, HCL Foundation; TB Alert, German Leprosy and Relief Association (GLRA), R.K Mission, DFIT and Doctors For You (DFY) II. Central TB Division III. Central TB Division IV. RK Ashram (RK Mission NGO)

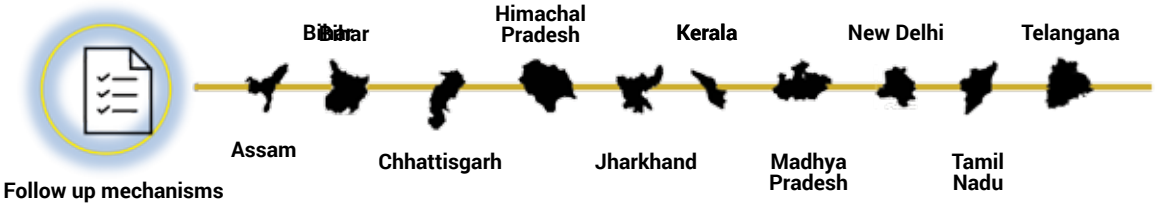
State	No. of PSS	Type of support per model	Geographical scope	Target beneficiary	Implementation Period	NGO assistance	Funding Source
Goa	1	Economic assistance	State-wide	Economically weaker TB patients	Since August 2008	N	External (TB Association of Goa)
Gujarat	1	Economic assistance (and nutrition support in select districts)	State-wide	Patients from low socio-economic group (SC, ST, EBC, SEBC & De-notified Tribes, Nomadic Tribes)	Since 2016	Y	State and externally funded
Himachal Pradesh	1	Nutrition support	State-wide	DR-TB patients	Since September 2016	N	State funded
Jharkhand	1	I. Economic assistance II. Nutrition support (inpatient care) III. Nutrition support (food package)	I. State-wide II. In 8/24 districts III. In 1/24 districts	I. Patients from low socio-economic group (SC, ST & OBC) II. TB patients in missionary hospitals III. MDR-TB patients	2017-18	Y	I. State Funded II. Select missionary hospitals III. Externally Funded (CARE India)

State	No. of PSS	Type of support per model	Geographical scope	Target beneficiary	Implementation Period	NGO assistance	Funding Source
Kerala	3	I. Economic assistance (pension) II. Nutrition support III. Treatment Support Groups	I. State-wide II. In 3/14 districts III. In 1/14 districts	I. Economically weaker TB patients II. Economically weaker TB patients III. TB patients	I. Since 2014 II. Since 2013 III. Since 2016	N	I. State Funded II. State Funded III. None (Voluntary group)
Maharashtra	1	Economic assistance (waiver of travel costs)	State-wide	TB patients travelling in MSRTC buses	Since 2014	N	State Funded
Madhya Pradesh	3	I. Nutrition support (Doctors for You) II. Nutrition support (Project Axshya) III. Nutrition support (NGO)	I. In 2/51 districts II. Not Available III. In 1/51 districts	I. MDR- TB patients II. MDR-TB patients III. Economically weaker and MDR-TB patients	I. 2016-2018 II. NA III. NA	Y	I. All three models are externally funded
Meghalaya	1	Nutrition support	In 1/11 districts	Economically weaker TB patients	NA	Y	Externally Funded (NGO- Social Service Centre)

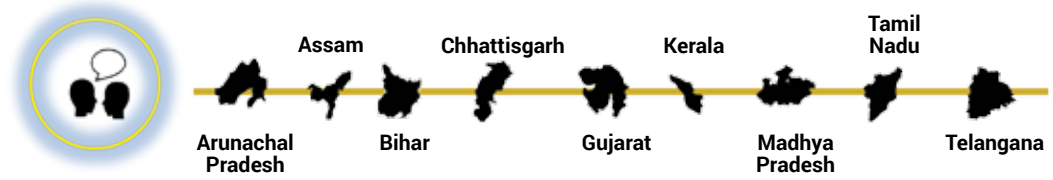
State	No. of PSS	Type of support per model	Geographical scope	Target beneficiary	Implementation Period	NGO assistance	Funding Source
Punjab	1	Nutrition and supplementary medicine support	In 6/22 districts	DR-TB patients	NA	Y	Various NGOs
Telangana	4	I. Nutrition support (AASARA Project) II. Counselling and nutritional support (Project Axshaya) III. Economic assistance and nutrition support IV. Nutrition support (Double ration – ICDS)	I. In 1/31 districts II. In 5/31 districts III. In 3/31 districts IV. State-wide	I. TB patients II. MDR-TB patients III. Economically weaker TB patients IV. Children under 6 on DOTS	I. January 2017-December 2017 II. Since October 2015 III. 2014-18 IV. Since October 2012	Y	I. External (Johnson & Johnson) II. External (Global Fund) III. External (World Vision) IV. State funded
Tamil Nadu	3	I. Nutrition support (AASARA) II. Nutrition support, economic assistance and counselling (Project Axshya) III. Economic assistance (Project ARUBAH)	I. In 4/32 districts II. In 14/32 districts III. State-wide	I. DR-TB patients II. TB patients and their care takers III. Small and marginal farmers	I. Since January 2017 II. July 2016-June 2017 III. Since 2006	Y	I. External (Johnson & Johnson) II. External (The Union against TB) III. State funded



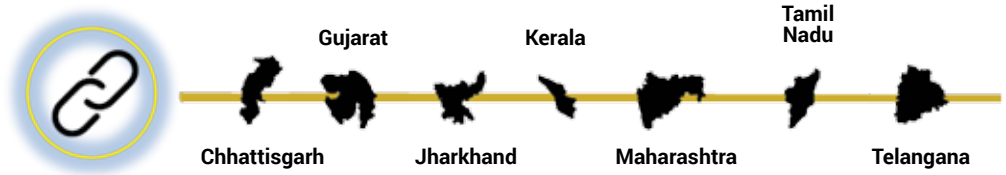
Food based support



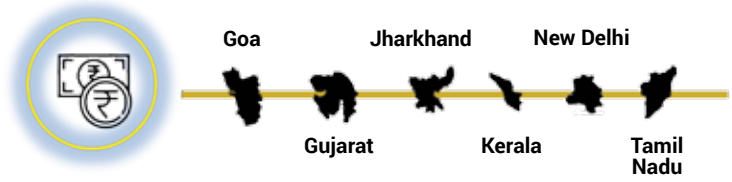
Follow up mechanisms



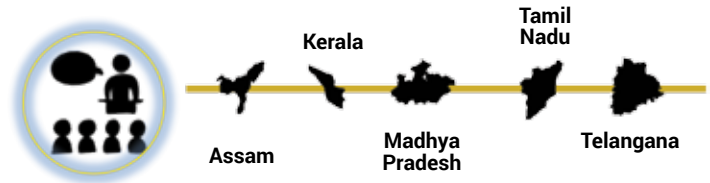
Counselling support



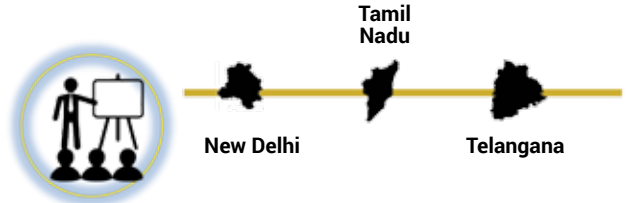
Linkages with other departments or schemes



Cash transfer



Community groups



Vocational training

Key Findings

I. Nutrition Support

Fourteen of the sixteen states studied provide supplementary nutrition to TB patients

The approach towards TB has evolved from a singular, biomedical perspective to a more holistic understanding of the co-morbidities and larger socio-economic determinants of the disease.[21,22] Many states have come to recognize that low body weight or poor nutritional status prevents patients from successfully completing treatment. As a result, fourteen out of the sixteen states observed in the study started providing supplementary nutrition to improve patients' nutritional status and treatment uptake.

Most states provide dry ration kits directly to TB patients

The *Guidance Document: Nutritional Care and Support for Patients with Tuberculosis in India* recommends that nutritional support for TB patients and their families should comprise of "enhanced ration" through the Public Distribution System (PDS) as well as an "additional food basket" directed at supplementing their calorie and protein intake requirement.[23] This should include cereals, milk powder/groundnuts/pulses and cooking oil and be designed to provide 1000 calories and 30-50 grams of protein for adults (550-600 calories and 21 grams of protein for children).[24]

Thirteen state-based initiatives provide supplementary nutrition in the form of monthly food baskets. The monthly food baskets consist of grains, protein, and micronutrient rich pulses, and nuts among other things. Punjab is the only state that has proposed to create linkages with the PDS. DR-TB patients in Punjab will be allowed to avail enhanced ration at highly subsidized rates under the *Antyodaya Anna Yojana* (AAY).[25]

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[21] *Wingfield, T., Tovar, M. A., & al, E. (2016). The economic effects of supporting tuberculosis-affected households in Peru. European Respiratory Journal.*

[22] *World Health Organization. (2017). The End TB Strategy. Retrieved from World Health Organization: http://www.who.int/tb/strategy/en/*

[23] *Central TB Division, D. G. (2017). Guidance Document: Nutritional Care and Support for patients with Tuberculosis in India. New Delhi: World Health Organization.*

[24] *Central TB Division, D. G. (2017). Guidance Document: Nutritional Care and Support for patients with Tuberculosis in India. New Delhi: World Health Organization.*

[25] *Launched in 2000, Antyodaya Anna Yojana (AAY) is a central scheme that provides ration to poorest of poor families at highly subsidized rates. In Punjab, the linkage with AAY is scheduled to be implemented in early 2018.*

Chhattisgarh has been a pioneer in introducing nutritional support

Jan Swasthya Sahyog (JSS) presented the evidence-based linkages between undernutrition and risk of developing TB to state-level officials. Consequently, in February 2014, a sum of ₹12 crore was earmarked from the state budget for the implementation of Mukhyamantri Kshay Poshan Yojana.

A State Technical Committee for Nutrition was constituted to decide what types of food would be provided to TB patients. Representatives from JSS, National Institute of Nutrition (NIN) – Hyderabad and State Health Resource Centre (SHRC) were part of the committee. A two-district pilot study was undertaken to design the food boxes, based on calorie-dense, locally-acceptable food items that would be easy to store, transport and use. Milk powder, soybean oil and groundnuts were added to the food basket. Eggs were also considered but, owing to the difficulties of transporting, storing, and low uptake, were not included.

The first instalment of food boxes is provided upon initiation of treatment, following which supplementary nutrition is provided every two months during follow up visits to the health facility. These visits are used opportunistically to counsel patients on side effect management, adherence, microbiological and clinical examination.

Sustained procurement and expansion of storage facilities has proved challenging, but is expected to be resolved soon.

Nutrition support is largely provided to DR-TB patients and patients from economically weaker sections of the population

Eight states – Assam, Bihar, Himachal Pradesh, Jharkhand, Madhya Pradesh, Punjab, Telangana and Tamil Nadu – provide nutrition support primarily to DR-TB patients, considering the long treatment duration and difficulties in battling drug resistant TB. Jharkhand, Kerala, Madhya Pradesh, Meghalaya, Telangana, and Tamil Nadu also extend similar support to TB patients from socio-economically weaker sections.

In Assam and Bihar, Doctors for You in collaboration with the State TB Cell (STC) provides nutrition support to MDR-TB patients for six months. In Assam, supplementary nutrition kits are provided by Programmatic Management of drug-resistant Tuberculosis (PMDT) and Public Private Mix (PPM) coordinators on a monthly basis. In Bihar, the STC and District TB Officer (DTO) are responsible for distributing the kits and providing nutrition counselling on prescribed intake of nutritional food and adherence to treatment.

Nutrition support tends to be concentrated toward those most in-need because these initiatives are largely implemented on a pilot basis with external funding support. However, as evidence suggests, all TB patients could benefit from nutrition support.

Patients are more likely to visit the health facility once they know of the nutrition support

Once patients learn about these nutrition entitlements, they are reportedly more likely to visit the health facility on a regular basis

Telangana aims to expand nutrition support across the state

TB patients in select districts receive nutrition support with help from various partners. With World Vision support, 300 underserved TB patients received nutrition kits for the Intensive Phase of treatment. TB Health Visitors, ASHA and ANM were involved in conducting home visits and screening patients in need of support. Patient weights were recorded monthly, to measure improvements.

TB Alert India provides monthly nutrition support to 518 drug-sensitive (DS) TB and 82 DR-TB patients in Hyderabad, in the form of rice, groundnuts, edible oil, jaggary and green gram. During enrolment, patients are counselled on treatment adherence and their weight is recorded. Over 90% of the beneficiaries reportedly showed improved weights and treatment success rates.

Similarly, 200 MDR-TB patients across five districts receive nutritional and counselling support under project Axshya. Patients are provided rice, pulses, oil, jaggery, and raagi powder every month. Lists of beneficiaries are prepared in consultation with the DTO. Monthly procurement is made accordingly and supplied by the vendor to district headquarters. Project staff undertake field-level distribution activities to deliver food packages to beneficiaries' door steps.

Owing to the positive impact of externally-supported nutritional programmes, the STC has developed a proposal to scale the intervention across the state in 2018. The proposal lays out a basket of options for types of nutrition support to be provided to the patients i.e. food kits/fixed amount via DBT/double ration via ICDS.

to inquire about the food packages. These monthly visits to collect supplementary nutrition are seen as a critical opportunity by the state department to engage and counsel the patient, measure weight gain, inquire about side effects and treatment adherence. This subtle aspect in the design of the intervention allows the programme to follow up with patients and improve treatment adherence.

Eleven of the fourteen states providing nutrition support receive external support from NGO's and/or development partners

In the remaining states, the procurement and delivery of food baskets is managed by the state machinery, with either the STC taking responsibility internally or establishing links with PDS and other departments.

States such as Meghalaya, Madhya Pradesh, Telangana, and Tamil Nadu, which receive **external support** for providing supplementary nutrition, do not have to devote programme machinery toward procurement. This gives NGOs responsible for the delivery of food kits opportunities to interact with beneficiaries routinely, via community or household discussions, facilitating important exchanges on the importance of nutrition and treatment uptake. It also provides opportunities for observing existing practices and challenges faced by patients. Several NGOs agree that these community interactions allow for better follow up on treatment adherence and improvement in nutritional status.

Implementing nutrition support via external agencies also allows the state RNTCP machinery to focus on the chief tasks of case finding, diagnostics and treatment. In this manner, STCs can retain an overarching supervisory role without having to engage in actual procurement and service delivery. However, it must be recognized that external support is implemented on a limited scale and time bound manner and is not able to cater to all those in need.

Table 1: Procurement and delivery mechanisms across states that do not receive external assistance

	Chhattisgarh	Himachal Pradesh	Kerala
Type of food and monthly quantity	Soy bean oil (1L) Groundnuts (1.5 kg) Milk Powder (1 kg)	"Him Nutrimix" – food supplement containing roasted wheat, sugar, soybean, black gram, refined oil, milk powder and groundnut. 1 kg package containing 10 small packets of 100 gm each.	Uncooked food - Indicative list: Raagi powder (1 kg) Oats (0.5 kg) Toordal (0.5 kg) Soybeans (0.5 kg) Peanuts (0.25 kg) Dates (0.25 kg) Milk powder (0.5 kg)
Duration of support	6 months for new TB patients; 8 months for previously treated TB patients; 24 months for Drug-Resistant (DR) TB patients	24-27 months (total duration of treatment for DR-TB patients)	Total length varies depending on type of patient but support is provided for the entire course of treatment
Unit cost	₹850 per patient	₹70/kg[26] per patient	₹1000 per patient
Procurement agency	Chhattisgarh Medical Services Corporation (CGMSC), Department of Health and Family Welfare	Milkfed - Himachal Pradesh State Co-operative Milk Producer's Federation Limited	Department of Civil Supplies

[26] *One kg packet lasts approximately ten days.*

	Chhattisgarh	Himachal Pradesh	Kerala
Delivery mechanism	Monthly food baskets are supplied by CGMSC up to the block level. Patients are provided with 2 boxes of monthly food kits at the PHCs and asked to come for follow up visits every 2 months	Nutrimix is supplied by Milkfed from its manufacturing unit in Mandi to State Drug Store Dharampur (Solan), from where it is distributed to the District TB Centres. From here, it is distributed to Tuberculosis Unit (TU) stores in respective health blocks where the RNTCP supervisory staff provides it to patients	Selection of beneficiaries and follow up is done by the State TB Cell while the Department of Health and Family Welfare oversees the supply chain process. Department of Local Self Governance implements the support, wherein Senior Treatment Supervisor (STS) ensures that food kits reach the entitled beneficiary
Fund source	State government funds	State government funds	State government funds

States plan to implement cash support via DBT, as proposed under NSP 2017-25 alongside the ongoing in-kind support

States such as Chhattisgarh, Kerala, Tamil Nadu, and Telangana reportedly plan to continue providing supplementary nutrition to patients, subject to availability of funds and/or external technical and financial assistance. Findings in this regard are presented as follows:

The current unit cost of food packages across states is higher than ₹500

In Telangana, food packages under AASARA cost ₹978 per patient per month and ₹725 under Axshya. In Jharkhand, it is ₹700 per patient per month and in states such as Kerala and Bihar, this amount is around ₹900-1000. Therefore, when it comes to procuring in-kind food support, states are spending a higher amount than the ₹500 per patient per month proposed by way of DBT.

While states do not perceive providing nutrition support via DBT support as a challenge, there exists a significant predilection towards in-kind nutritional support

DBT does not guarantee that the disbursed amount will be used towards improving nutritional status. It puts faith in the decision making ability of the patient to use the financial assistance towards his or her nutritional support or other treatment associated expenses. Therefore, it will not ipso facto address issues related to adverse reaction or side effects to medication, psychological and emotional stress during treatment. As mentioned earlier, patients visiting health facility provide an opportunity for counselling. Often, patients who are obstinately against seeking treatment have been seen to come around when offered monthly food kits. DBT, in comparison, "does not provide the benefit of human intervention which helps adherence".

