

Initial default among tuberculosis patients diagnosed in selected medical colleges of Puducherry: issues and possible interventions

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Abstract

Background: India accounts for one-fourth of the global incident tuberculosis (TB) case load and tops the list of high-burden countries. Initial default and loss to follow-up are important challenges in achieving the objectives of the Revised National TB Control Programme (RNTCP).

Objective: A study was carried out to estimate the proportion of initial defaulters, reasons for initial default, and recommendations to reduce initial default.

Materials and Methods: A record-based study was carried out to identify the initial defaulters among new sputum-positive TB patients diagnosed during 1 year (2013) in four medical colleges of Puducherry. On the basis of the completeness of recorded residential address and availability of the patients, 38 patients were contacted and enrolled in the study. A pretested and predesigned questionnaire was used to interview the patients and open-ended questions were used to elicit the reason for initial default.

Results: The proportion of initial default among all the four medical colleges was 15.3%. Patient-related factors for initial default were long distance to the health facility, lack of support from the family members, being advised against alcohol consumption while taking treatment, monetary constraints, job constraints, not convinced about results by the health facility, stigma related to TB, and lack of awareness regarding TB. Health system-related factors were unpleasant experience with the health system, lack of dissemination of adequate information regarding further course of action to the patients, and nonavailability of the laboratory staff.

Conclusion: The magnitude of initial default was found to be high in Puducherry and most of the reasons for initial default found in this study were preventable. Systematic methods to prevent initial default need to be chalked out by program managers in collaboration with various medical colleges under the RNTCP.

KEY WORDS: Initial default, tuberculosis, interventions, Puducherry

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Introduction

Tuberculosis (TB) is the major public health problem in the world, accounting for 8.6 million new cases in 2012, of which 60% were reported from Asia.^[1] India is home to one-fourth of the global incident TB case load and tops the list of high-burden countries.^[2] In 2012, the incidence and prevalence rates for TB in India were 176 and 230 per lakh population. The mortality rate due to TB was 22 per lakh population.^[3]

The Revised National Tuberculosis Control Programme (RNTCP), which was based on the internationally recommended Directly Observed Treatment short-course Strategy (DOTS), was launched in 1997.^[4] Two important challenges in achieving the objectives of RNTCP, that is, 90% case detection and cure rates, are initial defaulters and loss to follow-up of the TB patients before or after referral for treatment.^[5] An initial defaulter is a TB patient who is diagnosed and recorded as sputum-smear positive in the Designated Microscopy Centre (DMC) laboratory register but whose record does not appear on the DOTS center treatment register and therefore possibly has not been started on treatment under RNTCP.^[6]

The magnitude and various reasons for initial default among TB patients are poorly understood. Medical colleges have an important role in the identification and treatment of TB patients under the RNTCP. By implementing the Standards for TB Care in India (STCI), cure rates can be increased and rates of initial default can be minimized.^[7]

Only few studies have identified the reasons for initial default among TB patients. This study was carried out to assess the proportion of initial defaulters identified in medical colleges as well as to find out the reasons of initial default.

Material and Methods

Puducherry has nine medical colleges, of which only four had RNTCP-approved DMC and DOTS center reporting to the RNTCP State Task Force (STF) for the past 5 years at the time of the study. Three of the medical colleges were private-owned institutes and the fourth one was a Central Government institute. Patients attending these health facilities are from Puducherry and the adjoining districts of Tamil Nadu.

A record-based study using the RNTCP registers maintained at the Government Chest Clinic, Ambour Salai, Puducherry, was conducted to measure the proportion of initial defaulters among all new sputum-positive (NSP) TB

patients diagnosed at the four medical colleges in Puducherry during January–December 2013. A person was considered as initial defaulter if he had not started his/her treatment within 14 days of having been diagnosed of TB. On the basis of the reports submitted by these medical colleges to the Office of the State TB Officer (STO) Puducherry, a list of TB patients was prepared along with their sociodemographic characteristics.

