Status of Feedback on TB Cases Put on DOTS and Referred for Treatment: A Record Based Study from a Medical College in Dakshina Kannada District of Karnataka

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Abstract

Background: Medical Colleges are referring large numbers of patients to other health facilities for treatment after diagnosis.Extent and quality of feedback received at referring centre may enhance/hamper both the interest of the treating doctor in the programme as well the programme outcome.

Methods: Records for previous five years of the DOTS centre of a Private Medical College Hospital were included in this study. Referral and feedback status was evaluated against the RNTCP guidelines. Factors affecting the feedback of patients such as referral within TU, within the district, and other districts within state or other states were studied and the information thus collected was statistically analysed. A p-value of <0.05 was considered as the level of statistical significance.

Results: Out of 535 TB patients referred for treatment, 384(71.8%) were of pulmonary tuberculosis and 151(28.2%) extra pulmonary. 437(81.6%) were new cases, 36(6.7%) defaulters, six(1%) treatment failure, and 28(5%) wereof relapse. 186(34.8%) were referred within same TB unit, 154(28.8%) within same district, 31(5.8%) to other districts and 164(30.6%) were referred to other states.Feedback was limited to receipt of cases/starting of treatment 466(87.1%) and was received mostly through the STS, 375(70.1%). Feedback was received for182(97.8%) cases referred within the same TB units,150(97.4%)same district and106(65.8%) other states($p<0.05$).

Conclusion: Despite existing comprehensive feedback guidelines under RNTCP there was a lack of commitment in implementation of such guidelines.

Key words: Feedback, referral for treatment, RNTCP, Medical College, DOTS

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Introduction:

Revised National Tuberculosis Control Programme (RNTCP) came into existence by formulating and adopting the internationally recommended Directly Observed Treatment Short course (DOTS) strategy as the most systematic and cost effective approach to revitalize the TB control programme in India.[1] DOTS have five components and one of them is systematic monitoring and accountability.[2] The programme is accountable for the outcome of every patient treated. This is done using standard recording and reporting system. The cure rate and other key indicators are to be monitored at every level of the health system. RNTCP aims at achieving 85% cure rate amongst those who have been put on treatment.[3]As a domiciliary treatment is recommended in DOTS, it is commonly seen that many TB patients choose to get a referral to another DOTS centre based on their convenience, proximity to their residence and other factors.[4]Medical Colleges are referring large numbers of patients to other health facilities for treatment after diagnosis.[5]This referral may be within the same Tuberculosis Unit, same district, inter district or to a DOT centre in another state. To alleviate the apprehension of the treating doctor regarding the compliance and outcome of the patient, there is a provision of feedback in the RNTCP.[4]The DOTS centre, to which the patient has been referred for treatment, is required to report back to the health facility from which the patient had been referred. The information to be reported includes; receipt of the patient, treatment continuation, treatment completed and patient cured.[4]Extent and the quality of the feedback received at the referring centre may enhance/hamper both the interest of the treating doctor in the programme as well as the programme outcome. Of the sputum positive patients referred for treatment during the period April 2009 to March 2010 the feedback to the referring medical college regarding treatment initiation status has been received from 73 per cent of sputum positive cases, 68 per cent of the sputum negative pulmonary TB cases and 62 per cent of the EPTB cases.[6]A report has pointed to the lack of co-ordination and poor feedback from other districts and states on the TB cases by The Revised National Tuberculosis Control Programme (RNTCP) under the Bruhat Bangalore Mahanagara Palike.[7]In Karnataka there is scarcity of data on the performance of the feedback system related to the patients transferred out of a health facility under RNTCP. To address this problem the present study was undertaken to understand the status of the performance of the feedback system under RNTCP.

Aims & Objectives

1. To study the frequency and completeness of the feedback received by the referring centre of the patients put on DOTS and referred for treatment under RNTCP.
2. To study the factors affecting the feedbackreceived by the referring centre of the patients put on DOTS and referred for treatment under RNTCP.

Materials and Methods

This record based study was carried out at a Private Medical College Hospital in Dakshina Kannada District in the Karnataka state of India. The hospital records of the DOTS centre for previous five years (from 2006 to 2010) were scrutinised and examined after taking the necessary permission from hospital authorities. Ethical clearance was obtained from the institutional ethics committee. This being a record based study and the patients' identity was not to be disclosed, the need of patients' consent was waived off by the hospital authorities. All records of the patients diagnosed with tuberculosis of any part of the body and put on DOTS as per DOTS centre record were included in the study. A pre-tested semi-structured questionnaire was used to collect information. The referral and feedback status was evaluated against the RNTCP guidelines for referral and feedback. The extent and quality of feedback received by the referring centre was assessed by the frequency and completeness of the feedback on the receipt of patient/ treatment continuation/treatment completion/ outcome of the patient. The various factors affecting the feedback of patients such referral within TU, other TU within the district, and other district within state or interstate referral were studied and the information thus collected was statistically analysed using SPPS 12.0 version. Statistical methods used for analyses of the results included percentage, proportions and chi-square. A p-value of less than 0.05 was considered as the level of statistical significance.

