FEASIBILITY OF UTILISING TRADTTIONAL BIRTH ATTENDANTS IN DTP*

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Summary **: The study shows that it is feasible to train *Dais* residing in villages effectively in selection of the chest symptomatics of their villages, for door-delivery of antituberculosis drugs to the cases placed on treatment and for sputum collection at the end of treatment as well as their future follow-up. Under *Dais* 85% treatment completion and over 63% cure rate were achieved. *Dais* are available in every village in India and could be trained and utilised for NTP in rural areas. They could also be entrusted with delivering antituberculosis drugs under direct observation (DOTS) under RNTCP.**

INTRODUCTION

DTP has been in operation for the past 3 decades The case-finding and case-holding efficiencies of DTP need still to be improved. Hence, a study was undertaken by TRC to investigate the feasibility of involving a NGO by training their traditional birth attendants (Dais) in case-finding and door-delivery of drugs to tuberculosis patients. The study was undertaken in 44 villages in Sriperumbudur Taluk situated about 40 km from Chennai. The results of the study during a period of 5 years are presented.

MATERIAL AND METHODS

The non-governmental organisation that co-operated in the study is "PREPARE". They function in 68 villages in Sriperumbudur Taluk of which the study involved 44 villages. The *Dais* of these villages were trained by PREPARE in conducting home deliveries in an aseptic manner, undertaking ante-natal and post-natal care of pregnant women, in organizing immunization camps and in the supply of simple drugs for minor ailments and documenting it by putting "tallymarks" on the records. *Dais* are traditional birth attendants. They reside in the same villages where they conduct deliveries. Hence, they are well-known in the community and have good rapport with the villagers. They are quite often illiterate, and are not on the payroll of the government. They are provided with proper delivery kits. after their training, for conducting deliveries at patients' homes in a hygienic way.

The design of the study comprised several steps. As a preliminary step, practical training of *Dais* was arranged in the field, in tuberculosis case-finding as well as home-delivery of anti-tuberculosis drugs to confirmed cases put on treatment.

The field training was repeated at monthly intervals, for a period of 5 years, initially by a TRC team for 2 years and later by the nurses of PREPARE During this period, health education of the community, regarding TB, was organized in the 44 villages. The health education methods used were : exhibitions, role-plays, participation in village meetings and film shows on tuberculosis. After their training, the *Dais* could identify the chest symptomatics, collect 2 sputum specimens from each chest symptomatic and transport the specimens carefully to PREPARE office in Sriperumbudur. All the collected specimens were subsequently transported to TRC laboratory for sputum microscopy, by a messenger, every day.

For the sputum positive patients, found by smear or culture, the TRC team initiated treatment at patients' homes. The drugs needed for each patient were issued to PREPARE office wherefrom the drugs were delivered to *Dais*, in the field. Then, *Dais* delivered the drugs at patients' door-steps, fortnightly.

To check on regularity of drug intake by patients, a weekly check was done by *Dais* by putting a tally mark against each name. In addition, TRC team exercised spot drug-check during field visits by doing a pill count and collection of urine for testing drug excretion.

After completion of treatment, a list of patients due for follow up was sent to PREPARE office,

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which intimated the *Dais* concerned to collect sputum from those patients. The collected specimens were then transported to TRC laboratory for sputum microscopy.

Monitoring of the study was done by TRC team consisting of a medical officer, a clinic nurse and a medical social worker. Fortnightly visits were made without intimating the field staff, to validate the work of *Dais.*

RESULTS

Case-finding

Case-finding done through *Dais* during a period of five years is presented in Table 1.

In the total population of 26,413 persons, the eligibles for symptom questioning, i.e. those aged 15 years or more were 16,740. Total number of *Dais* in the 44 villages was 55, i.e. one or more in each village. Total number of chest symptomatics identified by them was 600, that is 3.6% of the eligible population. Total number of sputum positive patients detected among 600 symptomatics was 77, that is 2.8% of the chest symptomatics.