This was followed by a community-based cross-sectional study by personally contacting the initial defaulters at their residences to interview them and find out the reasons for initial default. Among the 145 initial defaulters, 68 were enlisted for personal contact and possible recruitment into study (refer flow chart) [Figure 1].

All the TB patients who could be personally contacted were provided information about this study using the Participant Information Sheet and a written consent was obtained from them and they were enrolled in this study. A pretested and predesigned semistructured questionnaire was used and participants were encouraged to freely give their responses. The questionnaire contained sociogeographic details of the initial defaulters, date of visit to the health facility, as well as

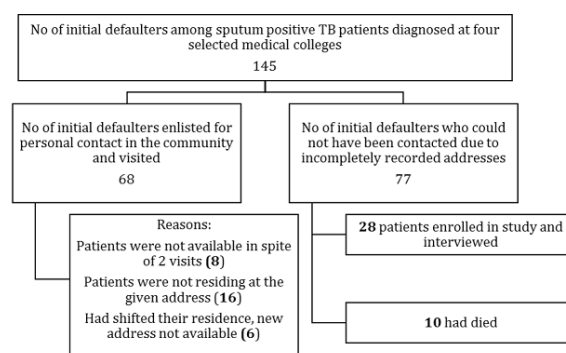


Figure 1: Selection of the study sample.

Flow chart representing selection of the study sample

Reasons for Initial Default

Reasons	N	Percentage
Patient factors		
Patient is an alcoholic and was advised not to consume alcohol while taking medications	4	20.0
Stigma related to TB	4	20.0
Lack of awareness about TB and its consequences	2	10.0
Lack of support from family members	2	10.0
Money constraint and hence poor access to health facility	1	5.0
Job constraint	1	5.0
Not convinced regarding the results provided by the health care facility	1	5.0
Health system-related factors		
Patients were not given adequate information regarding further course of action	2	10.0
Laboratory staff who issued the sputum result was unavailable	2	10.0
Unpleasant experience with the health system	1	5.0
Total	20	100

open-ended questions regarding the reasons for initial default. Data were collected by the investigator during personal visits to the residences of the TB patients. For those patients who were not available at the time of survey, two subsequent visits were made. All initial defaulters whose addresses were incomplete or incorrect or were unavailable after two visits were excluded from the study. Some patients had shifted their residence after having been diagnosed with TB. It was not possible to obtain any further details of these initial defaulters and hence they could not be contacted. Details of the patients who had died were collected from the relatives/next of the kin of the patients available.

Results

Of the 950 NSP TB patients diagnosed in the four medical colleges of Puducherry, the proportion of initial defaulters was 15.3%. Maximum (31.7%) initial defaulters were found to be within the age group of 31–40 years. Most (73.1%) of them were males. Majority (67.6%) of them were residents of Tamil Nadu and 47.4% had completed primary education whereas 21% were illiterates. Maximum (36.8%) were working in nongovernmental sector and majority (68%) were residents of rural areas. Most of them (92.1%) belonged to Hindu religion and to Most Backward Caste (MBC) category, that is, 58.9%. Maximum number of them (47.3%) belonged to social Class IV.

Distribution of Study Participants Based on the Stage at Which they Defaulted ($n = 20$)

Most patients defaulted when they were asked to report to DOTS for initiation of treatment [Figure 2].

Discussion

The proportion of initial defaulters from the selected medical colleges of Puducherry was found to be high (i.e., 15.1%). Similar high proportions of initial defaulters have been reported from previous studies as well. Sai Babu et al.,^[8] in a study conducted in Andhra Pradesh, reported that the proportion of

reported initial defaulters was 9.4%. Gopi et al.,^[9] in a similar study conducted in South India reported that the initial default rate among chest symptomatics reported voluntarily at the peripheral health facility was 14.9%.

Most of the initial defaulters belonged to the productive age group, that is, 31–40 years followed by 41–50 years. Muhammad^[10] reported that initial defaulters were found to be in the age group of 45–54 years.