At the same time, state TB programmes cannot, admittedly, devote their limited infrastructure, resources and manpower to rolling out supplementary nutrition. The responsibility for deciding the type of food to be provided, as well as ensuring procurement, storage, delivery, and quality, require dedicated resources at every stage of the supply chain. A majority of the states currently providing this form of support are only able to do so with the support of NGOs. In this regard, it is operationally easier to implement nutrition support by way of DBT. Additionally, as part of a national level mandate, DBT will enable greater coverage across states. However, there is lack of clarity on the ways of addressing operational challenges related to linking Aadhaar and bank accounts. STOs have raised concerns about providing entitlements to beneficiaries who may not possess Aadhaar cards or bank accounts in their name (such as minors or women). Further guidance is needed in this regard. Therefore, while cash transfers are believed to be the most feasible intervention, they may not be the most efficient or impactful intervention.

Patient voices on nutrition support

Respondents suggest that they were satisfied with the quantity and quality of food packages being provided on a monthly basis. Patients were informed about the nutrition support by the programme staff as well as community workers associated with partner NGOs.

Patients expressed satisfaction with the quantity and quality of food baskets but had varied preferences on the food menu

A 47-year-old male patient in Kerala said that he is satisfied with the contents and quantity of the food basket. He shares the food with his wife and children. Similar responses were received from patients in Assam, Jharkhand, and Chhattisgarh. On the other hand, a 28-year-old man in Chhattisgarh finds the food quantity adequate and does not share it with his family members. Some patients recommended adding additional food items such as milk, bread, eggs, ghee, fruits, and dry fruits to the food baskets.

> "The quality and quantity is more than sufficient…Sometimes, I share it with fellow patients"
>
> *- 34-year-old female TB patient from Ranchi, Jharkhand*

Patients in select states reported gaining weight as a result of improved food intake

Respondents mentioned that the food support has helped them gain weight and contributed to a general sense of improved health. They felt better and had more energy to resume work and carry out daily activities. An 18-year-old MDR-TB patient from Hyderabad said her weight increased from 30 kg to 42 kg in two months as a result of the nutrition support being provided by the Helping Hand Foundation. Similarly, a 10-year-old patient in Hyderabad experienced an increase in weight from 20 kg to 23 kg in two months.

A 65-year-old patient in Assam said he has "gained weight within a short period and can move around on his own" given the improved food intake. Another patient in Assam gained

> "I gained weight and also felt much better compared to when I was just taking the drugs"
>
> *-32-year-old female TB patient from Morigaon, Assam*

> "Health staff supplied food materials at home. It is the most convenient [method]"
>
> *-69-year-old male TB patient from Thrissur, Kerala*

15 kg as a result of the nutritional support. He likes the lentils, gram and flour provided to him as these food items give him the energy to work.

While some patients visit the nearest health facility to collect the food packages, others are provided the packages directly at home. A 69-year-old patient from Kerala is provided the monthly food packages at his house and finds this process "most convenient". In another case, the patient had to travel long distances in order to procure the support – a 32-year-old patient in Assam finds the procurement process challenging as she has to travel more than 20 km, which costs her over ₹100 per trip. "It would have been good if I could collect it from my nearby health center" she said.

An instance of delay was cited by a 65-year-old male patient from Kamerup, Assam. Patients interviewed in Chhattisgarh also mentioned instances where the food was not provided on time due to lack of supply. A patient in Telangana mentioned that he has not received food kits for the past two months and was told that the support is being directed towards new patients who are in greater need. The benefits of nutritional support may be compromised if the process of acquiring the support is tedious, complex or inconvenient for patients and their families.

Nutritional support, financial support or both?

Patients' preference between nutritional and financial support varied across states. In some states such as Meghalaya, Chhattisgarh and Madhya Pradesh, a majority of patients

> "Money can be taken by husband/family"
>
> *-38-year-old female TB patient from Indore, Madhya Pradesh*
>
> "I prefer money. That way I can use for other expenses also"
>
> *-65-year-old male TB patient from Vellore, Tamil Nadu*
>
> "Only Nutritional support is best."
>
> *-34-year-old male TB patient from Shimla, Himachal Pradesh*

interviewed preferred nutritional support over financial support because they perceived that the former was more beneficial. Two female patients in Madhya Pradesh expressed preference for nutritional support because "money can be taken by husband/family". Another patient, a 50-year-old man from Tamil Nadu said "I will be tempted to drink in the evenings when I have money. This food packet is better."

On the other hand, patients interviewed in Assam, Kerala and Punjab would prefer either financial support or both nutritional and financial support because it would supplement their income and give them the flexibility to purchase food items of their choice over and above the food baskets they were receiving.

Him Nutrimix: A favourite with the patients in Himachal Pradesh

Patient responses from the state indicate a marked increase in weight after a sustained intake of "Him Nutrimix". A 20-year-old female MDR-TB patient, who was diagnosed with TB two years ago has reportedly gained 10-15 kg. A 50-year-old male patient mentioned that he found it difficult to consume the recommended dose of 100 gm in one serving. He divides the recommended dose into 2-3 smaller servings and consumes it throughout the day. Another

young patient aged 18 mentioned that "heaviness is felt" after consuming a single serving. Patients can collect the supplement from various designated facilities such as Employee State Insurance (ESI) dispensary, ayurvedic dispensary, district hospital etc. An 18-year-old patient living near Deen Dayal Upadhyay Hospital Shimla said his parents collect the package from the facility. Another patient, a 20-year-old female, said the STS drops the Nutrimix packets at the nearby ayurvedic dispensary and she collects it from there. The patients mentioned that they are also counselled on the benefits of nutrition. All patients interviewed in Himachal Pradesh stated their preference for nutritional support over financial support.

II. Links with other social welfare schemes

Seven of the sixteen states under study have linked TB patients to existing social welfare schemes

In addition to nutritional support, linking patients with relevant social welfare schemes is a key area of support proposed in the NSP 2017-25. As mentioned earlier, states such as Punjab,[27] Telangana, and Himachal Pradesh have linkages with existing food security and nutrition initiatives to provide nutritional support via PDS or ICDS or other schemes. For instance, the Department of Food Civil Supplies and Consumer Affairs in Punjab agreed to the inclusion of DR-TB patients as beneficiaries under the *Antyodaya Anna Yojana* (AAY), after the successful intervention of STO Punjab. This linkage is planned to be implemented in 2018. Beneficiaries will receive blue cards, which they can show at ration shops to avail wheat flour and pulses at subsidized rates. The STC estimates that 600-700 patients will benefit from this pilot linkage to AAY. Other states have linked patients to social welfare schemes that entitle them to monetary assistance, insurance coverage, and waiver of travel costs. The following is a summary of the different forms of support via state wise social welfare schemes.

MDR-TB package under government health insurance schemes covers cost of inpatient care

Chhattisgarh: As per treatment guidelines, MDR-TB patients are required to undergo hospitalization for a brief initial period for pre-treatment evaluation and to stabilize them on second line drug regimen. Pre-treatment

Gujarat — **Social Welfare Benefit Scheme**

₹500 per month to patients from Scheduled Castes (SC), Scheduled Tribes (ST), socioeconomically marginalized backgrounds, de-notified tribes, nomadic tribes

Jharkhand — **Chikitsa Sahayata Yojana**

Up to ₹10,000 is provided to TB patients from the Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Classes (OBC)

Kerala — **Pension Plan**

Monthly sum of ₹1,000 is given to TB patients with an annual family income below ₹1,00,000

Tamil Nadu — **Chief Minister's Uzhavar Pathukappu Thittam (UPT) Scheme**

₹1,000 per month is provided to patients temporarily incapacitated due to TB. This includes small & marginal farmers suffering from TB

[27] *Linkages with PDS are scheduled for March 2018*

evaluation includes a thorough clinical evaluation by a physician, chest radiograph, haematological and bio-chemical tests[28]. All MDR-TB patients are also offered referral for HIV testing and counselling at the nearest centres.

The State TB Cell has been successful in including a package of inpatient care services for MDR-TB patients under Rashtriya Swasthya Bima Yojna (RSBY) and Mukhyamantri Swasthya Bima Yojana (MSBY)[29]. As per this inclusion, patients are entitled to get all necessary clinical and laboratory investigations free of cost at all government DR-TB centres as well as empanelled private health facilities. All cost towards pre-treatment evaluation, follow-up evaluations and ancillary drugs for management of adverse side effects for MDR-TB patient are to be covered under this 'MDR-TB Package'. After examination, the patient may be discharged after seven days of treatment initiation. In case the patient refuses hospitalization, alternative local arrangements are to be made for pre-treatment evaluation and initiation of MDR-TB regimen.

Average hospitalization cost per patient is ₹8000 and can be absorbed within the overall insurance ceiling of ₹50,000 per family per annum[30]. This linkage provides patients access to quality diagnostics and prescriptions while simultaneously allowing STC to monitor MDR-TB patients more closely. Going forward, the TB Cell is planning to revise the MDR-TB package to insure costs of outpatient care as well.

TB patients from disadvantaged communities receive monetary assistance under state social welfare schemes

Gujarat: The Gujarat Social Welfare Benefit Scheme was initiated under the Department of Social Justice and Empowerment in 1998 to provide financial assistance to poor patients suffering from TB, HIV, cancer, and pregnant women with anemia etc. Since 2016-17, it has been implemented by the Department of Health and Family Welfare to avoid procedural bottlenecks and delays. Under this scheme, all TB patients belonging to Scheduled Castes (SC), Scheduled Tribes (ST), Socially and Educationally Backward Classes (SEBC), Economically Backward Classes (EBC), as well as Denotified and nomadic tribes are provided a monetary assistance of ₹500 per month for the entire duration of treatment (~6 months) on a quarterly basis. Eligibility for support is determined based on income limit of ₹47,000 per annum for rural areas and ₹67,000 for urban areas. Financial benefits are transferred to all eligible patients via DBT/RTGS under the order of Chief District Health Officer.

Approximately one third of all TB patient in the state are eligible under the social welfare support. Many eligible patients do not possess the required documentation such as income certificates or ID proofs and hence do not qualify for the entitlement. In 2016-17, a total of 8,590 patients were given financial assistance worth ₹2,24,13,500 (~₹2600 per patient).

Jharkhand: *Chikitsa Sahayata Yojana* is being implemented under the Department of Social Welfare, Jharkhand to provide monetary assistance to patients belonging to marginalized socio-economic groups (SC, ST, and OBC) and suffering from debilitating diseases such as TB. Financial assistance of up to ₹10,000 per patient is provided via RTGS upon certification of the disease by the Civil Surgeon, the District TB Officer (DTO) or the Medical Officer in Charge (MOIC). The Deputy Commissioner serves as the controlling officer for this scheme. On an average, the cost for

[28] *Complete blood count with platelet counts, blood sugar to screen for Diabetes Mellitus, liver function tests, blood urea and other tests to assess kidney function, thyroid function test, urine examination and pregnancy test for all women in the child bearing age group*

[29] *While RSBY covers beneficiaries belonging to BPL families, MSBY extends coverage to each and every member of the population.*

[30] *As of October 2017, the RSBY/MSBY package of ₹30,000 per family per annum has been revised to ₹50,000 per family per annum.*

DBT is ₹3,000 per patient (₹10,80,00,000 for an estimated 36,000 TB patients).

Kerala: Under the state based Pension Plan, all TB patients being treated at the government health facilities with an annual family income below ₹1,00,000 are provided a monthly sum of ₹1,000 for the entire duration of treatment. The pension scheme is believed to contribute towards reducing the treatment expense and encouraging treatment adherence. The scheme is fully sponsored by the Government of Kerala and delivered via DBT by the Department of Revenue.

The STC is responsible for the follow up and monitoring of the patients while the Department of Health and Family Welfare is responsible for documentation and coordination support. Upon diagnosis, the Medical Officer certifies the disease status and the treatment duration. The patient, with the help of a multi-purpose health worker, files an application and submits it to the local Village Officer. The village officer then validates the annual income and their eligibility for the pension scheme. All eligible applications are forwarded to the block office for approval following which the pension is sent to the beneficiary via RTGS/money order on a monthly basis.

Village Officers are also sensitized on the disease burden and encouraged to make people aware about the entitlement. The total support is ₹6,000-8,000 for DS-TB patients and ₹24,000 for DR- TB patients since the latter undergo a longer treatment duration (approximately 8-24 months). Individuals suffering from cancer, leprosy and HIV/AIDS are also covered under the Pension Plan.

Tamil Nadu: Launched in 2006, the state wide *Uzhavar Pathukappu Thittam* (UPT) scheme provides a monthly pension of ₹1,000 to TB patients for the entire treatment period. TB patients who are small and marginal farmers, inland fisherman, and plantation labourers aged 18-65 years are eligible for financial coverage under UPT. The scheme contributes to combating the wage loss during the treatment period and contributing towards the nutritional needs of the patient. UPT scheme also covers those who are suffering from cancer and renal failure. Beneficiaries are counselled at DOTS Centres and encouraged to use the money to supplement their nutritional needs instead of channelling it towards other household expenses. The STC compiles the total number of beneficiaries for the UPT scheme, along with the beneficiary details (bank account number, Aadhaar number and total treatment period) along with a cost estimate and shares it with the State Revenue Department. The Revenue Department validates the details and disburses funds to the District Collector.

The Block Medical Officer issues a medical certificate specifying the treatment duration. The certificate is submitted to the Special Deputy Collector (SSS Tehsildar) and further verified by the Village Administrative Officer. Pension is provided to beneficiaries via RTGS or money order in cases when beneficiaries' bank account details are unavailable. A total of 1,071 TB patients benefited under the UPT scheme between January and August, 2017, while 3,616 applications were under process in the same period. UPT covers patients suffering from cancer and renal failure as well. The STC has also requested fund support from Labour Commissioner in the state to provide similar coverage to TB patients who are construction and factory workers, miners etc.

TB patients availing treatment in government facilities receive a travel cost waiver

Maharashtra: Recognizing the catastrophic costs and wage loss accruing to TB patients, the Government of Maharashtra provides free travel for all TB patients availing

treatment in government facilities. In 2014, the Department of Public Health collaborated with the Maharashtra State Road Transport Corporation (MSRTC) to guarantee free travel for TB patients using MSRTC buses. TB patients often belong to lower socio-economic strata and may have to travel long distances to access quality diagnostics and treatment facilities. MSRTC operates over 16,500 buses reaching the remotest corners of the state. The patient travelling in an MSRTC bus can show the ID card issued by RNTCP and is waived off the tariff. The total cost of such waivers is compiled at the state level and billed to the Department of Public Health. In the 2014-17 period, a total of 27,945 TB patients have benefitted under this initiative with a total waiver of ₹11,82,970.[31] A similar waiver is provided for patients suffering from leprosy and cancer. The state government is planning to extend the initiative to patients seeking treatment in private health facilities as well.

Patient voices on monetary support under various schemes

Patient responses across various states point to the compromised productivity, inability to work, and the ensuing wage loss during the treatment period. In this context, patients appear to appreciate the monetary support being provided to them under state based schemes. It was observed that in some cases, patients enrolled under the same scheme receive varying amounts.

Goa

In Goa, a 30-year-old female has been suffering from MDR-TB for the past two years. While she continues to do minor tasks around the house, the disease has affected her ability to work. She reported receiving a one-time amount of ₹600 as benefits from the TB Association of Goa. She uses this money to travel to the DR-TB centre. She states that this amount has not made a significant impact on her treatment and recovery and she continues to depend on her brothers for financial support.

> "I am thankful for this [support], but the amount is very less to support nutrition or anything else."
>
> *- A 55-year-old female with recurrent TB has received ₹500. The patient is currently not working and depends on her sister's income.*

Under the same scheme, a 42 year-old XDR-TB patient received approximately ₹11,700. He received ₹10,000 by cheque six months ago and a one-time payment of ₹1700 by cash. He was also given money to travel to DR-TB centres. The patient is a father of three and is unable to work at present. His wife, a school teacher, is the sole breadwinner for the household with a monthly salary of ₹1000. The patient shared that his daughter has contracted TB from him and is currently undergoing treatment for MDR-TB. He expressed satisfaction with the support, noting that it helps bear the cost of his children's education and meet his family's daily expenses. However, he adds that additional support would be helpful as he is still on treatment. Patients interviewed in the state reportedly did not face any delays or challenges in receiving the cash support.

Gujarat

Beneficiaries under Gujarat's Social Welfare Benefit Scheme have provided mixed responses on their satisfaction with the support. A 28-year-old female was diagnosed with extra-pulmonary TB eight months ago and has completed her treatment. She

[31] *The government is exploring the possibility of providing these services via DBT to ensure greater transparency.*

is currently not working and is supported financially by other family members. She stated that the cash support of ₹500 has not made a difference to her treatment and recovery process. The Multi-Purpose Health Worker (MPHW) informed her that the scheme provides ₹500 per month for the entire treatment duration. However, she only received a one-time payment post treatment. She used this amount towards a fixed deposit. Another 31-year-old patient is enrolled under the same scheme. He was diagnosed four months ago had to stop working owing to the disease. The patient is receiving ₹500 on a monthly basis through DBT, which he finds is a convenient mode of delivery. He uses the money to purchase food and feels that the support has helped him adhere to the treatment. All patients submitted their Aadhaar cards to avail benefits under this scheme. There was unequivocal recommendation that the amount of ₹500 should be increased.

