

Pilot Project on Supplementary Nutrition for TB Patients

Interim Report (February to May 2016)

SHRC – July 2016

Background:

Research evidence has shown that there is a strong relationship between under-nutrition and TB disease. Improving nutrition can improve outcomes for TB patients. Some of the above evidence has come through studies carried out in Chhattisgarh by Jan Swasthya Sahayog (JSS) at Ganiyari.

Government of Chhattisgarh announced a scheme for providing Supplementary Nutrition to TB patients in the state and funds were allocated in State Budget in 2015-16. Wayanad district in Kerala and Mumbai in Maharashtra were other two places which had started small experiments on this theme. Chhattisgarh was the first state to create such a scheme as a state-wide programme backed by state-funding. This scheme being a new innovation by the state, no set design, guidelines or procedures were available from other parts of the country. Therefore, in order to find out the best ways in which such a programme can be designed and implemented, the following steps were taken:

- a) A survey was carried out to find the kind of food items TB patients prefer in different parts of Chhattisgarh. The survey was done in September 2015 by SHRC.
- b) Based on funds available, Directorate of Health Services decided Rs.600 per month as the outlay per patient.
- c) A Technical Committee was created by Directorate of Health Services with members from NIN, Hyderabad apart from SHRC and state health officials. The Committee looked at the findings of Food Preference Survey and decided two kinds of food baskets as appropriate:
 - Eggs, Milk Powder, Groundnuts
 - Oil, Milk Powder, Groundnuts
- d) A Pilot Scheme was designed for two districts to find out acceptability of food baskets chosen and the feasible ways of implementation. Directorate approved the Pilot in January 2016.
- e) Simultaneously, the draft scheme was sent for approval by DoHFW to Finance department.

The Pilot Project Design:

I Patients Coverage: SHRC was asked to start the pilot in two districts, covering around 300 patients from February 2016 onwards. It was decided to cover all types of TB cases for the purpose of food distribution. Cat I cases were to be given 6 months supplementation and for Cat II, the period was to be 8 months. For study of weight gain and other clinical outcomes, the sample will exclude MDR cases in order to maintain comparability.

II Distribution Centres: It was decided that TB patients would come each month to collect monthly food basket. The food distribution points were decided as the concerned Designated Microscopy Centres (DMCs) as they offer following advantages:

- a) The DMC can get an opportunity to follow-up and counseling on treatment of patient when he/she comes to collect food
- b) It will increase importance of food being given. The patient is likely to associate receiving the food with the health-centre and thus to consider it as a part of treatment
- c) The Lab Technicians can keep accurate records of food distribution as well as weights. Weight measurements are more feasible in a health centre compared to other choices say a Ration Shop.
- d) The health department will be able to run the scheme on its own rather than being dependent on other departments. Patients also are saved from going to multiple places.

III. Area Covered

The areas selected were:

- a) 6 blocks in Rajnandgaon District – Rajnandgaon, Khairagarh, Chhuria, Chhuikhadan, Dongargarh, Dongargaon – pilot implementation in collaboration with DTO and RNTCP team – to cover around 200 TB cases
- b) Bilaspur - Jan Sawsthya Sahayog hospital in Ganiyari – to cover around 100 TB cases

IV. Food Baskets Given:

Basket A - Around 200 patients (Quantity/month/patient)	Basket B - Around 100 patients (Quantity/month/patient)
Milk Powder - 1 kg	Milk Powder - 1 kg
Soya bean oil - 1 L	Egg - 30 No.s - 150 Rs. given as cash to buy eggs (due to short shelf life of eggs)
Groundnut - 1.5 kg	Groundnut - 1.5 kg

The calories and protein provided by the each basket per day is given below:

Basket 1				
	Qty	Monthly Cost (Rs)	Protein gm/day	kcal per day
Skimmed Milk Powder	1	218	11.6	93
Soya Oil	1	72	0.0	300
Groundnut	1.5	119	12.9	283
Total		409	24.6	676

Basket 2				
	Qty	Monthly Cost (Rs)	Protein gm/day	kcal per day
Skimmed Milk Powder	1	218	11.6	93
Groundnut	1.5	119	12.9	283
Egg	1.4	150	5.9	66
Total		487	30.5	443

V. Enrollment Period:

The data on patient registration was studied. It was seen that in two months, the six blocks taken in Rajnandgaon get around 200 new patients. Therefore, in discussion with DTO (Rajnandgaon), the enrollment period for Nutrition pilot was fixed as 1st February to 31st March 2016.

VI. Pilot Roll-out Process:

It involved the following steps:

- a) The record keeping formats at various levels were designed.
- b) A 3-hour Training of all RNTCP staff (STLS, STS, LT) of 6 pilot blocks was done by SHRC in presence of DTO on following aspects:
 - Importance of Supplementary Nutrition for TB patients and introduction to purpose of the pilot
 - Who will be enrolled for this benefit
 - What will be given and in what quantity
 - How to measure weights and heights
 - What records are to be kept and how
 - Storage of food items
 - How to counsel patients when they come to DMC to get monthly food
 - Role of STS in supervision

DTO Rajnandgaon successfully ensured that all the concerned staff attended the training. The participants from RNTCP, responded with enthusiasm and expressed pleasure at such a scheme being started to help them in meeting the objectives of RNTCP and in achieving better health outcome for TB cases.