In our study, alcoholism, stigma associated with tuberculosis, lack of awareness regarding TB, and lack of adequate support were the main reasons for not starting treatment among the patients. Gopi et al.^[9] found that refusal to initiate treatment among the patients was due to lack of interest, mild symptoms, old age, or work-related constraints. Mehra et al.^[11] stated that lack of trust in the health-care providers and DOTS program, death of patients before the initiation of treatment and advice by the local population against DOTS were some of the patient-related factors. The rates of defaults were higher among rural areas, illiterate patients, and smokeless tobacco users.^[11]

Most of the participants belonged to the lower socioeconomic status as per the Modified BG Prasad classification. Majority of these patients had either studied up to primary school or were illiterate. In their study, Munir et al.^[12] mentioned that the low education and poverty were among the most important reasons for initial default along with other domestic and religious factors. Rawat et al.,^[13] in a similar study conducted in Uttarakhand, stated that the reasons for initial default among TB patients were lack of motivation to go for the second visit to give sample, long distance of the DMC from home, and vocational priorities.

In our study, unavailability of the laboratory staff, lack of appropriate communication by the health-care providers regarding the next course of action, as well as dissatisfaction with the health-care providers were found to be important health-related factors for initial default. Khan et al.^[14] identified the reasons for initial default as dissatisfaction with the health services, expenses incurred during diagnosis, and repeated travel to health facilities. Rao et al.^[15] reported that 16.7% of patients were not aware of TB and hence did not collect the report. Korobitsyn et al.^[16] reasoned that the suboptimal qualification of health centers and funding as well as improper management and supervision practices of TB patients were reasons for initial default.

This study highlights the lacunae in the reliability and accountability of the present reporting system of TB patients under RNTCP. This is one of the essential components of the DOTS strategy. As the reasons for initial default were obtained from the individuals by an exploratory survey carried out in the community, the difficult task of personally contacting and interviewing these apparently 'lost TB patients' was undertaken and hence the reasons obtained are reliable.

The study could have been improved if the health staff at each of the DMCs and DOTS centers could have been interviewed to obtain their views and identify difficulties faced by them to get an overview of the problem of 'initial default'.

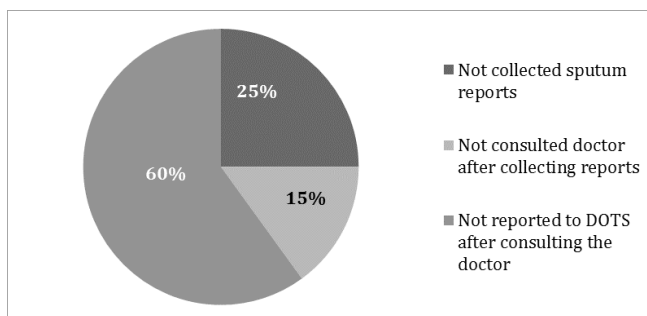


Figure 2: Distribution of study participants based on the stage at which they defaulted ($n = 20$).

The written medical records/reports of some TB patients were not available at the time of the home visits and hence information provided verbally by the participants was documented.

Measures to ensure completeness of addresses of all TB patients by the MO(TC) and LT(RNTCP) as well as maintenance of RNTCP DOTS directory of all DMCs and DOTS providers must be undertaken and the information should be made available in all medical colleges. Measures to recording and reporting deaths of TB patients as well as verbal autopsy for the same must be ensured by RNTCP. The electronic system of recording and reporting of TB patients (NIKSHAY) is being implemented since 2012–2013. This could be implemented in all medical colleges along with creating a prompt and regular reporting and feedback system to ensure that no TB patients are missed by the health-care services. Conducting of regular quarterly core committee meetings and border district meetings can help to discuss all aspects concerned therewith and help enforce these measures in the medical colleges.

Conclusion

The proportion of initial default was found to be high in this study and most of the reasons for initial default found in this study are preventable. Hence, the suggested recommendations should be appropriately incorporated in the RNTCP implementation at medical colleges in Puducherry to minimize the initial default among the newly diagnosed sputum-positive patients.

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