Maharashtra

Patient stories from Maharashtra have provided insight on the various monetary support schemes available to TB patients in the state. A 43 year-old male spoke about the cash support of ₹750 he received towards **"day to day incidental expenses and travel".** He has been suffering from TB for the last seven months and is currently not working. The weakness has decreased his work efficiency along with his interest in work. His wife and daughter support the family as daily wage earners. Another TB patient in Maharashtra is a beneficiary of the *Sanjay Gandhi Nirandhar Yojna*, which entitles her to ₹600 per month. The patient is a homemaker and is supported financially by her husband, who is a daily wage labourer. She mentioned facing multiple challenges in receiving the support. The turnaround time was four months and she has not received the amount for the last two months. Similarly, 48 year-old patient, mother of two, faced a turnaround time of one year, finally receiving the amount after her treatment had ended. Other patients have echoed this challenge of a lengthy turnaround time citing that the "authorization committee sits only twice a year".

"Simple process for availing this scheme is needed"

"₹600 is [a] very less amount. Support is needed for child's education"

"Turnaround time of one year is not acceptable"

- Patients respond on the challenges faced in receiving cash support under the Sanjay Gandhi Nirandhar Yojna in Maharashtra.

A majority of the responses indicate that health workers/ RNTCP staff facilitated the registration process. They assisted in obtaining and submitting the forms which included the submission of Aadhaar, income certificate, date of birth certificate and residential proof documents along with the application form to the Tehsil (block) office.

Cash support in Kerala

In Kerala, patients stated that an Aadhaar card was not required to avail the monetary benefits under the TB Pension Scheme and health staff facilitated the enrolment process. Two out of

What do you use the money for?

"My blood pressure medicines"

"For food and diabetes medicines"

"I am getting additional food like milk and egg for myself with this money"

-Patient responses on the use of money provided by the TB Pension Scheme.

eight respondents mentioned that they faced challenges or delays in receiving the money. A 55 year-old TB patient has been suffering from extra pulmonary TB for the past four months. While she is employed, the disease makes her tired and has affected her ability to work. She had to submit an income certificate to register for the support. She suggested that the process of obtaining the income certificate could be improved. Another 58 year-old was delayed in receiving support as he was unable to get the Ward Member's signature in time. This was because he felt it was "difficult to disclose" his illness to her due to the perceived stigma. The majority of patients use the support toward purchasing food and medicines.

III. Psycho-social support

Apart from economic constraints, there are a range of gripping psycho-social factors that prevent a patient from seeking and/or continuing treatment optimally. Stigma, societal discrimination, low awareness, presence of treatment interrupters or naysayers in the community make it exceedingly difficult for the patient to cope with the disease.

Community based groups serve as important enablers of treatment uptake and completion

States such as Assam, Chhattisgarh, Kerala, Tamil Nadu, and Telangana among others have been implementing PSS that include elements of counselling and community mobilization. However, it is observed that no state model singularly focused on setting up community based groups. Community mobilization activities formed an incidental part of the patient support models, supplementing the core support mechanism such as delivery of food kits or monetary assistance. Nonetheless, STCs emphasized the importance of such field level interventions in catalysing uptake of services and improving treatment adherence. Participation in community based support groups is voluntary in nature and usually consists of PRI members, AWWs, ASHAs, TB Health Visitor and other volunteers. Volunteers conduct home visits to assess the health status of the patient and select beneficiaries for available entitlements. In many ways, these community based groups serve as integral psycho-social support for TB patients,

Telangana-Care groups and home based counselling

Social support models in Telangana were found to have a strong community mobilization aspect. Under the World Vision – Arubah project in Telangana, "TB Care Groups" have been formed at the community level. They consist of local women SHGs, AWW, ASHA, Panchayat members. These groups of 8-10 people meet every month to share information on newly identified cases of TB and discuss optimal messaging for the community. Capacity building for these Care Groups is based on training guidelines issued by the Central TB Division. Similarly, outreach workers under the AASARA project work in close coordination with the THALI team to reach out to beneficiaries and ensure that nutrition supplementation is reaching them in a timely manner.

Under project Axshya, MDR-TB patients are given home based counselling on the importance of contact screening, regular examination and treatment, cough etiquette, side effect management, and avoiding substance abuse. The field workers under Axshya apprise the families on the entitlements, link them to relevant social welfare schemes and also provide emotional support with the intent of ameliorate depression, sense of stigma and discrimination owing to the disease.

closely monitoring treatment adherence and observing improvements. By way of personal communication and outreach, these groups also motivate patients and counsel them on side-effect management, nutrition, and co-morbidities.

Cured TB patients are engaged as champions for treatment uptake

In Telangana, select field staff are attempting to engage cured TB patients as champions for treatment uptake and completion. These individuals share their challenges and experiences during neighbourhood meetings. In Assam, DTCs in select districts organize advocacy meetings wherein cured beneficiaries are invited to speak about their experiences and motivate TB patients who are undergoing treatment. The occurrence of these meetings is dependent on the availability of these volunteers. In larger cities, DTOs encourage cured beneficiaries to work as DOTS providers. They are trained by STS and DTOs.

In Chhattisgarh, DTOs and *Mitanins* have been instructed to ensure that patients are consuming the medications and supplementary nutrition. Patients are asked about their practices when they come to collect the food boxes. Cured patients are encouraged to serve as "Axshya *Saathis*" and share their experience with the community.

Robust and proactive local governments are found to contribute to an enabling environment

Coordination with the Gram Panchayats and PHCs is integral to efficient implementation of community mobilization initiatives. The STCs in Kerala, for instance, attributes the success of various patient support initiatives

Kerala-Treatment Support Groups

Local treatment support groups are constituted to support TB patients who find it difficult to adhere to treatment. The groups were first initiated in the district of Pathanamthitta and aimed at assisting treatment continuation, connecting them to a range of services such as counselling, food kit, pension assistance, travel support etc. as per need. They also provide intervention and support on various forms of co-morbidities such as alcoholism, a major problem in Kerala. The groups are non-statutory bodies of socially responsible volunteers chaired by the Gram Panchayat or a local opinion leader. Group members include medical officers, peripheral health workers, community DOTS provider, experienced informal counsellors, members of faith based organizations and local philanthropists. They are responsible for safeguarding a patient's dignity, information and empowering them to complete treatment successfully.

Each TB patient is linked to a DOTS provider and a Multipurpose Health Worker (MPHW). The MPHW assesses if a patient is in need of social support and connects them to a TSG. Once cured, beneficiaries serve as members of the TSG. The activities under TSG are monitored by the block level officer and PRO-NHM (Public Relations Officer).

Quality and degree of support varies from region to region. The STO claimed that rates of loss to follow up were brought down to zero owing to the success of TSGs. Under the Kerala TB Elimination Mission 2017, TSGs will be formed across all districts.

on the strong local governance structures in the state. Panchayats are often well informed about the number of TB cases and mortalities in a given period. Neighbourhood groups are constituted at each ward to identify and push priorities related to local development e.g., improving sanitation, providing drinking water, construction of roads, innovations at local hospitals etc. These support groups convene once every three months to discuss identified priorities for the ward and enrich the strengths of local governance. Other state programmes looking to replicate Kerala's success in patient support models will need to address prevailing gaps in local governance, poor community engagement and lack of inter-sectoral coordination.

Patient voices on psycho-social support

Across different states, DTOs, NGO staffs and faith based organizations giving social support, counsel patients on the benefits of the nutrition support provided to them and advise them to use the monetary assistance towards their nutritional needs. In the case of some states, community meetings are organized to facilitate interaction between TB patients, to motivate them to adhere to treatment and inform them on the disease and side-effect management.

TB is a harbinger of deep rooted psycho-social stress

Patients who contract TB have to endure painful injections and drugs, nausea and vomiting, hallucinations, appetite loss and physical weakness which deter them from maintaining their daily routines. Patient responses reveal instances where children have had to drop out of school and employed adults have had to discontinue their work as a consequence of contracting TB. The physical side effects and socio-economic costs of the disease also induce deep-seated psycho-social stress for the patient and complicate the process of treatment and cure. A 25 year old female patient from Himachal Pradesh revealed that she contracted MDR-TB two months after her marriage and stated that, "psychologically, I felt very bad".

> "I got this support when no one was coming to my house. No one was ready to help me and my children. Even relatives stopped visiting."
>
> *- 33 year old widow from Telangana*

The sense of stigma and fear of discrimination is common

Patient responses across states reveal that TB patients often feel stigmatized and isolated after people find out about their condition. A 57 year old auto driver from Kerala had to shift to a new junction due to the unfavourable response of his colleagues when they learnt about his condition. Female patients appear to face stigma from their in-laws - A 28 year old female patient from Gujarat says the ***"stigma and discrimination from house of in-laws"*** has been the most difficult part of dealing with the disease. A 46 year old female patient from Kerala was fearful of the stigma attached to TB and therefore, she has only revealed her condition to her family members and health workers. Similarly, a 30 year old female patient from Goa was afraid of others discovering her condition.

A 55 year old female patient from Bihar stated that the financial support has helped in reducing the discrimination from family members. The money allows her to support herself and buy food which is amenable to the family since they no longer have to bear the cost of her treatment and care. Hence, nutrition and financial support appears to help the patients on a psychological level as well.

Patients discussed the perceived benefits of counselling and community meetings

Patient responses reveal that counselling helps in improving treatment adherence. A 64 year old male patient from Tamil Nadu says "The counselling given was very useful. It helped me to understand how to prevent the spread of infection and made me aware that TB is completely curable." He said he was informed on the food items to consume and the ones he should avoid.

Another 52 year old male patient from Tamil Nadu shared that he felt depressed during the initial days following diagnosis. However, once he started receiving counselling from the staff at REACH NGO, he was motivated to complete his treatment and to quit smoking as well.

In states such as Kerala and Telangana, respondents spoke about avenues for sharing their experiences and interacting with other TB patients. A 70 year old male patient from Telangana said that the community engagement meetings held by AWW and ASHA are useful and helped him share his grievances, understand the disease as well as the side effects associated with the prescribed medicines. He has interacted with other TB patients in the village and whenever he meets someone with the disease symptoms, he advices them to get tested. Respondents from Kerala stated that they receive counselling on management of side effects, benefits of nutritional support, and use of the financial assistance. A 63 year old male patient from the state finds the counselling useful as he learns about the benefits of the food he is consuming. A 70 year old male patient from the state said that "The meetings are useful as they talk about symptoms and how to take medicines [that the] Government is giving everything for free."

In Kerala, patient provider group meetings are found to be useful for encouraging patients to adhere to treatment. The family members

> "[by] sharing the feelings and experiences with people like me, [I am able to] relieve a lot of stress".
>
> *- 58 year old male patient from Kerala*

of the patients also receive counselling which makes them aware about the disease and complications. A 56 year old male patient from the state said his family received counselling on cough etiquette, need for treatment adherence, and managing side-effects. In Delhi, patients receiving monthly monetary support are counselled on using the financial assistance towards their recovery and betterment. A 20 year old male patient said he ensures consuming meals on time following the counselling on food habits.

Support from family members helps in reducing anxieties and stress of the treatment process

Patient responses reveal instances in which patients were thinking of abandoning treatment but were encouraged by their family members to continue it. A 63 year old male patient from Kerala said he is supported in his recovery process by his daughter-in-law who reminds him to take his tablets every day. Another 69 year old patient from Kerala was motivated by his wife to resume treatment after he discontinued it.

In Telangana, an erstwhile TB patient was supported by her husband and family to seek treatment and also availed the dry ration which led to an improvement in her weight and BMI. She spoke about the emotional stress and stigma she underwent after being diagnosed with TB, having to avoid physical contact with her children during the course of the treatment. Now she and her husband have been engaged as champions to engage the community on the importance of seeking care.

"I used to feel nauseated... I used to think of stopping medicines. But I wanted to get well soon...so I can play with my grandchildren".

"... after repeated counselling and with medications to prevent vomiting I am able to take my medicines regularly now."

- 35 year old female TB patient from Tamil Nadu

"I was very depressed when I started treatment. I used to think of mixing poison with alcohol and ending my life...during the counselling sessions, I was told about the healthy diet practices - what to eat and what to avoid. I was taught how to cough with kerchief. They said that all my family members should undergo X-ray test which is free of cost to rule out TB"

- 52 year old male patient from Tamil Nadu

On the desire to share their experience with their community

Patient responses point to their willingness to share their experiences and stories with others. A 64 year old male patient from Tamil Nadu said, "Definitely I will share my experience to encourage other patients to complete their treatment."

IV. Economic assistance in-kind

In-kind support is well aligned with the community and family centered support envisaged in the NSP

The NSP commits to a wide variety of "community and family centered" patient support systems. Vocational training and livelihood support are part of the basket of palliative support mechanisms that complement economic and nutritional support. It touches upon the crucial need for long term rehabilitative support for patients. It boosts morale of the patient, spouse and family and serves to motivate them to look forward to a fulfilling and productive life after the treatment.

Select states are providing economic assistance by way of livelihood training, supporting education, and other auxiliary support

The long duration of treatment as well as the overall debilitating impact of the disease renders a person economically constrained and physically weak to re-enter the workforce. In this context, it was observed that some states provide economic assistance to TB patients in the form of livelihood training, supporting children's higher education, linking them to local rotary clubs and other auxiliary support.

Delhi: The Damien Foundation India Trust (DFIT) provides select TB patients in West Delhi and South West Delhi with educational and livelihood support through the Livelihood Enhancement Programme (LEP). The Ramakrishna Mission (R.K. Mission), a faith-based organization, supports MDR-TB patients through the provision of blankets during winters. Additionally, the Trust also organizes gatherings of TB patients such as the Annual Public Meeting and Blanket Distribution Programme, in which blankets are donated to participants by local NGOs.[32] The Mission caters to patients accessing clinics in Central Delhi, South West Delhi, North East Delhi and South Delhi.

Kerala: Local governments in Trivandrum and Wayanad districts construct houses for TB patients at the recommendation of STC. The housing initiative is to provide

[32] *RamaKrishna Mission T.B. Clinic. Retrieved from http://www.rkmdelhi.org/activities/medical/t-b-clinic/*

accommodation for patients who may be orphans, lacking familial support, or presently residing in poorly ventilated facilities. Many philanthropists have also come forward to contribute towards treatment costs of TB patients in need.

Tamil Nadu: TB Alert India has set up social support structures for TB patients which include meals and counselling during inpatient care. DTOs link patients belonging to low income families to local Rotary and Lions Clubs to ensure that they receive dry rations. Project Axshya in the state runs livelihood training programmes for the patients and their family members with the aim of improving the financial condition of the household. Livelihood training centres are identified at the district level and a list of eligible beneficiaries is prepared in consultation with the district TB team. In Villupuram district, trainings focused on tailoring and craft making and in Pudukottai, beneficiaries learned mushroom cultivation.

Telangana: The ARUBAH project provides Economic Development Assistance (EDA) to TB patients upon completion of treatment. For instance, if a patient is unfit to resume work owing to weakness, assistance is provided in the form of vocational training, livestock, fees for children's education, etc. Caregivers in the family are linked to income generation opportunities such as grocery shops, tea stalls, clothes business, tailoring units etc. Local NGOs have supported TB affected households by building houses, providing monetary support and providing employment. The ARUBAH team estimated that EDA worth ₹20,000 per head had been provided to 75 TB patients thus far.

Patient voices on economic support in-kind

Responses from Telangana and Delhi offer insights on the various forms of in-kind support being provided to TB patients. Respondents mentioned experiencing reduced work productivity and wage loss after contracting the disease. This was exceptionally challenging for those who were the only earning members in their family. In this context, provision of in-kind support appears to contribute towards the patients' and the households' economic needs.

Ram Krishna Mission (R. K. Mission) in New Delhi: Provision of blankets during the winter season Patients registered with the R.K. Mission in New Delhi reported receiving blankets during winter. During registration, patients are provided with a slip containing their name, MDR number and date of distribution. Respondents expressed that this form of support has helped them cope with the cold. A 28 year-old male was diagnosed with MDR-TB in 2016 and finds the food support, cash and in-kind assistance under R.K. Mission beneficial.

As a self-employed plumber, his work opportunities are intermittent. Weakness owing to the disease has reduced his ability to lift heavy weights and his "earning capacity has decreased". The patient has been provided

"It is good to keep everything separate during TB treatment, to avoid spreading [the disease]. Therefore, it is very good to get a separate blanket"

- An 18-year old was provided blankets during winter by R. K. Mission, Delhi

"It [blankets] helps in winter, and yes, I felt motivated towards completing my medicines."

-A Delhi student who was diagnosed with TB at the age of 16 received blankets from R.K Mission.

with blankets three times during winter, which helped him cope during the season.

An 18 year-old female has been suffering from MDR-TB since 2016 and had to discontinue schooling owing to the disease. Under the same scheme, she has been given one blanket for the winter. She stated that **"it is good to receive blankets"** and that her family also **"feels good"**. Patients interviewed in Delhi were satisfied with the "convenient" manner in which the support is made available.

Economic Development Assistance (EDA) scheme in Telangana: While respondents appreciated the in-kind support, they expressed the need for other forms of support

In Telangana, in-kind support takes various forms depending on the need of the patient and his/her family. A 33 year-old MDR-TB patient from Telangana is a widow and breadwinner for her two children. She was diagnosed with TB in 2015. She was provided cloth material worth ₹20,000 as part of the Economic Development Assistance (EDA) initiative under the World Vision project. While she was unable to work around the time of diagnosis, she now earns her living by stitching and selling clothes. She stated that the EDA supported her financial situation and motivated her to complete treatment. Although she is thankful for the staff's support, she has requested enhanced support for her children.

> "Yes this support has helped me a lot. I got this support when no one was coming to my house. No one was ready to help me and my children. When I got nutritional and this financial support I could do things. Now I stitch clothes and earn my livelihood. With their [NGO] support and motivation I completed my treatment and I am working today."
>
> *- A 33 year-old MDR-TB patient who was provided with cloth material worth ₹20,000.*

A 32 year-old female patient is a mother of three daughters. She was diagnosed with TB in 2016 after an ASHA worker referred her to a hospital. She was unable to work and mentioned incurring a wage loss of ₹36,000. Under World Vision support, she was provided three goats. She mentioned that the goats offered her respite as a future source of income – "**These goats are small now but in the future when they grow, they will give us milk, which I can sell and earn money".** While the patient is satisfied with the quality of support, she would prefer receiving cash support, nutrition or counselling.