- c) The Block Coordinators of Mitanin also participated in above training and learnt the role of Mitanins in informing patients and in follow-up to improve better utilization and consumption of supplements by patients.
- d) Concerned BMOs, RMAs were also oriented by visiting each DMC.
- e) Procurement and Standardisation of Digital Weighing Machines and Height-meters for all DMCs were done and trained staff of SHRC installed the above in all concerned DMCs.
- f) SHRC procured and provided each DMC a storage box (tin trunk *peti* – 35 in number) and 200 plastic jars for keeping the foodstuff safe from rodents etc.
- g) SHRC procured and provided the food items to concerned DMCs by estimating the no. of patients. Food items were provided once a month by door step delivery to DMC.
- h) For cash component, advance was issued to concerned STS/STLS. Designated RNTCP staff/Lab Technicians distributed the Rs.150 component in cash directly to patients.
- i) The scheme benefits were displayed in concerned DMCs by pasting a computer print-out of Food Items and quantity along with the required message for patients.

- j) Data on distribution and weights & heights was recorded by Lab Technicians in the given formats. SHRC representatives collected data from the above records. The Nikshay entry list of TB cases registered during February and March (2016) was taken by SHRC and further computer entry of food distribution and weights & heights was done against the names available in the list.

Experience so far:

VII. Food Distribution: (February to May 2016)

TB patients received the food items by coming to concerned Designated Microscopy Centres (DMCs) each month:

Table: Patients who received food items under the pilot

Month	Patients who received Food Basket 1 - Milk Powder, Groundnuts, Oil			Patients who received Food Basket 2 - Milk Powder, Groundnuts, Cash for eggs			Total Patients who received Food		
	Rajnand-gaon	Bilas-pur	Total	Rajnand-gaon	Bilas-pur	Total	Rajnand-gaon	Bilas-pur	Total
Feb	83	10	93	63	9	72	146	19	165
March	156	28	184	63	28	91	219	56	275
April	142	51	193	77	39	116	219	90	309
May	122	41	163	66	37	103	188	78	266

Around 290 TB cases were enrolled in Rajnangaon and 108 in JSS Bilaspur for the pilot. In April, it was seen that more than 70% of the above enrolled patients came for collecting their monthly food. This shows the acceptability of the food baskets amongst the patients. In May, there was a small decrease in beneficiaries due to some gap in supply of food items to DMCs in Rajnandgaon. The cause of gap in supply in May was the time taken by SHRC to understand the distribution and procurement quantities and their reconciliation with number of patients enrolled and benefitted each month.

Weight Gain observed in first two months:

The weight gain in first two months of treatment is considered to be more important from the point of view of outcomes. The expectation was that mean weight gain should be around 4 Kgs over 6 months and around half of it should be in first two months. The data shows the following results:

Table: Weight gained in first two months of supplementation received by the patient

District	Basket 1 - Milk Powder, Groundnuts, Cash for eggs		Basket 2 - Milk Powder, Groundnuts, Oil		All	
	No. of patients	Mean Weight gain in 2 months (Kg)	No. of patients	Mean Weight gain in 2 months (Kg)	No. of patients	Mean Weight gain in 2 months (Kg)
Rajnandgaon	52	1.27	110	2.08	162	1.82
Bilaspur	28	1.17	35	1.10	63	1.13
Total	80	1.24	145	1.84	225	1.63

For group 1 (Oil, Milk Powder, Groundnuts), the average weight gain was 1.84 Kg over two months which is very close to the expected weight gain of 2 Kgs.

For group 2 (Milk Powder, Groundnuts, Cash for eggs), the average weight gain was 1.24 Kg over 2 months.

Interim Conclusions:

The detailed analysis and recommendations will be provided in the final report which is likely to be submitted in September 2016 after the pilot gets completed.

Based on the progress till May 2016, the interim conclusions are:

- The food baskets given to TB patients are acceptable to patients.
- The results in terms of weight gain seem to be better so far for the group getting Basket 1 i.e. Oil, Milk Powder, Groundnuts.
- There is need to increase the quantity of food items in order to increase calories and protein supplementation. It can have better chance of achieving the desired weight gain. Within the cost of Rs.600 amount approved by Government for the scheme, it is feasible to provide the existing food items in increased quantities as follows:

Recommended Basket				
Food Item	Qty	Monthly Cost (Rs.)	Protein gm/day	kcal per day
Skimmed Milk Powder	1.5	330	17.50	140.00
Soya Oil	1	75	0.00	300.00
Groundnuts (kernels)	2	160	17.20	378.00
Total		570	34.7	818.0