In order to ascertain whether *Dais* had made proper selection of chest symptomatics, the TRC nurse assessed all the chest symptomatic identified by them. In addition, to check whether the *Dais* had correctly identified all the chest symptomatics present in the community, an independent estimate was prepared by visiting two households (for every chest symptomatic identified) one on either side of the household of the identified chest symptomatic, and symptom-questioned them The result of the validation of the work of *Dais* is shown in Table 2. A total of 2,330 persons was screened for presence of chest symptoms. There were 654 chest symptomatics in the community sample, of whom 61 had been missed by *Dais,* and 7 were wrongly labelled as chest symptomatics (sensitivity 91.9%, specificity 99.6%). In all, 68 persons out of 2330 were mis-labelled by *Dais.* It is evident that *Dais* proved to be efficient in identification of chest symptomatics in the community.

Table 1. Case-finding by 'Dais' during 5 years in 44 villages

	No.	%
Total population	26,413	100.0
Population ≥ 15 years	16,740	63.0
Total no. of *'Dais'*	55	
Chest symptomatics identified	600	3.6
Sputum positives (S + C + 18; S + C + 49; S + C + 10)	77	12.8

Table 2. Validation of work of 'Dais'

Chest symptomatics*	Assessed by TRC		Total
	Yes	No	
Assessed by *'Dais'* — Yes	593	7	600
Assessed by *'Dais'* — No	61	1669	1730
Total	654	1676	2330

Sensitivity 91.96; Specificity 99.69%
*As per DTP definition

Treatment

In the 44 villages, 78 sputum positive cases put on standard chemotherapy were placed in the care of *Dais.* This number included one detected by TRC clinic nurse. Their status at the end of 12 months is shown in Table 3.

Anti-tuberculosis treatment (ATT) could be initiated only in 62 cases (79%). The reasons for not starting treatment in 16 are also given in Table 3. During the prescribed treatment period. 6 cases died and 3 migrated while 53 (85%) completed treatment. These findings suggest that by door-

Table 3. Status of sputum positive cases after 12 months of treatment

	No.	%
Total number of cases	78	100
ATT initiated by TRC	62	79
Died	6	10
Lost	3	5
Completed treatment	53	85
ATT Initiated by TRC 16		
Hospitalised	7	
Died	3	
Outside area	2	
Migrated	1	
Refused ATT	2	
Not identified	1	

Table 4. Results of sputum examination at 12 and 18/24 months of treatment

	12 months		18/24 months	
	No.	%	No.	%
Number eligible	53	42		
Number sputum collected				
By *Dais*	42	80	33	79
Number cured (S÷, C÷)		63		82
Number of failures (S + or C +)	6	14	4	12
Retreated NTM/Cont.		23		3

Table 5. Results of surprise checks during 12 months of treatment

	No.	%
Number eligible for check	53	100
Drug intake check done number who missed	43	81
≤ 20% of doses	37	70

delivery of anti-tuberculosis drugs, 85% could complete chemotherapy even in rural areas.]

Follow-up

The results of follow-up sputum examination at 12 months and after 18 or 24 months of treatment are given in Table 4. The proportions of sputum specimens collected by *Dais* were 80% of 53 at 12 months and 79% of 42 at 18 or 24 months. Smears and cultures were negative in 63% at 12 months and 82% at 18/24 months. The number of patients retreated was 6 at 12 months and 4 were being retreated at 18/24 months. The *Dais* were asked to give each dose of retreatment under direct supervision for a period of 3 months or till their smears became negative. The point of interest is that *Dais* were able to administer drugs under supervision, without much efforts, because the patients were residing in the same villages. These findings suggest that *Dais* are efficient in the different activities engaged under DTP in a rural setting.

Results of surprise checks done during the 12 months of treatment by TRC team are shown in Table 5. Of the 53 cases who continued their treatment and were eligible for a drug intake check. TRC team did such a check in 81% of cases. In all, 70% of the 53 patients had intake 80% or more of their scheduled chemotherapy.