V. Target beneficiaries

States prioritized covering the most vulnerable or at risk sections of the population

In terms of target beneficiaries, it was rare to find a state running PSS for all TB patients (drug resistant and drug sensitive and agnostic of economic profile) in the state, the exception being the *Mukhyamantri Kshay Poshan Yojana* in Chhattisgarh. PSS have been implemented in a targeted manner for patients belonging to economically weaker sections (based on BPL or state based income criteria) or to socially marginalized communities (such as Scheduled Tribes, Scheduled Castes and Other Backward Classes).

Eight states under study were found to be providing PSS exclusively for DR-TB patients. In terms of geographical scope, PSS in Chhattisgarh, Goa, Gujarat, Himachal Pradesh, and Maharashtra are being implemented across all districts in the state. Some of the interventions in Jharkhand,

Kerala, Telangana, and Tamil Nadu are being run state-wide. While all TB patients need to be supported with adequate socio-economic assistance, targeting PSS towards those most in need (DR-TB patients or BPL) allows the STC to advance equity in terms of improved access to services and safeguard better treatment outcomes.

Children and young adults

TB not only pervades all economic strata, but it also affects individuals of all ages. Patient responses from across different states shed light on the experiences of children and young adults suffering from the disease. The respondents fall in the age group of 10 to 20 years of age. Their stories capture perspectives on the impact of TB in their lives, challenges associated with the disease and treatment and the forms of support they are receiving.

Contracting TB forced young patients to withdraw from school education

A 10 year old girl from Hyderabad was diagnosed with TB in January 2018. She states that the excessive coughing, weakness and chest pain has been challenging and made it difficult for her to attend school. World Vision has been providing her with nutrition support for the past two months. Her mother expressed that **"[her health] has improved and her weight has increased from 20 kg to 23 kg"** because of the provided support. A male patient in New Delhi was 17 when he was diagnosed with MDR-TB. He shared that the daily injections were a painful experience. Because of bodily weakness, it became difficult to walk or play outdoor games. To support his treatment and recovery, Ram Krishna Mission (R. K. Mission) Scheme is providing him with financial support (in cash and kind), nutrition support and psycho-social support. He feels that the various forms of support have helped him regain his physical strength and energy. He noted that his **"weight improved"**. A 19 year-old undergraduate student based in New Delhi, was diagnosed with TB three years ago. The monetary support from R.K Mission **"helps [him] in getting a proper diet"**.

"I stopped going to school because of this [TB]"

-A Delhi student who was diagnosed with TB at the age of 16

"[for] 1 month, study was stopped"

- A second grade student in Hyderabad, suffering from extra-pulmonary TB

A 20 year old female from Himachal Pradesh was diagnosed with MDR-TB when she was a grade 12 student. She was forced to withdraw from school but has now completed her schooling as a private candidate. She was given food support in the form a supplementary nutrition powder, *Him Nutrimix*. She feels that *Nutrimix* has **"definitely"** been beneficial for her treatment and recovery. She also cited a substantial increase in weight. Another young adult from Himachal Pradesh narrated a similar story - The 18 year-old MDR-TB patient was diagnosed a year ago and had to drop out from school for a year. As a result, he could not appear for his grade 11 examination. The patient is also provided *Nutrimix* and has expressed satisfaction with this supplementary nutrition powder. He observed an increase in weight as a result of consuming the powder.

An 18-year old female MDR-TB patient from Hyderabad was diagnosed with TB a year ago. The fever and leg pain she experienced were the most difficult part of dealing with the disease. The patient was employed in a garments shop but has had to stop due to weakness. Now, she depends on her mother for financial support. She is receiving nutrition

What has been the most difficult part of dealing with the disease?

"Weakness, loss of appetite"

-18 year old male TB patient from East Khasi Kills, Meghalaya

"Large number of tablets and the daily injections"

-20 year old MDR-TB female patient from Himachal Pradesh

support through Helping Hands Foundation. The support has helped improve her weight "from 30 kg to 42 kg". She stated that ideally, she would like to get both nutrition and financial support. **"Food that I get, I can cook and eat. If I get financial support, I can also buy fruits and eat them for my better health".**

Patient interviews point to the risk of contagion within a family

Children with parents suffering from TB are at a high risk of contracting the disease. This was observed in the case of a 42 year-old father from North Goa. The father, who has extensively drug- resistant TB (XDR-TB) transmitted the disease to one of his daughters. She is currently undergoing treatment for MDR-TB.

VI. Resource requirements

Three states rely exclusively on state government funds for implementing patient support

Chhattisgarh, Himachal Pradesh and Maharashtra are the only states presently running PSS independent of external fund support. In **Chhattisgarh**, a total sum of ₹12 crore was earmarked for the *Mukhyamantri Kshay Poshan Yojana* in FY 2017-18 from within the state budget and is expected to continue for 2018-19 and beyond. The State TB Cell will implement the cash benefits as recommended under NSP 2017-25 and also continue to provide food baskets under the scheme. In **Himachal Pradesh**, the nutrition scheme is facilitated by funds from the state budget. The state has spent ₹10.80 lakh for the supply of the first tranche of Nutrimix. In **Maharashtra**, the PSS is an inter-departmental collaboration between Department of Public Health and Maharashtra State Road Transport Corporation (MSRTC) and between 2014 and 2017, have waived off travel costs worth ₹11,82,970.

Externally funded models provide enhanced resources, but are not sustainable due to their time-bound nature

States such as **Telangana** and **Tamil Nadu** are implementing a wider variety of patient support benefit from financial and technical assistance from external sources. While this kind of support allows for enhanced reach and supplementary resources, such projects are implemented for a limited time only. Therefore, even as beneficiaries stand to gain from the support, the time bound nature of these models calls into question the sustainability of such support unless these are integrated within the state TB programme.

The State TB Programmes have expressed broad support and readiness in implementing the recommendations of the NSP 2017-25 in so far as the proposed budget of ~₹12,000 crores comes through. States such as Telangana and Kerala among others have shared plans for integrating ongoing patient support systems within their PIP process of 2018-19.

VII. Monitoring and evaluation

Use of monitoring and evaluation mechanisms is limited

The absence of structured and regular monitoring and evaluation mechanisms for

the various patient support systems is a stark finding from the study. Of the sixteen states under study, only three (Assam, Jharkhand and Telangana) appeared to have some form of regular mechanisms to measure coverage and progress against target outcomes since the initiatives were being implemented via external support.

Inferences made on the preference or efficacy associated with the various models is based on field level observations, patient feedback and select follow up interactions conducted by field staff at the community level. Interactions and weight measurement during monthly visits to the health facility to collect food kits or discussions during home visits serve as follow up mechanisms across all states in lieu of formal monitoring mechanisms. The lack of a logical framework prevents state based initiatives to provide a robust picture of output and impact. For instance, there is limited understanding or evidence on the efficacy of cash vs. in-kind nutrition support at present. While STCs did not see it as a significant challenge, the absence of a comprehensive monitoring mechanisms limits the evidence case in support of PSS. This is because it is difficult to understand the extent to which programme outcomes can be attributed to the support provided or to surmise how the observed successes will play out on a large scale.

Kerala: Field staff sometimes undertake random household visits to conduct patient interviews and inquire about the kind of nutrition support being received by beneficiaries. However, structured supervision is absent. Similarly, the Pension Plan for TB patients is disbursed by the Revenue Department to "all those in need". The Revenue Department does not monitor treatment adherence and since the Health Department is not involved in the implementation of this scheme, pensions are provided monthly regardless of treatment status. No form of appraisal is currently undertaken for this scheme.

Tamil Nadu: Under the UPT scheme in Tamil Nadu, field staff including STS and TB coordinator periodically conduct home visits to investigate whether the disbursed funds are being used as recommended and assess gaps in the provision of incentives. The findings from these home visits are submitted to the District TB Officer (DTO) and subsequently passed on to the District Collector for necessary action.

Telangana: Even as the state benefits from a range of patient support systems that include nutritional support, counselling, vocational training, a formal impact assessment has not been conducted. TB Alert reported a treatment success rate of 95% after the implementation of nutrition support under AASARA project but this is largely based on on-ground observation. Project Axshya was scheduled to be evaluated in December 2017.

Recommendations: Towards expanded patient support

In mapping out state experiences of implementing various forms of socio-economic and nutrition support, the attempt has been to document the strengths, challenges and areas of improvement that can collectively inform the roll out of patient support systems as proposed under the National Strategic Plan. Our study also revealed patient experiences vis-à-vis side effect management, risk of contagion, gendered positioning of the disease, among others. While these observations are crucial to well-rounded programmatic elimination of TB, these aspects remains out of the purview of this report.

Building upon the findings, this section presents a set of tangible, action oriented recommendations that will inform the setting up and strengthening of patient support systems across India. All recommendations have been derived from interactions with various officials from State TB Cells, technical experts and insights emerging from patient interviews.

Make nutrition support an integral part of patient's therapy

The perspective on TB elimination has moved beyond the provision of biomedical treatment. Provision of nutritional support can bring down mortality and unfavourable outcomes owing to TB. Several states in the country have introduced targeted nutritional supplementation programmes for TB patients, especially for those with drug resistant TB and those belonging to the economically weaker sections of the population. Not only can the provision of supplementary nutrition be instrumental in improving motivation and adherence to treatment, it is an intrinsic part of therapy for the patient.

> Several states are considering a hybrid model of nutritional support – both cash transfer and food support

Further, the Union Budget 2018-19 avowed that ₹600 crores will be set aside to provide nutrition support for all TB patients by way of ₹500 per month for the entire treatment duration.[33] While this is a welcome step, the jury is still out on whether nutrition is best provided via cash or in-kind support until there is evidence on the comparative efficacy of one over the other. Patient voices corroborate that both forms of support are needed.

[33] *Ministry of Finance (2016). Budget Speech 2018-19. Retrieved from India Budget: http://www.indiabudget.gov.in/ub2018-19/bs/bs.pdf*

Globally, conditional cash transfers (CCT) have a positive impact on uptake of health services, health outcomes and nutritional status of infants and young children.[34] However, in the case of TB, CCT appears to contribute to the cure rate, however the evidence of impact on nutritional status and treatment is limited.[35] Monthly cash support will augment the household's ability to expend on nutritional needs but does not offer a guarantee that funds will be devoted towards this end. On the other hand, well planned food support directly impacts beneficiary's well-being but supply chain management can overwhelm the state TB programme's capacities. Therefore, several states are considering a **hybrid model of nutritional support – both cash transfer and food support**.

Key recommendations

Complement the introduction of DBT of ₹500 per patient for nutrition support with provision of supplementary nutrition for the entire duration of treatment.

Supplementary nutrition

- Align supplementary nutrition with the recommendations made in *Guidance Document: Nutritional Care and Support for Patients with Tuberculosis in India.* Patients should be provided enhanced ration through the PDS as well as an additional food basket directed at supplementing their calorie and protein intake requirements.
- Design food baskets keeping in mind the local food palate as well as infrastructure available for supply chain management. Food baskets should incorporate calorie dense, nutritious items that can be consumed with minimum effort by the patient. In this regard, dry fruits, nuts, milk powder, soya bean oil or nutritious dry mixes would be beneficial. Additionally, patients reportedly prefer food items that can be used as ingredients in daily cooking.

Service delivery

- Procurement and delivery for supplementary nutrition should be entrusted to a government department with relevant experience in production, purchase, procurement, processing, storage, movement, and delivery of food stuffs. Close coordination with Department of Civil Supplies is recommended in this regard. Linkages with ICDS could also be explored to support children, pregnant and lactating women suffering from TB.
- Leverage support of local NGOs and CBOs towards service delivery, capacity building of field staff and monitoring and evaluation.
- Disburse food packets at the health facility to create an opportunity for dialogue with the patient, assess improvement, follow up on treatment adherence, and provide counselling support. Food packets should be delivered to the patient's home if she or he is indisposed to visit the health facility as patients have indicated this as the "most convenient" option.

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[34] *Lagarde M, H. A. (2009). he impact of conditional cash transfers on health outcomes and use of health services in low and middle income countries. Retrieved from Cochrane Library: http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD008137/epdf/standard*

[35] *Torrens, A. W., Rasella, D., Boccia, D., & al, e. (2016, February). Effectiveness of a conditional cash transfer programme on TB cure rate: a retrospective cohort study in Brazil. Retrieved from Transactions of the Royal Society of Tropical Medicine and Hygiene : https://academic.oup.com/trstmh/article-abstract/110/3/199/2578980?redirectedFrom=fulltext*

Improving awareness

- Community groups can play an important role in encouraging preventive behaviours including nutrition, debunking myths around the disease, promote early diagnosis and uptake of treatment. Patients receiving nutrition support can share their experience and perceived benefits in such group engagements as well.
- Accompany cash transfers with proactive counselling of the patient to convey the need for using this amount towards nutrition only. Guide patients in resolving misconceptions around the perceived nutrition value of costlier food items and inform them about the benefits of locally available, cost-effective and nutritious alternatives.
- Both facility based and home based counselling should be used to raise awareness on the importance of balanced nutritious diet in preventing and curing TB. Patients should be counselled at the facility at the time of picking up the food packages. This should be complemented by home visits, during which ongoing food practices can be observed and the patient can be counselled on optimum nutrition.

Resource requirements

- Ensure greater budgetary allocation so that supplementary nutrition can be extended to all patients in the state. At present, in-kind food support is being provided in a targeted manner i.e. for MDR-TB patients, for BPL patients etc. However, all patients will benefit from both cash and in-kind food support.

Monitoring and evaluation

- Define appropriate, evidence based monitoring and assessment indicators that can measure the overall impact of nutrition support on patient. For example, it is preferred to assess changes in BMI status and not just weight gain.
- A monitoring and evaluation mechanism should be put in place to track outcomes and impact, including understanding the success of DBT vs. in-kind support, especially from the lens of gender, regional and sociocultural differences. Future support should be tweaked in line with the findings on the efficacy of service delivery as well as patient preferences.

Provide economic support in various forms during and after treatment

Economic support can go a long way in enabling a patient to continue treatment without the fear of catastrophic financial burden. Even as diagnosis and treatment for TB is provided free of cost in the public sector, the disease imposes a severe economic burden on the patients and their households e.g. travel costs, additional medicines, supplementary nutrition etc. The loss of livelihood while battling the disease is the most prominent economic constraint, especially for single income families. The long duration of treatment as well as the overall debilitating impact of the disease renders a person economically constrained and physically weak to re-enter the workforce.[37] Families are forced to compensate their financial burden by sale of assets, taking a loan or withdrawing a child's education and

> Addressing socio-economic determinants & implications of disease among the poor is a potent step in breaking the vicious cycle of poverty and disease

[37] *Kumar, B. A. (2016). Rehabilitation of treated TB patients: Social, psychological and economic aspects. Retrieved from ScienceDirect (International Journal of Mycobacteriology): https://ac.els-cdn.com/S221255311630245X/1-s2.0-S221255311630245X-main.pdf?_tid=b483d94b-25b6-4643-aadb-18cfb0e4102c&acdnat=1528257521_dacb34bec72c9dbe4f0197adfd888bb8*

run the risk of entering a free fall into debt and poverty. The economic impact of TB is devastating, multifaceted and long term. Economic distress also goes hand in hand with psychological distress.[38] Therefore, addressing socio-economic determinants and implications of the disease, especially among the poor, is a potent step in breaking the vicious cycle of poverty and disease. Patient support systems, in this regard, can be instrumental in offering financial risk protection as envisaged under the broader UHC strategy.

The NSP has recommended financial incentives of ₹500 per month per patient by way of economic assistance. This support is premised on the Pradhan Mantri Jan-Dhan Yojana, Aadhaar and NIKSHAY platform and therefore presumes the functionality of each component to be able to deliver support.

State experiences reflect a multitude of avenues offering economic support to TB patients. This included monetary support, linking them to existing social support schemes, vocational training, supporting a child's education, expense waiver, linking them to a means of livelihood and other auxiliary support. However, uptake of support from these avenues was restricted by a lack of awareness on available entitlements as well as limited linkages.

Key recommendations

Handholding support to patients

- Ensure uptake of Aadhaar cards and bank accounts for all patients seeking treatment currently. In case of unavailability of an Aadhaar card or bank account, the authorities should support the patient to create one. In case of technical or operational delays in linking patient's Aadhaar card, the State TB Cell must make alternative arrangements to provide benefits. In no case should patient support be denied or delayed.
- Link the patients to existing social welfare schemes to allow them to avail benefits wherever applicable.
- Cash support/ Direct Benefit Transfers have to be accompanied by regularly guiding the patient on the correct use of this incentive towards treatment costs and general wellbeing.

Inter-departmental linkages

- Create operational linkages with relevant state departments such as Department of Revenue, Department of Women and Child Development as well as other schemes running under Department of Health. This will ensure that such welfare schemes have an eligibility criteria that recognizes TB patients as beneficiaries and provides them timely support.
- Regular communication should be maintained with the Department of Revenue to ensure the timely release of cash support. State TB Offices should engage the Department of Revenue in the monitoring and evaluation process to address operational bottlenecks.

[38] *Kumar, K., Kumar, A., Chandra, P., & al, e. (2016, Jan-Mar). A study of prevalence of depression and anxiety in patients suffering from tuberculosis. Retrieved from National Center for Biotechnology Information: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943123/*

Health insurance coverage

- Ensure that all diagnostics and inpatient care for TB patients is covered under RSBY/NHPS and state based insurance schemes, if applicable.
- Developing a special TB benefits package that could cover outpatient costs would be beneficial since TB treatment has been decentralized to a large extent and not all cases will require hospitalization. Greater cover for outpatient expenses would be a valuable area of support.

Vocational and rehabilitative support

- Create vocational and rehabilitative support for the patient post treatment completion by connecting them with relevant programmes. Linking cured individuals with programmes such as the Deen Dayal Antyodaya Yojana (DDAY)[39] among others will allow the patient to be re-integrated into the workforce.
- Leverage support from development partners and local NGOs to provide vocational training for family members so that they are empowered to earn a livelihood.

Improving awareness

- Spread awareness about the provision of ₹500 for all TB patients under the *Nikshay Poshan Yojana*. A well informed patient will inquire about this entitlement and therefore private providers will be encouraged to notify TB patients to the government. This will increase the social protection net to include privately treated patients. Often patients do not know about insurance coverage and need to be made aware of their entitlement and the procedure for availing it.

Others

- Seamless functionality of DBT is premised on the internet based software Nikshay. State TB offices should ensure that all regions have uninterrupted internet access to enter patient information and monitor them. At the back end, it must be ensured that the software is user friendly and capable to manage the data load.

Integrate psycho-social support as key component of patient support

In addition to the extensive physical stress and economic burden, TB induces debilitating and enduring emotional and psychological stress in the patient. Researchers at the national and international level have generated considerable evidence on the comorbidity between TB and psychological distress. Those who have been previously treated for the disease are 3.76 times more likely to report psychological distress than newly diagnosed individuals.[40] After diagnosis, poor understanding of the disease, loss of livelihood, stigma, loss of social standing and stress in inter-personal relationships can result in depression and hopelessness. Certain TB drugs are known to induce psychosis, insomnia, irritability and restlessness as well as other side effects.[41] This can deter the patient from seeking and

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[39] *The Deen Dayal Antyodaya Yojana (DDAY) is an overarching scheme to uplift urban and rural poor with the enhancement of livelihood opportunities through skill development and other means. National Rural Livelihood Mission was renamed as DAY-NRLM (Deendayal Antyodaya Yojana - National Rural Livelihoods Mission) w.e.f. March 29, 2016 and is the flagship programme of Govt. of India for promoting poverty reduction through building strong institutions of the poor, particularly women, and enabling these institutions to access a range of financial services and livelihoods services. Deendayal Antyodaya Yojana - National Rural Livelihoods. (n.d.). Retrieved from Master Circular – Deendayal Antyodaya Yojana – (NRLM): https://rbidocs.rbi.org.in/rdocs/content/pdfs/10MC03072017_AN1.pdf*

[40] *Tola, H., Shojaeizadeh, D., Garmaroudi, G., & al, e. (2015, November 24). Psychological distress and its effect on tuberculosis treatment outcomes in Ethiopia. Retrieved from National Center for Biotechnology Information: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4660932/pdf/GHA-8-29019.pdf*

[41] *Kumar, K., Kumar, A., Chandra, P., & al, e. (2016, Jan-Mar). A study of prevalence of depression and anxiety in patients suffering from tuberculosis. Retrieved from National Center for Biotechnology Information: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943123/*

continuing treatment for the prescribed duration and has been known to cause serious mental stress often culminating into suicidal thoughts.

While facility based counselling provides an important window of opportunity, psycho-social support has to be offered in the patient's surroundings, at the community level and within the family as well. Community mobilization activities formed an important part of patient support initiatives across states and were characterised by active participation from PRI members, AWWs, ASHAs and other volunteers. In some states, voluntary support groups were formed at the community level to reach out to patients in need. These along with health workers conducting home visits offer psycho-social support to assess the health status of the patient and closely monitor treatment adherence and improvements. Patients too have indicated a desire and a potential to become champions of treatment uptake within the community.

Key recommendations

Improving awareness and empathy

- Launch a BCC campaign that addresses and resonates the individual and community level aspects of the disease. This can build further on the ongoing "TB *Harega Desh Jeetega*" campaign.
- Awareness campaigns should also target schools to improve awareness on aspects of prevention, prevailing myths and misconceptions, signs and symptoms of the disease as well as on services, drugs and support mechanisms available under government programming.
- Develop guidelines on recommended content for IEC and BCC activities and community based interactions so that psycho-social support aligns with optimal messaging.
- Extend counselling to family members to give them a platform to address their misconceptions, emotional needs and to encourage them to support the patient.
- Extend counselling to the community members to address prevailing misconceptions about TB and create an enabling environment for timely diagnosis, treatment uptake and continuation.
- Ensure the availability of at least one counsellor per DR-TB center. Facility based counselling is essential to motivate patients, inform them about their rights and address their concerns.
- Counsellors should receive refresher training which re-acquaints them with optimal messaging as well as good inter-personal skills. Further, health workers at all levels of operation should be trained to be sensitive while communicating with TB patients, and be able to connect patients with various counselling support systems.

Voluntary community based groups

- Facilitate creation of treatment support groups at the community level. These could be voluntary in nature and invite participation from a range of individuals such as PRI members, local health workers, teachers, CBOs, cured individuals etc.
- Cured TB patients, in particular, should be involved as champions for treatment uptake by regularly sharing their experiences with the community at large. Adequate attention should be paid to avoid exposing cured champions to the infection again.

Engage local government representatives

- Get PRI members to anchor and lead community based activities for TB patients. Their presence would lend validity to the initiative and can directly combat prevailing notions of stigma and discrimination against patients.

Foster cross sectoral ownership of patient support systems to ensure success of the initiative

A number of determinants of TB such as poverty, malnutrition, urbanization, indoor air pollution, sanitation, migration, etc., remain outside the direct purview of the health department. TB prevention, care and elimination, therefore, needs a multi-sectoral response.[42,43]

More specifically, the success of patient support systems rests on efficient inter-departmental coordination. This is especially true for establishing linkages with existing social schemes that are spread across different departments. Similarly, food support will need to be implemented in coordination with state based departments of food and civil supplies. A truly patient centric approach to TB elimination will need to touch upon challenges plaguing different aspects of a person's life.

Key recommendations

Inter-sectoral ownership

- Create State TB Forum and District TB Forum to convene Members of the Legislative Assembly, policy makers, civil society representatives, District Magistrates, Chief Medical Officers and community based organizations on a regular basis. These forums at the state and district level should replicate the mandate of the newly constituted National TB Forum and work towards greater awareness and prevention of the disease.
- Get relevant ministries and corresponding state departments to "co-own" relevant components of patient support. This would allow the State TB Programme to tap into the expertise, infrastructure and resources of ongoing initiatives under different departments. Some of the relevant ministries are:
  - Department of Women and Child Development: targeted reach for women and children suffering from TB; ration support through ICDS
  - Department of Food and Public Distribution/ Civil Supplies: support on the supply chain management of food based support
  - Department of Human Resource Development: create a favourable policy environment to support the education of children and young adults who are forced to withdraw from schools owing to TB
  - Department of Urban Development: support improved housing facilities in overcrowded areas; facilitate accommodation for homeless patients or patients lacking familial support
  - Department of Rural Development: create linkages with relevant

[42] *Chiang, C.-Y., Weezenbeek, C. V., Mori, T., & al, e. (2013). Challenges to the global control of tuberculosis. Retrieved from Official Journal of the Asian Pacific Society of Respirology: https://onlinelibrary.wiley.com/doi/epdf/10.1111/resp.12067*

[43] *Pai, M. (2018, March 22). 10 Things to Prioritise to Achieve TB Elimination by 2025. Retrieved from The Quint : https://fit.thequint.com/health-news/10-things-to-prioritise-to-achieve-tb-elimination-by-2025-2*

employment opportunities for beneficiary and his or her family members
    - Department of Local Self Government: preside over community level initiatives and awareness generation campaigns
    - Department of Public Health Engineering/ Water and Sanitation: from a preventive point of view, look into the overall hygiene and cleanliness of the local surroundings
    - Department of Finance: sufficient fund allocation toward patient support systems, and supervision and management of timely and regular fund disbursement
- Organize a **multi-sectoral state based consultation** to deliberate on the role of respective departments and urge participants to own some aspect of social support for TB patients.
- Similarly, the State TB Programme should continue to **invite collaboration** from development partners and NGOs that work across different fields and can push for coordinated action.

Set up and implement patient support systems in an outcome oriented manner

Union Budget 2018-19 was accompanied by an Output-Outcome monitoring framework[44] that would track progress on the outputs and outcomes under various government schemes. The following are targets spelled out for RNTCP:

Output/ Deliverables against the Outlay 2018-19	Increase in total TB cases notified (Public& Private) to 20,00,000 from 17,45,000 (2016)
Projected Medium Term Outcomes	Improved Treatment Success rate (80%) amongst Notified Drug Sensitive TB cases

In this context, patient support system have a key role to play in improving case notification as well as in ensuring treatment success rate. When patients are informed about entitlements related to socio-economic and nutrition support, it serves as a strong motivating factor for them to seek treatment and, thus, be 'notified'. Secondly, holistic patient support contributes to patient wellbeing and thereby improves the overall probability of treatment success.

Therefore, creating a concrete causation between patient support systems and improved treatment outcomes calls for a systematic monitoring and evaluation framework. The states presently undertaking some form of patient support have intermittent follow up mechanisms and do not conduct a structured impact assessment. This creates significant gaps in knowledge vis-à-vis resources invested, reach and impact. Regular monitoring and evaluation of PSS will, over time, create adequate evidence base to: i) build confidence in the efficacy of this strategy among policy makers and programme officials, ii) allow for course correction year on year, iii) enhance uptake of the support mechanism among the patients.

[44] *Ministry of Finance. (2018, February). Output Outcome Framework for Schemes 2018-19. Retrieved from India Budget: http://www.indiabudget.gov.in/OutcomeBudgetE2018_2019.pdf*

Key recommendations

- **Extend PSS to patients in the private sector** as a means to ensure optimal treatment and improve notification rates. Support schemes will incentivize patients to report disease status. It will also allow them to be better informed about the correct treatment regimen and other entitlements available under the national TB programme.
- **Create log frame for PSS** under RNTCP with target outputs and outcomes defined for each form of support. For example, tracking enrolment and uptake; measuring improvement in weight and BMI among malnourished patients; assessing number of households taking up work opportunities following vocational training; examining number of cured patients who managed to join work following treatment; and number of cured patients who participate in community meetings as champions.
- **Plan and track programme budget for PSS** to allow for an improved budgetary allocation and utilization. State PIPs should include a structured plan for PSS initiatives proposed for each fiscal year. Data and documentation on uptake and impact should feed into this planning process.
- **Conduct programmatic evaluation** against defined log frame to identify and address existing inefficiencies; **Annual assessment** of coverage, adherence and treatment outcomes should be undertaken; both from the point of view of programmatic efficiency and patient perspective.
- A **monitoring and evaluation mechanism** should be put in place to track outcomes and impact, including understanding the success of DBT vs. in-kind support. Structured formats can be used at the village, block and district level and be integrated into the existing monitoring framework. Future support should be tweaked in line with the findings on the efficacy of service delivery as well as patient preferences.

Overall, it is recommended that patient support systems should be extended to all TB patients in the country. The nature and degree of support can be decided based on local context, patients' gender, age, socio-economic background. It is envisaged that the findings and recommendations presented in this report will serve as an impetus for states to define and implement a comprehensive patient support system or a set of patient centric schemes and entitlements for all TB patients.

ANNEXURES

Annexure 1: State Snapshots

- State snapshots have been developed based on information received from State TB Cells via responses on templates, telephonic interviews and state visits
- Data on Total TB notifications and Annual total TB notification rate for each state snapshot has been retrieved from the RNTCP Annual Status Report 2018. (2018). *India TB Report 2018.* Central TB Division, Ministry of Health and Family Welfare. Retrieved from https://tbcindia.gov.in/showfile.php?lid=3314
- Annual total TB notification rate is per 1,00,000 population

Arunachal Pradesh

Total TB patients notified: 3,154

Annual total TB notification rate: 203

I. Nutrition support, Counselling & DOTS Services

Indicator	Details
Geographic scope of coverage	(1/21 districts) Tirap
Type of support	Nutrition support, counselling & DOTS services
Implementation period	Not available
Target beneficiaries	TB patients
Total beneficiaries	Not available
Implementing agency/ partner	State TB Cell (RNTCP) in collaboration with Missionaries of Charity (NGO)
Linkage with other schemes	No
Details of intervention	The missionary provides nutrition support, counselling and DOTS services to TB patients. The Sisters are in regular engagement with the RNTCP to ensure treatment adherence. They participate in RNTCP DOTS training, refresher programme and community meetings. Service delivery: Drugs are provided by RNTCP at DOTS centres, whereas nutrition support and other services required by patients are provided by the Sisters of the NGO. Half of the patients in the district are catered to at the DOTS centers at Khonsa and Borduria.
Funding source	Missionaries of Charity
Cost of activity	Not available. The cost of care and nutrition support is funded by the NGO, without any monetary support from the RNTCP.
Preliminary outcomes	Not available
Plans of scale-up	Not available

Assam

Total TB patients notified: 40,174

Annual total TB notification rate: 119

I. Project POSHAN

Indicator	Details
Geographic scope of coverage	(14/32 districts) Barpeta, Bongaigaon, Chirang, Darrang, Dhubri, Goalpar, Kamrup, Kamrup Metro, Kokrajhar, Karbi Anglong, Morigaon, Nagaon, Nalbari, Sonitpur
Type of support	Nutrition support
Implementation period	2016 – 2017
Target beneficiaries	MDR-TB patients
Total beneficiaries	300 MDR-TB patients
Implementing agency/ partner	Doctors For You (DFY) NGO with support from the State TB Cell
Linkage with other schemes	No
Details of intervention	Nutrition support is provided to beneficiaries for a total duration of six months. Patients are also counselled on the benefits of the food provided under the support. Implementation: A list of new and existing beneficiaries is prepared by the District TB Cells (DTC) in consultation with Programmatic Management of Drug Resistant Tuberculosis (PMDT) and Public Private Mix (PPM) coordinators. Based on the list of beneficiaries, procurement orders are initiated. The quality of items is screened before the order is placed. Service delivery: A local vendor has been selected by each DTC for the procurement of the nutrition kits. The kits are distributed by PMDT and PPM coordinators on a monthly basis to beneficiaries in the target districts. Monitoring: Monthly follow-ups are conducted for 30 patients on the basis of a fixed format. Patients who have been receiving support for six months are examined for improvement in weight. Consumption of the ration is assumed to lead to an increase of 0.5 kg in weight, which is examined in the monthly check ups.

Indicator	Details
	Community mobilization: In some districts, the DTO organizes advocacy meetings. Cured TB patients residing in the area are invited to speak about their experience and motivate TB patients who are currently undergoing treatment. The regularity of these meetings is dependent on the availability of the cured TB volunteers. In the larger cities, DTOs encourage cured TB patients to work as DOTS providers. The training is provided by the Senior Treatment Supervisor (STS) and DTOs. In this regard, Guwahati has mobilized one patient.
Funding source	DFY
Cost of activity	Approximately ₹1000 per patient per month
Preliminary outcomes	Not available
Plans of scale-up	None as of now. The programme may be concluding shortly.

Additional information

Food item	Quantity per month (kg)
Wheat	2
Rice	7.5
Green Gram	1
Pulses	1
Chickpeas	1
Jaggery	1
Soya bean	1
Peanut	1

Contents of the food packets in Assam

Bihar

Total TB patients notified: 96,489

Annual total TB notification rate: 82

I. Doctors for You Nutrition Support Initiative

Indicator	Details
Geographic scope of coverage	(4/38 districts) East Champaran, West Champaran, Sitamarhi, Muzaffarpur
Type of support	Nutrition support
Implementation period	2016 – Present
Target beneficiaries	DR-TB Patients
Total beneficiaries	Not available
Implementing agency/ partner	Doctors For You (DFY) NGO
Linkage with other schemes	No
Details of intervention	Monthly nutrition support is provided in the form of ration packets for six months. Monthly counselling services are provided for the family members of the patients as well. Service Delivery: A DFY staff procures the materials required for the nutrition packets. The STC and DTO are responsible for the distribution of the packets. The STC is also involved in counselling services, for which nutrition counsellors may be appointed. In the absence of nutrition counsellors, the STC staff members provide counselling to the patients on the benefits of nutritious food and adherence to treatment. Community mobilization: The STC organizes regular health camps in each district of the state where patients are screened for TB. Cured TB patients are also engaged in awareness generation activities to garner attention of other organizations which could serve as prospective donors. Monitoring: The weight of TB patients is measured every month during distribution of the packets. Based on the improvement in weight, couselling is conducted.

Indicator	Details
Funding source	Johnson & Johnson
Cost of activity	₹900 per patient per month
Preliminary outcomes	Not available
Plans of scale-up	None

Additional information

Food item	Quantity per month (kg)
Wheat	6
Rice	6
Red Lentils	1
Gram flour	1
Chickpeas	1
Kidney beans	1
Split chickpeas	1

Contents of the food packets in Bihar

Chhattisgarh

Total TB patients notified: 41,272

Annual total TB notification rate: 145

I. MDR-TB Package under RSBY & MSBY

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	November 2012 – Present
Target beneficiaries	RSBY: MDR-TB patients falling in the BPL bracket MSBY: all MDR-TB patients (BPL & APL)
Total beneficiaries	Not available
Implementing agency/ partner	Government of Chhattisgarh
Linkage with other schemes	Rashtriya Swasthya Bima Yojna(RSBY) and Mukhyamantri Swasthya Bima Yojna (MSBY)
Details of interventiont	The "MDR-TB Package" of benefits includes pre-treatment evaluation covering all clinical and laboratory tests, follow up evaluation, ancillary drugs for management of adverse side effects and hospital stay (image with package details can be found below). The average cost of hospitalization per patient is around ₹8,000, which is covered within the overall RSBY/MSBY insurance coverage of ₹50,000. The scheme provides an opportunity to enhance public-private engagement, often an untapped avenue in the RNTCP, and therefore addresses the prevalent issue of inaccurate diagnostic testing and prescribing in the private sector. It will also ensure notifications from private hospitals empanneled under RSBY.
Funding source	Government of India
Cost of activity	No additional cost incurred
Preliminary outcomes	Not available
Plans of scale-up	State wide scheme - The package, at present, only provides coverage for inpatient care. However, there are plans to revise the existing benefits package to expand coverage to outpatient care as well.

II. Mukhyamantri Kshay Poshan Yojana

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Nutrition support
Implementation period	July 2017 – Present
Target beneficiaries	All TB patients
Total beneficiaries	Not available
Implementing agency/ partner	Department of Health and Family Welfare, Government of Chhattisgarh
Linkage with other schemes	None
Details of intervention	Additional nutrition supplementation is provided to all TB patients in the form of food baskets. The decision on the food commodities to be provided under this support was taken by a specially constituted State Technical Committee for Nutrition. Benefits are provided to new TB patients for a total duration of six months, to previously treated TB patients for eight months and to DR-TB patients for 24 months. Patients are informed about the entitlements under this scheme during counselling with Medical Officers as well as during Information, Education and Communications (IEC) activities that take place at the district and block level. Implementation: The model leverages Mitanins (ASHA workers) and Auxiliary Nurse Midwives (ANMs) at sub-centres, who serve as DOTS providers. Service delivery: The monthly food baskets are procured and distributed by Chhattisgarh Medical Services Corporation (CGMSC). The STS provides beneficiaries with counselling on the quality and nutritional value of the basket and treatment adherence, at the time of distribution of the first basket. Monitoring: DTOs and Mitanins have been instructed to question patients at the time of distribution on their food and medication intake. To monitor the receipt of nutrition supplementation, a treatment card with patient signatures is maintained by the health facility. Every two months, patients are requested to come for follow up visits. During this visit, patients are counselled for side effect management, adherence, microbiological and clinical examination. Additionally, the weight of patients is measured at a two-month interval at the DTCs (district level) and sub-centres (block level).
Funding source	Government of Chhattisgarh

Indicator	Details
Cost of activity	₹12 crores per year ₹850 per person per month
Preliminary outcomes	Not available
Plans of scale-up	Not applicable

Additional information

Food item	Quantity per month
Soya bean Oil	1 L
Groundnut	1.5 kg
Milk Powder	1 kg

Contents of the food baskets in Chhattisgarh

Delhi

Total TB patients notified: 65,893

Annual total TB notification rate: 360

I. Nutrition Support

Indicator	Details
Geographic scope of coverage	(8/11 districts) North West Delhi, North East Delhi, North Delhi, Central Delhi, East Delhi, West Delhi, South West Delhi, South Delhi (details on geographic scope within districts is provided in the additional information)
Type of support	Nutrition support
Implementation period	2017 – 2018
Target beneficiaries	• TB patients at Rajan Babu Institute Of Pulmonary Medicine & Tuberculosis (RBIPMT) hospital (DOTS Plus Site KCC) • Most vulnerable TB patients • MDR-TB patients • Target beneficiaries vary depending on geographic scope and implementing agency
Total beneficiaries	Not available
Implementing agency/ partner	Development partner Janssen Foundation, the HCL Foundation and NGOs such as TB Alert, German Leprosy and Relief Association (GLRA), Ram Krishna Mission (R. K. Mission), Damien Foundation India Trust (DFIT), Anaj Bank NGO and Doctors For You (DFY) are implementing the support in the abovementioned districts.
Linkage with other schemes	Not available
Details of intervention	• Dry ration is provided by Janssen Foundation and TB Alert NGO as well as by Anaj Bank NGO. Janssen Foundation and TB Alert NGO provide the support on a monthly basis. • Food package containing wheat flour, rice, split green gram, red lentil, split chickpeas, jaggery, soya beans and groundnuts is provided by DFY on a monthly basis.

Indicator	Details
	• NGO GLRA and HCL provide protein power supplement to MDR patients (BMI <18). Supplement is given after weight measurement on a fortnightly basis. • Eggs are provided on a daily/monthly basis through NGO assistance. • Milk, egg, biscuits, rice, pulses, wheat porridge, oil, wheat flour and monetary aid are provided on a daily/monthly basis to MDR-TB patients by R.K Mission. • Monthly ration of milk, wheat flour, chickpea flour and rice as well as socio-economic support (after treatment) is provided to MDR, XDR and HIV Positive patients by DFIT.
Funding source	Development partner Janssen Foundation, the HCL Foundation and NGOs such as TB Alert, GLRA, R.K Mission, DFIT and DFY are funding the support in the abovementioned districts.
Cost of activity	Not available
Preliminary outcomes	The STO suggests that adherence to treatment is improved with nutrition support.
Plans of scale-up	Not available

Additional information

Information submitted by Delhi STC details out the geographical scope of support in terms of Chest Clinics. These chest clinic facilities cater to localities across various districts. For the purpose of this snapshot, we have presented geographic scope in terms of districts. The specific localities receiving nutritional support are as follows:

North West Delhi: Jhahangirpuri, Bhalaswa, Rohini, Vijay Vihar, Karal, Khanjawla, Ashok Vihar, Shalimar Bagh, Pitampura, Ahakur Pur, Sangam Park, Shehzada bagh, Narela, Barwala, Bakhtawerpur, Siraspur, Bawana, Mangol Puri, Kirari, Sulatan Putan Puri, Pritam Pura

North East Delhi: Shastri Park, Seelampur, Yamuna Vihar, Shiv Vihar, Karawal Nagar, Sonia Vihar, Chand Bagh, Gokul Puri, Kajoori Khas, Mukund Pur, Budh Nagar

North Delhi: Gurmandi, Gulabi Bagh, Trinagar, Azad Market, Kingsway Camp, Timarpur, DU, Wazira Baad, Burari, Chawri Bazar, Hindu Rao

Central Delhi: Jhandewalan, Karol Bagh, Paharganj, New Delhi, Delhi Gate, Darya Ganj, Jama Masjid, AIIMS, Tank Road, Anand Parbat, Pilli Kothi

East Delhi: Maujpur, Johri pur, Patparganj, Trilok Puri, Pandav Nagar, Mayur Vihar, Preet Vihar, Laxmi Nagar

West Delhi: Raghuveer Nagar, Khayala, Chaukhandi, Hari Nagar, Tilak Vihar, Vikas Puri, Tihar Jail, Mohan Garden, Uttam Nagar, Moti Nagar, Madi Pur, Pashim Vihar, Jwala Puri, Kirti Nagar, Raja Garden, Ranjeet Nagar, Patel Nagar

South West Delhi: Moti Bagh, Sagar Pur, Mahipal Pur, Delhi Cantt., Jafferpur Kalan, Najafgarh, Pandawla Kalan, Goila Dairy Vijay Enclave, Kakrola

South Delhi: Lodhi Road

II. Cash Support

Indicator	Details
Geographic scope of coverage	A. (8/11 districts) Central Delhi, East Delhi, North Delhi, North West Delhi, North East Delhi, South Delhi, South West Delhi, West Delhi B. State-wide C. State-wide (Details on the geographical scope within districts is provided in the additional information)
Type of support	Economic assistance
Implementation period	2017 – 2018
Target beneficiaries	MDR-TB patients TB HIV+ patients Patients on Bedaquiline (BDQ)
Total beneficiaries	Not available
Implementing agency/ partner	State TB Cell
Linkage with other schemes	Not available
Details of intervention	A. A cash benefit of ₹50 is given to MDR-TB patients for transporting sputum for culture to chest clinic & DST lab in the eight districts mentioned above. The benefit is provided after verification of the visit to the lab. It includes the support for BDQ. B. A cash benefit of ₹1,000 is provided to every TB HIV+ patient by Delhi State AIDS Control Society (DSACS) in the state of Delhi. C. Financial support is provided to BDQ's Patients by The UNION for their pretest evaluation.
Funding source	Central TB Division, Directorate General of Health Services, Government of India
Cost of activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	Not available

Additional information

Information submitted by Delhi STC details out the geographical scope of support in terms of Chest Clinics. These chest clinic facilities cater to localities across various districts. For the purpose of this snapshot, we have presented geographic scope in terms of districts. The specific localities receiving cash support are as follows:

Central Delhi: Jhandewalan, Karol Bagh, Paharganj, New Delhi, Delhi Gate, Darya

Ganj, Jama Masjid, AIIMS, Tank Road, Anand Parbat, Pilli Kothi

East Delhi: KarKardooma, Vishwas Nagar, Dilshad Garden, Jhilmil, Maujpur, Johri pur, Patparganj, Trilok Puri, Pandav Nagar, Mayur Vihar, Preet Vihar, Laxmi Nagar

North Delhi: Gurmandi, Gulabi bagh, Trinagar, Azad Market, Kingsway Camp, Timarpur, DU, Wazira Baad, Burari, Chawri bazar, Hindu Rao

North West Delhi: Jhahangirpuri, Bhalaswa, Rohini, Vijay Vihar, Karal, Khanjawla, Ashok Vihar, Shalimar Bagh, Pitampura, Ahakur Pur, Sangam Park, Shehzada bagh, Narela, Barwala, Bakhtawerpur, Siraspur, Bawana, Mangol Puri, Kirari, Sulatan Putan Puri, Pritam Pura, Ajeet Nagar, Gandhi Nagar

North East Delhi: Shastri Park, Seelampur, Yamuna Vihar, Shiv Vihar, Karawal Nagar, Sonia Vihar, Chand Bagh, Gokul Puri, Kajoori Khas, Mukund Pur, Budh Nagar, Shahdara, Nandnagri, Sunder Nagri, Seemapuri

South Delhi: Lodhi Road, Nehru Nagar, Ashram, Sarai Kale khan, Okhla, Harikesh nagar, Khanpur

South West Delhi: Bijwasan, Dwarka, Saad Nagar, Chawla Village, Moti Bagh, Sagar Pur, Mahipal Pur, Delhi Cantt., Mehroli, Jafferpur Kalan, Najafgarh, Pandawla Kalan, Goila Dairy Vijay Enclave, Kakrola

West Delhi: Raghuveer Nagar, Khayala, Chaukhandi, Hari Nagar, Tilak Vihar, Vikas Puri, Tihar Jail, Mohan Garden, Uttam Nagar, Moti Nagar, Madi Pur, Pashim Vihar, Jwala Puri, Kirti Nagar, Raja Garden, Ranjeet Nagar, Patel Nagar

III. Livelihood Enhancement Programme (LEP)

Indicator	Details
Geographic scope of coverage	(2/11 districts) West Delhi, South West Delhi (details on the geographical scope within districts is provided in the additional information)
Type of support	Socio-economic support
Implementation period	2017 – 2018
Target beneficiaries	TB patients
Total beneficiaries	Not available
Implementing agency/ partner	Damien Foundation India Trust (DFIT) NGO
Linkage with other schemes	Not available
Details of intervention	Patients are provided with educational and livelihood support
Funding source	Central TB Division, Directorate General of Health Services, Government of India
Cost of activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	Not available

Additional information

Information submitted by Delhi STC details out the geographical scope of support in terms of Chest Clinics. These chest clinic facilities cater to localities across various districts. For the purpose of this snapshot, we have presented geographic scope in terms of districts. The specific localities receiving livelihood enhancement support are as follows:

West Delhi: Raghuveer Nagar, Khayala, Chaukhandi, Hari Nagar, Tilak Vihar, Vikas Puri, Tihar Jail, Mohan Garden, Uttam Nagar

South West Delhi: Jafferpur Kalan, Najafgarh, Pandawla Kalan, Goila Dairy Vijay Enclave, Kakrola

IV. In-kind Support

Indicator	Details
Geographic scope of coverage	(4/11 districts) Central Delhi, South West Delhi, North East Delhi, South Delhi (details on the geographical scope within districts is provided in the additional information)
Type of support	Auxiliary support
Implementation period	2017 – 2018
Target beneficiaries	Most vulnerable TB patients
Total beneficiaries	Not available
Implementing agency/ partner	RK Ashram (Ram Krishna Mission NGO)
Linkage with other schemes	Not available
Details of intervention	Patients are provided with incentives and blankets during winter
Funding source	RK Ashram (RK Mission NGO)
Cost of activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	Not available

Additional information

Information submitted by Delhi STC details out the geographical scope of support in terms of Chest Clinics. These chest clinic facilities cater to localities across various districts. For the purpose of this snapshot, we have presented geographic scope in terms of districts. The specific localities receiving in-kind support are as follows:

Central Delhi: Karol Bagh, Tank Road, Anand Parbat, Delhi, AIIMS

South West Delhi: Moti Bagh, Sagar Pur, Mahipal Pur, Delhi Cantt.

North East Delhi: Budh Nagar

South Delhi: Lodhi Road

Goa

Total TB patients notified: 1,935

Annual total TB notification rate: 128

I. Economic Assistance

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	August 2008 – Present
Target beneficiaries	TB patients in the low-economic strata
Total beneficiaries	9 (2016)
Implementing agency/ partner	State TB Cell
Linkage with other schemes	None
Details of intervention	Financial assistance of ₹600 is provided to TB patients for full DOTS treatment (CAT (Category) I & CAT II) and to MDR- and XDR-TB patients until treatment completion. Implementation: The Health Officer from every PHI (health facility) shares the name of the patient and treatment period with the STC, where the RNTCP staff confirms the information with the TB Health Volunteer (TBHV) and STS. Service delivery: Following the confirmation of information by RNCTP, the STC releases the money the patient. The STS gives the cash payment to the TB patient.
Funding source	TB Association of Goa
Cost of activity	Approximately ₹20,000 per year
Preliminary outcomes	In 2016, four out of the nine patients on financial support were cured while the others were on treatment.
Plans of scale-up	Not applicable

Gujarat

Total TB patients notified: 149,061

Annual total TB notification rate: 224

I. Social Welfare Benefit Scheme

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	1998 – Present
Target beneficiaries	Department of Health and Family Welfare: • Scheduled Caste (SC) • Socially and Educationally Backward Classes (SEBC) • Economically Backward Classes (EBC) • De-notified Tribes, Nomadic Tribes Department of Tribal Development: • All Scheduled Tribe (ST) • Educationally Backward Classes (SEBC) • Nomadic Tribes Rural Area Income limit: ₹47,000 Urban area income limit: ₹67,000
Total beneficiaries	8,590 patients (2016-2017)
Implementing agency/ partner	Since 2016, Department of Health and Family Welfare, Government of Gujarat (Prior to 2016, the scheme was implemented by Department of Social Justice and Empowerment)
Linkage with other schemes	Social Welfare Benefit Scheme
Details of intervention	Beneficiaries are provided an amount of ₹500 per month, which is transferred by the Chief District Health Officer to the patient on a quarterly basis. Service Delivery: The money is transferred via DBT/RTGS on quarterly transactions. Of all the TB patients in the state, only a third of the patients are eligible for the scheme. This is on account of their BPL status as well as the fact that many eligible patients do not possess the required documentation such as income certificates.

Indicator	Details
	Health workers sensitize the patients and village elders through home visits and community based meetings to generate awareness in the community
Funding source	Department of Health and Family Welfare, Government of Gujarat
Cost of activity	Not available. The funding for the scheme is earmarked under the state government funds.
Preliminary outcomes	In the 2016-17 period, a total sum of ₹2,24,13,500 was provided to 8,590 beneficiaries.
Plans of scale-up	Not Applicable

Additional information

In addition to the Social Welfare Benefit Scheme, the District TB Centres have been providing raw materials as nutrition support to patients with a specific focus on DR-TB patients in 30 out of 36 districts in the state. The State TB Cell is not involved in these initiatives and they are carried out solely on the discretion of the DTO. These initiatives are funded by local NGOs and donor agenciesc.

Himachal Pradesh

Total TB patients notified: 16,451

Annual total TB notification rate: 226

I. Supplement Nutrition Scheme for DR-TB patients

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Nutrition support
Implementation period	September 2016 – Present
Target beneficiaries	DR-TB patients
Total beneficiaries	600 patients (as of November 2017)
Implementing agency/partner	State TB Cell
Linkage with other schemes	Yes (in coordination with Milkfed, a state government undertaking)
Details of intervention	DR-TB patients are provided packaged supplementary nutrition for the entire duration of treatment. A packaged *Him Nutrimix* containing roasted wheat, sugar, soya bean, black gram, refined oil, whole milk powder and groundnut is prepared by Milkfed (state government undertaking). The *Nutrimix* is manufactured in a one kg package which contains 10 packets of 100 gm each. Each packet (single daily dose) is an adequate quantity to be taken daily by MDR-TB patients and accounts for nearly a fifth of their daily calories and a quarter of the protein requirement. The package is found to last ten days. Service delivery: The mix is manufactured at the State Drug Store in Dharampur, from where it is distributed to the DTCs. It is further distributed to TU stores in respective health blocks. The RNTCP supervisory staff hands over the monthly packages of *Nutrimix* to all patients. Monitoring: DTCs monitor the outcomes for patients. Serial Body Mass Index (BMI) measurements of all MDR-TB patients taking the supplementation are noted by the health officials at monthly intervals and records are maintained on a specified format.
Funding source	Government of Himachal Pradesh
Cost of activity	₹10.80 lakh in first trench Cost of 1 kg of *Nutrimix* is ₹70
Preliminary outcomes	Not available
Plans of scale-up	Not available

Jharkhand

Total TB patients notified: 44,128

Annual total TB notification rate: 118

I. Monetary Support for TB Patients

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	2017 – 2018
Target beneficiaries	TB patients from the Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Classes (OBC)
Total beneficiaries	Not available
Implementing agency/ partner	Department of Social Welfare, Government of Jharkhand
Linkage with other schemes	Chikitsa Sahayata Yojana
Details of intervention	Monetary support of up to ₹10,000 is provided to patients. A Government Order was issued by the Department of Social Welfare mandating the provision of monetary support to patients belonging to low socio-economic groups (SC, ST and OBC) and suffering from debilitating diseases including TB. Service delivery: The support is provided through a RTGS to the beneficiary's bank account at the block level.
Funding source	Government of Jharkhand
Cost of activity	Average cost of ₹3,000 per patient Total cost of Direct Benefit Transfer: ₹10,80,00,000
Preliminary outcomes	Not available
Plans of scale-up	Not available

II. Nutrition support to TB patients

Indicator	Details
Geographic scope of coverage	(8/24 districts) Ranchi, Dumka, Sahibganj, Godda, Palamu, Jamtara, Pakur, Hazaribagh
Type of support	Nutrition support
Implementation period	2017 – 2018
Target beneficiaries	TB patients
Total beneficiaries	1,561 patients
Implementing agency/ partner	Select missionary hospitals in the abovementioned districts
Linkage with other schemes	Not available
Details of intervention	Missionary hospitals in remote tribal areas within the geographic scope function as DOTS Centres for patients in need. These beneficiaries are provided with indoor care and nutritional care for two to three months. Subsequently, patients are put on ambulatory treatment by the local DOTS providers with a system of monthly follow ups.
Funding source	Not available
Cost of activity	₹700 per month per patient
Preliminary outcomes	This additional nutritional support and patient care has shown an improved treatment adherence and outcome in these populations.
Plans of scale-up	Not available

Additional information

Hospital	Beneficiaries
Ramkrishna Mission TB Sanatorium, Tupudana, Ranchi	1,000
Missionaries of Charity, Dumka	137
Kundli Mission, Barhait, Sahibganj	60
St. Elizababeth Health Centre, Gokhla Mission, Gokhla, Mirzachowki, Sahibganj	20
Mercy Hospital, Poraiyahat, Godda	26
St. Lukes Health Center, Dakaita, Lalmatiya, Godda	48
Missionaries of Charity, Jail Hata, Daltonganj, Palamu	54
Mother Teresa Missionaries of Charity, Rajbari, Mahijam, Jamtara	80
Missionaries of Charity (Brother), Milan Ashram, Shaharpur, Littipara, Pakur	80
Holy cross mission hospital, Belatand	56

Details of hospitals that function as DOTS centre

III. Nutrition Support to MDR-TB patients

Indicator	Details
Geographic scope of coverage	(1/24 districts) Bokaro
Type of support	Nutrition support
Implementation period	2017 – 2018
Target beneficiaries	MDR-TB patients
Total beneficiaries	13 patients
Implementing agency/ partner	CARE India
Linkage with other schemes	Not available
Details of intervention	The notified MDR-TB patients in Bokaro are provided nutrition support worth ₹700 at DTC Bokaro on a monthly basis. The food package provided includes rice, pulse, grams and soya bean.
Funding source	Not available
Cost of activity	Cost of nutrition supplementation per patient per month is ₹700
Preliminary outcomes	Not available
Plans of scale-up	Not available

Kerala

Total TB patients notified: 22,754

Annual total TB notification rate: 67

I. TB Pension Plan

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	2014 – Present
Target beneficiaries	TB patients with an annual family income below ₹1,00,000
Total beneficiaries	Not available
Implementing agency/ partner	The scheme is implemented through interdepartmental coordination. The implementing bodies are: • Department of Revenue: Fund disbursement • Department of Health and Family Welfare: Documentation and coordination • State TB Cell: Follow up and monitoring support
Linkage with other schemes	Pension Plan
Details of intervention	A monthly sum of ₹1,000 (in accordance with GO (Rt) No. 2352/2-14, Dtd. 10/7/14) is provided to beneficiaries for the entire treatment duration to mitigate costs and promote adherence. Implementation: Upon diagnosis, a medical officer certifies the patient's disease status and estimates the duration of treatment. The patient submits an application for pension to the local village office. The village officer certifies the annual income and eligibility for pension and forwards all applications to the Thaluk office for approval. The Revenue Department is instructed to enrol the patients for 6 months (standard treatment duration). In case of treatment extension, an application for renewal has to be made Service Delivery: Upon approval, the pension money is sent to the beneficiary by money order (Indian Postal Services).

Indicator	Details
	Monitoring: No formal guideline or mechanism is available. Community sensitization: Village officers are sensitized on TB and encouraged to make people aware about the entitlement. Challenges in implementation: • Delay in fund allocation by the government • Lack of awareness on the scheme by patients and their families • Operational challenges
Funding source	Government of Kerala
Cost for activity	• ₹6,000-8,000 per drug sensitive TB patient per treatment cycle • ₹24,000 per drug resistant TB patient per treatment cycle
Preliminary outcomes	Based on the information provided, regular monitoring of outcomes has not taken place
Plans of scale-up	Not applicable since this is a statewide scheme

II. Nutrition support

Indicator	Details
Geographic scope of coverage	(3/14 districts) Kozzhikode, Kannur, Kasaragode
Type of support	Nutrition support
Implementation period	2013 – Present
Target beneficiaries	TB Patients (MDR-TB and DS-TB) with an annual family income below ₹1,00,000
Total beneficiaries	• 2014-2015: 2,800 patients • 2015-2016: 4,326 patients • 2016-2017: 2,103 patients
Implementing agency/partner	The project is implemented by the Department of Local Self Government, Government of Kerala. The various departments involved in implementation are: District Panchayat (Zila Panchayat): Fund disbursement Department of Civil Supplies: Procurement District office, Department of Health and Family Welfare (DoHFW): Supply chain management State TB Cell: Selection of beneficiaries and follow up
Linkage with other schemes	No

Indicator	Details
Details of intervention	TB patients and their families are provided with monthly rations in the form of food kits. Implementation: While the state lacks a formal enrolment process for nutrition support, beneficiaries are identified from measures of weight, height and BMI. Evaluation of nutritional status is undertaken by the Senior Treatment Supervisor (STS) and Medical Officer. Based on this evaluation, the DTO requests the Zila Panchayat to sanction the needed support. Zila Panchayat officials articulate their need for funds to the state officials, after which the state releases funds as determined by the Panchayat's request. The entire process takes place independent of the health department. Zila Panchayat entrusts the Civil Supplies department with the process of food procurement. Distribution: Food kits can be collected at the health facility. Patients who are not in a position to visit the facility are provided the kits at home. STS are responsible for ensuring that food kits reach the entitled beneficiaries. Monitoring: The RNTCP officials are monitoring the scheme at the district level.
Funding source	Government of Kerala - District Panchayats sanction the fund
Cost of activity	₹1000 per patient per month • 2014-2015: ₹4,136,729 • 2015-2016: ₹6,036,407 • 2016-2017: ₹4,283,179
Preliminary outcomes	Not available
Plans of scale-up	Sustainability of support is dependent on approval of requested funds by Secretary, Local Self Government Department. A written request has been initiated by Secretary, DoHFW.

Additional information

Food item	Quantity (kg)
Ragi powder	1
Oats	0.5
Split pigeon pea (Toordal)	0.5
Soybeans	0.5
Peanuts	0.25
Dates	0.25
Milk powder	0.5

Content of food kits provided in Kerala

III. Treatment Support Groups

Indicator	Details
Geographic scope of coverage	(1/14 districts) Pathanamthitta
Type of support	Treatment Support Groups (TSG)
Implementation period	2016 – Present
Target beneficiaries	TB patients who face difficulty in adhering to treatment
Total beneficiaries	Not available
Implementing agency/ partner	Implementation: TSGs operate under the guidance of Gram Panchayats. The group is chaired by the Panchayat head or a local opinion leader. Monitoring: Exclusively by block level officer and the PRO-NHM (Public Relations Officer).
Linkage with other schemes	TB Pension Plan
Details of intervention	TSGs are voluntary groups based at the community level that help TB patients with treatment adherence. They address barriers such as social stigma, family problems, mobility issues, and financial backwardness. TSG activities include counselling, food kits provision, transportation support, construction of homes, sensitization on entitlements and adoption of TB patients during treatment period. Members include Medical Officer, peripheral health worker, community DOTS provider, experienced informal counsellors, members of community based or faith based organizations and local philanthropists. Implementation: A TB patient in the Gram Panchayat area is linked to a DOTS provider and a Multipurpose Health Worker (MHW). Multipurpose workers in the department of health and family welfare identify the TB patients who are in need of social support. Through home visits, the MHW identifies patients in need of TSG and links them to the same. Service delivery: ● Counselling for tobacco cessation and other forms of substance abuse is provided by the informal counsellor member. ● Social inclusion and stigma reduction counselling is given through home visits by members of the group. Community mobilization: Once cured, the patients act as members of the TSGs. Challenges in implementation: ● Operational challenges ● Societal discrimination toward TB patients and their families
Funding source	None. The model is comprised of volunteer groups.

Indicator	Details
Cost for activity	No cost to health system or government
Preliminary outcomes	• Gradual reduction in societal discrimination towards TB patients and their families. • Increase in public participation in TB elimination programmes.
Plans of scale-up	The strategy is being scaled up to other districts as a part of the Kerala TB Elimination mission.

Madhya Pradesh

TB notifications: 1, 29,915

New TB cases: 96,680

I. Nutrition support by Doctors for You

Indicator	Details
Geographic scope of coverage	(2/51 districts) Ujjain, Jabalpur
Type of support	Nutrition support
Implementation period	2016 – January 2018
Target beneficiaries	MDR- TB patients
Total beneficiaries	252 patients
Implementing agency/ partner	Doctors For You (DFY)
Linkage with other schemes	Not available
Details of intervention	Nutrition support is provided to MDR-TB patients in the form of dry ration on a monthly basis. Service delivery: DFY procures the dry ration and distributes it to patients at the DTC, in the presence of DTOs. Monitoring: DTC staff takes photographs of each beneficiary upon receipt of the ration, conduct monthly check ups and register details including time of nutrition distribution and patient weight.
Funding source	DFY
Cost for activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	The state expressed interest in incorporating NSP's proposal of ₹500 for patient social support. The state will include line items for patient social support in the PIP for FY 2018-19.

II. Axshya project

Indicator	Details
Geographic scope of coverage	Not available
Type of support	Nutrition support
Implementation period	Not available
Target beneficiaries	MDR-TB patients
Total beneficiaries	Not available
Implementing agency/ partner	Not available
Linkage with other schemes	Not available
Details of intervention	Implementing NGOs provide supplementary nutrition to MDR-TB patients.
Funding source	Not available
Cost for activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	Not available

III. Nutrition support by local religious group

Indicator	Details
Geographic scope of coverage	(1/51 districts) Indore
Type of support	Nutrition support
Implementation period	Not available
Target beneficiaries	Economically weaker TB patients
Total beneficiaries	Not available
Implementing agency/ partner	Religious social group
Linkage with other schemes	Not available

Indicator	Details
Details of intervention	A religious social group is providing nutritional supplement to poor TB patients, which includes MDR/XDR-TB patients. The patients are selected by the RNTCP Staff.
Funding source	Not available
Cost for activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	Not available

Maharashtra

Total TB patients notified: 1,92,458

Annual total TB notification rate: 159

I. Waiver of travel costs for TB patients

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	2014 – Present
Target beneficiaries	TB patients
Total beneficiaries	27,945 patients (between 2014 and 2017)
Implementing agency/partner	Department of Public Health, Government of Maharashtra and Maharashtra State Road Transport Corporation (MSRTC)
Linkage with other schemes	The travel cost waiver is an initiative by MSRTC
Details of intervention	Free travel to TB patients through MSRTC is intended to help TB patients cope with treatment costs. TB patients often belong to lower socio-economic strata and may have to travel long distances to access quality diagnostics and treatment facilities. Implementation: The patient travelling in an MSRTC bus can show the ID card issued by RNTCP and is waived off the tariff. The total bill is compiled at the state level and submitted to the Public Health Department.
Funding source	Government of Maharashtra
Cost for activity	• 2014-2015: ₹437,523 • 2015-2016: ₹396,151 • 2016-2017: ₹349,296 Total (2014-2017): ₹1,182,970
Preliminary outcomes	Not available
Plans of scale-up	• Government of Maharashtra is planning to extend the service to patients in the private sector under the guidance of Central TB Division, Government of India. • Government of Maharashtra is planning to explore possibility to extend these services through DBT to improve reach and ensure more transparency under the guidance of all stakeholders.

Additional information

In January 2018, the Brihanmumbai Municipal Corporation (BMC) announced the launch of a new nutrition support scheme to be implemented starting February. Currently in the planning phase, the scheme will provide DR-TB patients with food rations to address the nutrition deficit brought upon by the disease. Beneficiaries under this scheme will receive ration including pulses, rice, peanuts, jaggery and wheat flour for a duration of two moths. In this regard, the civic body has allocated a total of ₹1.2 crore toward the implementation of this scheme.[45] This initiative is a scale up of BMC's existing efforts which provides free medicines and nutrition including fruit juice, eggs, bananas and milk, to patients admitted in Sewri's Group of Tuberculosis Hospitals. The new scheme aims to make support available for all TB patients in the city and ensure the economically weak MDR- and XDR-TB patients have nutrition while continuing medication.

[45] *Mishra, S. (2018, January 09). Mumbai: BMC's health department to provide nutritious food ration to drug-resistant Tb patients. Retrieved from The Free Press Journal: http://www.freepressjournal.in/mumbai/mumbai-bmcs-health-department-to-provide-nutritious-food-ration-to-drug-resistant-tb-patients/1201166*

Meghalaya

Total TB patients notified: 3,961

Annual total TB notification rate: 116

I. Faith based NGO – nutrition support

Indicator	Details
Geographic scope of coverage	(1/11 districts) East Khasi Hills
Type of support	Nutrition support
Implementation period	Since March 2016
Target beneficiaries	Economically weaker TB patients
Total beneficiaries	50 patients (as of September 2017)
Implementing agency/ partner	Social Service Centre, Laitumkhrah Archbishop House (NGO)
Linkage with other schemes	No
Details of intervention	The NGO provides patients with 1 kg Bengal gram, 1 kg Horlicks and 30 eggs on a monthly basis.
Funding source	Laitumkhrah Archbishop House funds the support through membership contributions, brought in as part of their charity programme.
Cost for activity	Not available
Preliminary outcomes	Not available
Plans of scale-up	Not available

Punjab

Total TB patients notified: 45,313

Annual total TB notification: 153

I. Nutrition Support to DR-TB Patients

Indicator	Details
Geographic scope of coverage	(6/22 districts) Patiala, Faridkot, Bathinda, Ferozpur, Sangrur, Hoshiarpur
Type of support	Nutrition support and provision of supplementary medicines
Implementation period	Not available
Target beneficiaries	DR -TB patients
Total beneficiaries	Not available
Implementing agency/ partner	• DR-TB centre in Amritsar – Gurudwara Prabandhak Committee • DR-TB centre Faridkot – Mata Khiwi ji Gurudwara Langar • DR-TB centre Patiala – Kali Devi Mandir • Patiala – Sarbat Da Bhalla Trust • Faridkot – Bhai Ghanaya Charitable Trust • Bathinda – Nishkam Sewa Society • Hoshiarpur – Langar Sewa Samiti
Linkage with other schemes	No
Details of intervention	Beneficiaries are provided monthly nutritional diet and supplementary medicine with the help of local NGOs and CBOs (mentioned above). Implementation: As part of District TB Forum meetings, local NGOs and Community Based Organizations (CBOs) were sensitized on the need to provide nutrition and supplementary support to MDR and XDR patients. Subsequently, these local agencies initiated the provision of monthly nutrition support for the patients visiting the DTOs. Distribution: Local NGOs and CBOs are responsible for providing nutrition support to beneficiaries who are admitted at DR-TB centres of medical colleges of Amritsar, Patiala and Faridkot as well as to MDR- and XDR-TB patients in the districts covered in the geographic scope.
Funding source	Not available
Cost for activity	Approximate cost for one district is ₹10,000 per month
Preliminary outcomes	Not Applicable
Plans of scale-up	Not Available

Additional information

With the successful intervention and advocacy of STC-Punjab, the Department of Food Civil Supplies and Consumer Affairs – Punjab has agreed to include MDR and XDR-TB patients under Antodaya Ann Yojna (AAY) on the grounds of "terminally ill patients". DR-TB patients will be provided with blue cards that will allow them to avail nutrition supplements at subsidized costs. At present, the initiative has cleared all required sanctions and the STC is awaiting verification of the blue cards. The initiative is scheduled to be launched before World TB Day in March 2018. An estimated 600-700 patients will benefit from this linkage.

Depending on the success and uptake among patients, the scheme may be scaled up to provide these benefits to all TB patients. Additionally, the state TB programme aims to engage cured TB patients in community engagement efforts to encourage treatment adherence among active TB patients. After six months of initiating support, the STC plans to conduct physical check-ups including weight measurement of patients to assess the impact of the nutritional supplements on the health of the patients.

Another initiative in the pipeline is the provision of a high protein diet to MDR-TB patients. Markfed which is a cooperative federation is the nodal agency for this initiative and will be responsible for the implementation.

Tamil Nadu

Total TB patients notified: 93,327

Annual total TB notification rate: 119

I. AASARA

Indicator	Details
Geographic scope of coverage	(4/32 districts) Chennai, Kanchipuram, Thiruvallur districts; and DR-TB Centre Tambaram Sanitorium
Type of support	Nutrition support
Implementation period	January 2017 – March 2018
Target beneficiaries	DR-TB patients
Total beneficiaries	Inpatient nutrition care: 593 patients Dry ration support: 151 patients (Chennai - 66, Kanchipuram - 53 and Tiruvallur - 32) (August 2017)
Implementing agency/ partner	TB Alert India
Linkage with other schemes	None
Details of intervention	Supplementary nutrition is provided by the means of inpatient care to DR-TB patients in Centre Tambaram Sanitorium and dry ration provision to DR-TB patients in Chennai, Kanchipuram, Thiruvallur. The supplementation under inpatient care aims to provide high protein and vitamin supplementation to MDR-, XDR- and Bedaquiline TB patients. **Inpatient care at DR-TB Centre Tambaram Sanitorium** Service delivery: The hospital's nutritionist and the TB Alert India Coordinator distribute the food support once daily, at a fixed time. Counselling: Counselling on treatment adherence, importance of nutrition and home care is provided to hospitalized patients by the nutrition team members. The nutritionist at the facility provides patients and their families with demonstrations on food preparations regularly.

Indicator	Details
	Monitoring and quality assurance: Quality assurance of the food being supplied as well as distribution are monitored by the Residential Medical Officer (RMO) and Medical Officer of the MDR Ward. Quality checks focus on manufacturing and expiry dates (maximum 80 units can be kept for 2 days); package weight etc. Ward caretakers are to ensure uptake of food support by the patients. **Chennai, Kanchipuram and Thiruvallur districts** Service delivery: Nutritional supplements are distributed at 32 distribution points (5 in Chennai, 15 in Kanchipuram and 12 in Tiruvallur), which are primarily DTCs, Taluk and block level DMCs and PHCs. Approximately 10% distributions are done through home visits. Counselling: Food packs are displayed at the centres designated as distribution points and their benefits and usage are explained to beneficiaries. Upon distribution, AASARA project's nutrition team members provide individual, group and family members counselling on treatment adherence, and the importance of nutrition and home care. Additionally, to prevent new cases, family members are tested and referred accordingly. Monitoring and quality assurance: The District TB Officer, respective Block Level Medical Officer (BMO) and the Project Manager of TBAI are responsible for monitoring the distribution of the packs. The medical officer or a RNTCP staff member is required to be present at the time of distribution. Quality checks focus on manufacturing and expiry dates, package weight, record keeping of distribution etc. Further, family members are encouraged to ensure patients consume the food.
Funding source	Not available
Cost for activity	Inpatient care: ₹125 per month per patient Dry Ration: ₹1,100 per month for 6 months support One Human Resource: ₹22,000 per month Transportation: ₹10,000 per month
Preliminary outcomes	• 118 group counselling conducted and 774 members benefited. • 75 patients observed a weight gain, 30 patients showed stagnant weight and 3 patients showed weight loss. • 12 patients have successfully completed the 6 month of nutrition support and IP treatment.
Plans of scale-up	Not applicable

Additional information

Food item	Amount (g, ml)
Protein Powder	40
Groundnut	75
Almonds/Walnuts	4-5
Soya Milk	200
Seasonal Fruit	-

Contents of the dry ration provided in Chennai, Kanchipuram and Thiruvallur districts under the support

Food item	Amount (g)
Milk Powder	1,500
Groundnut	1,000
Jaggary	1,000
Green Gram (Mung Dal)	1,000
Edible Oil	-

Contents of the food provided under inpatient care to DR-TB patients admitted at Tambaram Sanatorium

II. Project Axshya-REACH NGO

Indicator	Details
Geographic scope of coverage	(14/32 districts) Chennai, Thiruvallur, Kancheepuram, Villupuram, Thiruvannamalai, Vellore, Krishnagiri, Cuddalore, Thanjavur, Trichy, Pudukottai, Dindigul, Madurai, Tirunelveli
Type of support	Patient charter sensitization, livelihood training and nutrition support
Implementation period	July 2016 – June 2017
Target beneficiaries	TB patients and their care takers

Indicator	Details
Total beneficiaries	2,119 TB patients (between July 2016 and June 2017) Livelihood training: 27 patients Nutrition support: 651 TB patients Akshay Kiosk services: 960 patients (March 2016- August 2017)
Implementing agency/ partner	Reach NGO
Linkage with other schemes	No
Details of intervention	Project Axshya provides beneficiaries with four services that improve the reach, effectiveness and visibility of TB control programme through ACSM interventions. • Patient charter sensitization—Project Axshya sensitizes TB patients on their rights and responsibilities. • Nutrition support by TB forum (comprising of TB patients, civil society members like local journalists, lawyers, NGO representatives, business executives and similar other such interested persons)—the TB forum provides beneficiaries with peanut, groundnut, dates, green peas, chickpeas, health mix powder and various other nutrient rich items. • Other support by TB forum—aside from advocacy, the TB forum installs water filters in DOTS centre; provides bubble tops and water cans; links patients to grocery stores; and provides household items such as bedsheets and pillows. • Livelihood training—for key affected populations, tailoring and craft-making training is provided to TB patients and their families to improve overall financial conditions. • Axshya kiosk—Provision of community friendly diagnostic and treatment services through effective public and private linkages. It dispenses free drugs from RNTCP and provides information on TB and related services. • Implementation: Beneficiaries for services are selected in consultation with RNTCP staff. • Patient charter sensitization—district level TB forum members partake in the programme as facilitators. The members represent patients at the different forums and thus, play a crucial role in motivating patients. • Nutrition support—TB forum members conduct the need assessment of the TB patients and provide support accordingly. • Livelihood training—Project Axshya staff identify livelihood centres and decide the type of training to be provided. The RNTCP staff compile a list of patients eligible for this support. • Monitoring: A monthly progress report is submitted by project officials to the STO, which documents observed progress on patient's nutritional status and increased treatment adherence.

Indicator	Details
Funding source	Not available
Cost for activity	Not available
Preliminary outcomes	According to monthly reports submitted to the STO, a 10-20% increase in treatment adherence owing to the provision of supplementary nutrition was observed.
Plans of scale-up	No. The project has initiated winding up of operations as of December 2017.

Additional information

Patient Charter Sensitization meeting

No. of TB patients sensitized on rights and responsibilities and provided nutritional supplement – 2119

Axshya Kiosk

No. of patients provided DOTS services – 960

No. of patients counselled – 884

No. of patients provided nutritional support – 88

No. of contacts referred and screened for TB – 38

Livelihood Training

No. of patients/family members provided Tailoring and Craft making training – 16

No. of patients/family members provided Mushroom training - 11

Nutritional and Other supports to TB patients

No. of patients provided Nutritional support – 651

III. Chief Minister's Uzhavar Pathukappu Thittam Scheme

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Economic assistance
Implementation period	2006 – Present
Target beneficiaries	Small & marginal farmers suffering from TB
Total beneficiaries	1,071 TB patients benefitted (January 2016 - August 2017) 3,616 TB patients application under process (January 2017- August 2017)

Indicator	Details
Implementing agency/ partner	Government of Tamil Nadu
Linkage with other schemes	Chief Minister's Uzhavar Pathukappu Thittam
Details of intervention	A monthly pension is provided to farmer members temporarily incapacitated due to TB, for the entire treatment duration. Implementation: The STO compiles and shares the total number of beneficiaries, beneficiary details (bank account number, Aadhaar number and total treatment period) along with a cost estimate, with the State Revenue Department. The Revenue Department scrutinizes the details and disburses funds to the District Collector. The Block Medical Officer issues a medical certificate specifying the treatment duration. The certificate is submitted to the Special Deputy Collector (SSS Tehsildar) and further verified by the Village Administrative Officer. Pension is provided to beneficiaries via RTGS. In cases where beneficiary's bank account details are unavailable, a money order is used instead. Counselling: Beneficiaries are counselled at the DOTS centres and encouraged to use the money towards their nutritional needs. Monitoring: The STS and TB Coordinator periodically conduct home visits to investigate if funds are being used toward nutrition and assess gaps in the provision of incentives. The findings are submitted to the DTO and passed on to the District Collector for necessary action.
Funding source	Department of Revenue, Government of Tamil Nadu
Cost for activity	Not available
Preliminary Outcomes	Not available
Plans of scale-up	The STC has requested additional funds from the Labour Commissioner in the state government to provide similar coverage to TB patients within the informal sector including construction and factory workers, miners etc.

Telangana

Total TB patients notified: 39,223

Annual total TB notification rate: 107

I. AASARA Project

Indicator	Details
Geographic scope of coverage	(1/31 districts) Hyderabad (all 19 Tuberculosis Units)
Type of support	Nutrition support
Implementation period	January – December 2017
Target beneficiaries	Below Poverty Line (BPL) TB and MDR-TB patients on Anti-TB Treatment (ATT) at government health facilities
Total beneficiaries	518 TB patients and 82 DR-TB patients enrolled
Implementing agency/ partner	TB Alert India
Linkage with other schemes	None
Details of intervention	Beneficiaries were provided with nutrition supplementation for six months post enrollment. Prior to the distribution of food, beneficiaries were counselled on the importance of treatment adherence. Implementation: AASARA worked in coordination and alignment with the THALI project, leveraging the front-line THALI workers (Outreach Workers) that supported in the distribution of the food. A separate PIP was developed to guide the entire implementation process for the project. Key areas that were considered during the PIP development process included: • Selection of the beneficiary and enrolment process (January-June) • Content of the nutrition supplementation • Process for the distribution of nutrition supplementation, in regards to the PIP, and de-enrollment of the patients (July-December) • Analysis of outcomes and its impact on patient treatment adherence

Indicator	Details
	Service delivery: The nutrition supplementation was distributed at a focal TU where around up to 30 beneficiaries gather on a fixed day every month. Patients needed to travel to the focal TU and ensure availability on that fixed date. Therefore, at times it took the distribution team around three days to complete a set of three to four TUs. Prior to the distribution of food, beneficiaries were counselled on the importance of treatment adherence. Monitoring: • During the monthly distributions, a patient list containing primary details including date of nutrition supply provision and their outcomes was maintained. • Project monthly reports containing patient details including weight, number of patients transferred out and deaths were maintained. The report also details the number of patients counselled on importance of treatment adherence, side effects and support required by family members. • Patient interviews were conducted on a random basis to assess the proper usage of food provided, adherence to treatment and identify barriers in accessing the food support at both the system and family level.
Funding source	Janssen, pharmaceutical division of Johnson & Johnson Private Ltd
Cost of activity	• Project activities including food provision (groceries) to DR-TB patients: ₹30,95,595 • Administration and programme management (indirect expenses): ₹4,01,301 Total cost: ₹34,96,896
Preliminary outcomes	• 90.4% of beneficiaries showed an improvement in weight • 7.5% of beneficiaries showed zero no improvement • 2.1% of beneficiaries reported a decline in their weight
Plans of scale-up	The project has concluded.

Additional information

As per qualitative feedback, the total cost of food packets was approximately ₹800 per patient per month.

Food item	Per month allocation (kg)	Energy (Cal)	Proteins (g)
Rice	10	390	8
Groundnuts	1	180	8
Edible Oil	1	297	0
Jaggary	1	126	0
Green Gram (Mung Dal)	1	115	8
Total	14	1180	24

Content of the food packets provided under this initiative

II. Axshya Project

Indicator	Details
Geographic scope of coverage	(5/31 districts) Karimnagar, Khamman, Nalgonda, Warangal, Nizamabad
Type of support	Nutrition support and counselling
Implementation period	January 2016 – Present
Target beneficiaries	MDR-TB patients
Total beneficiaries	Approximately 200 MDR-TB patients
Implementing agency/ partner	State TB Cell
Linkage with other schemes	Not available
Details of intervention	Beneficiaries are provided dry ration on a monthly basis—rice, pulses, oil, jaggery and ragi powder. Home-based counselling is also provided on the importance of nutrition and treatment adherence. Patients are counselled on treatment side-effects, risks of alcohol intake and smoking, the risk of infecting others, and coping with the emotional distress caused by societal stigma. Additionally, patients are informed of government schemes relevant for linkages. Implementation: The State TB Officer, in consultation with the District TB Cell team, identifies and lists MDR-TB patients in need. Service delivery: The monthly procurement is matched with the number of nutrition packets required for beneficiaries. The vendor supplies dry ration packets in all district headquarters being covered under the project. The project staff distributes the packets among beneficiaries and collect acknowledgment receipts from them. Monitoring: The timelines for each process entailed in the implementation of food support are monitored on a monthly basis. Data on counselling and nutrition receipts is recorded on hard copies. Challenges: • Difficulty in reaching all 200 MDR-TB patients in the districts owing to extensive supply chain management • Delays in funds release • Limitations in funding resulted in the inability to meet the nutritional needs of all MDR-TB patients
Funding source	The Global Fund for AIDS/HIV, TB and Malaria
Cost of activity	• 2015-2016: ₹49,000 • 2016-2017: ₹6,52,264 • 2017-2018: ₹6,85,410 Total cost: ₹13,86,674
Preliminary outcomes	Increased adherence to treatment observed by field staff
Plans of scale-up	Not available

Additional information:
Project evaluation was planned for December 2017.

III. Arubah Health Project

Indicator	Details
Geographic scope of coverage	(3/31 districts) Gajwel, Achampet, Malkajigiri
Type of support	Economic assistance, nutrition support and counselling
Implementation period	April 2014 – March 2018
Target beneficiaries	Poor TB patients on treatment
Total beneficiaries	• 2015: 500 patients • 2016: 250 patients • 2017: 300 patients Total: 1,050 patients In 2017: • Economic Development Assistance (EDA): 75 patients • Nutrition support: 300 patients on Intensive Phase (IP) treatment
Implementing agency/ partner	World Vision in partnership with TB Care groups (consisting of local women self-help groups, Anganwadi Workers (AWWs), ASHA, and Panchayat members) and Government of India
Linkage with other schemes	No
Details of intervention	The project provides economic assistance, nutrition support and counselling to help TB patients cope with the side effects of anti-TB drugs and the financial burden of the family during the treatment period. EDA provision aims to improve the family's financial status and assist family members meet their health, education and other basic needs. This financial assistance is given in-kind. Nutrition kits comprising of cereals, pulses, jaggery, and milk are provided to beneficiaries. The food kit is customized based on a menu of recommendations provided by a national level technical expert. The ration quantity is determined based on budget availability. This project also provides counselling support that is conducted through home visits. Implementation: Home visits are conducted to identify TB patients on IP treatment and BPL families. Beneficiaries are selected in discussion with ASHAs and ANMs. The TBHV, subsequently, shares data on patients entitled for support. Monitoring: During home visits, Community Health Co-ordinators visit patients and link the services through the Government of Health staff accordingly and report on a monthly basis. Additionally, during home visits the staff ensure that the dry ration is being consumed by the patient and not by other family members.

Indicator	Details
	Challenges in implementation: Lack of follow-up of EDA on a regular basis Difficulty in ensuring that nutrition given is consumed by TB patients only and no other family members Absence of mechanism to capture success stories and the impact of EDA and nutrition support
Funding source	World Vision
Cost of activity	EDA: ₹1,00,00,000 Nutrition support: ₹35,00,000 Total: ₹1,35,00,000
Preliminary outcomes	Nutrition support found to improve treatment adherence, increase weight gain, and reduced loss to follow-up, failure and relapse cases. Economic assistance showed an increase in family income, which reduced school drop outs.
Plans of scale-up	The state TB programme has decided to develop a proposal to scale the interventions across the state as part of the PIP for FY 2018-19.

IV. Double ration under ICDS

Indicator	Details
Geographic scope of coverage	State-wide
Type of support	Nutrition support
Implementation period	2012 – Present
Target beneficiaries	TB-affected children under the age of six years on DOTS/ Instant Nutritional Assessment (INA)
Total beneficiaries	120 patients (as on December 2017)
Implementing agency/ partner	State TB Cell in coordination with the Department of Women Development and Child Welfare
Linkage with other schemes	Integrated Child Development Services (ICDS)

Indicator	Details
Details of intervention	Children under six suffering from TB can avail additional nutrition support through the Anganwadi system under ICDS. As per government order (Memo No. 7452/J1/2012) issued in 2012, Anganwadi Workers are mandated to be involved in DOTS and the provision of double nutrition to the TB affected children under the age of six on DOTS/INA. The initiative leverages ICDS and its network of around 35,700 Anganwadi in the state as well as NGOs.
Funding source	Department of Women and Child Welfare
Cost for activity	Not available
Preliminary Outcomes	Not available
Plans of scale-up	Not available

Annexure 2: National and state based stakeholder interviews

S.No.	State	Name	Designation, Organization
1	National	Dr. Raghuram Rao	Deputy Assistant Director General, Central TB Division
2	National	Dr. Manoj Toshniwal	Consultant, National Strategic Plan for TB Elimination 2017-2025
3	National	Raj Singh	Consultant, National Strategic Plan for TB Elimination 2017-2025
4	National	Dr. Deepak Saxena	Associate Professor, Indian Institute of Public Health
5	National	Dr. Anurag Bhargava	Professor, (Yenepoya University, Mangalore)
6	Assam	Dr. N. J. Das	State TB Officer, State TB Cell
7	Bihar	Ms. Bushra Azim	IEC Officer, State TB Cell
8	Chhattisgarh	Dr. T.K. Agarawal	State TB Officer, State TB Cell
9	Gujarat	Dr. Hiren Thanki	Medical Consultant (TB), WHO
10	Kerala	Dr. Sunil Kumar M.	State TB Officer, State TB Cell
11	Madhya Pradesh	Dr. Atul Kharate	State TB Officer, State TB Cell
12	Punjab	Dr. Naresh Kumar	State TB Officer, State TB Cell
13	Tamil Nadu	Dr. R. Veerakumar	State TB Officer, State TB Cell
14	Telangana	Dr. Ch. Suryaprakash	State TB Officer, State TB Cell

Annexure 3: State based patient interviews

S. No.	State	No. of patient interviews received
1	Arunachal Pradesh	No interviews conducted
2	Assam	5
3	Bihar	5
4	Chhattisgarh	3
5	Delhi	5
6	Goa	3
7	Gujarat	9
8	Himachal Pradesh	5
9	Jharkhand	5
10	Kerala	10
11	Madhya Pradesh	5
12	Maharashtra	5
13	Meghalaya	5
14	Punjab	5
15	Tamil Nadu	8
16	Telangana	5

Central TB Division
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