Results:

It was observed that the RNTCP guidelines for referral and feedback were being followed at the DOTS centre of the Medical College Hospital where the study was carried. All of the patients diagnosed at the centre were being put on DOTS and for all of the patients referred to another health facility for DOTS, a referral form in triplicate was prepared – one was given to patient and one each was posted to the respective DTO and TU/PHI. Record of referred cases was maintained in the referral register and the Tuberculosis Treatment Card was maintained at the health facility as per program norms. Institutional Core Committee meetings were held regularly and DTO was invited in all of these meetings during the period of the study.

A total of 535 persons were diagnosed with tuberculosis, registered and put on DOTS at the hospital during the study period. Among them 386(72.2%) were men and 149(27.8%) were

women. Average age of the men was 42.89±17.3 years and that of women was 37.99±18.11years and the median age was 45 years and 37 years respectively. Thirty two(6%) were under 15 years of age and 12(3.4%) were under five years of age. Out of 535 TB patients, 384(71.8%) were suffering from pulmonary tuberculosis while 151(28.2%) were suffering from extra pulmonary tuberculosis (Table 1).

Table 2 shows that out of the total 535 patients diagnosed as a case of tuberculosis, all were registered in the DOTS centre, put on DOTS and referred/ transferred out. Among these, 437(81.6%) were new cases of tuberculosis, 36(6.7%) were treatment after default cases, six(1%) were treatment failure cases, 28(5%) were relapse cases and 28(5%) were of others category.

Table 3 shows that out of 535 patients that were referred to other DOTS centres, 186(34.8%) were referred to another health facility within the same TB unit, 154(28.8 %) were referred to another TB unit within the same district, 31(5.8 %) were referred to other districts within the state and 164(30.6%) were referred to other state as per request of the patients for continuation of treatment under DOTS. Feedback was received at least once for 467(87.3%) cases and no feedback was received for 68(12.7%) cases. Maximum feedback was received from within the same TB units 182(97.8%) and other TB units within the same district 150(97.4%). The feedback received from the TB units located in other states was the least 106(65.8%). This difference in the feedback rate and the location of the DOTS centre where the patients were referred was statistically significant ($p<0.05$). Furthermore it was observed that the feedback was limited mostly 466(87.1%) to receipt of cases/starting of treatment. The feedback related to continuation of treatment, treatment completion, cure or default was negligible. The treatment cards maintained at the referring centre were observed to be incomplete due lack of timely information from the centres providing treatment to the referred patients in absence of an effective feedback.

The study also revealed that whatever feedback was received it was mostly through the STS (Table 4). The feedback received directly as per RNTCP guidelines from the DOT centre where the patients were referred was for 92(17.2%) cases,maximum being54(35.1%) from other TB units within the same district and minimum 8(4.3%) from within the same TB unit where the maximum patients were being referred.

Discussion:

The present study has revealed that the receiving DOT centre had given any feedback to the referring centre only for 92(17.2%) cases, STS tried to make up for lapses of the receiving centres by providing feedback for 375(70.1%) cases but for 68(12.7%) cases no feedback was

ever provided to the referring centre. This was despite the fact that there is a provision of a systematic feedback in the RNTCP. Wherein, 'if a patient is required to be referred to another health facility for DOTS, a referral form in triplicate is to be prepared – one given to patient, one each to be posted to the respective DTO and TU/PHI. Record of referred cases is to be maintained in the referral register. The respective, STS is responsible for tracking of these referral cases. Programme review meetings held in the district should be utilized to facilitate tracking and feedback of referred cases. The receiving treatment facility should honour diagnoses made at the medical college/hospital and must provide timely feedback on the receipt of patient, continuation and completion of treatment to the referring health facility. The Tuberculosis Treatment Card is to be maintained at the health facility where the patient is initiated on treatment and a duplicate treatment card is prepared and maintained at the DOT centre by the DOT provider. The original treatment card at the referring centre is to be updated at least once in a fortnight'.[8]

At national level of the patients referred for treatment during the period April 2009 to March 2010 the feedback to the referring medical college regarding treatment initiation status has been received from 73 per cent of sputum positive cases, 68 per cent of the sputum negative pulmonary TB cases and 62 per cent of the EPTB cases.[6]A study from Yemen reported that the health facilities to which patients were referred rarely provided any feedback to the referring health facilities upon the presentation of the referred patient.[10]According to the Bruhat Bangalore MahanagaraPalike RNTCP records, while 255 cases were transferred (initially treated here but later transferred to the place of the patient's residence) out of Bangalore Urban, it received feedback on only 144 cases and of the 630 cases transferred outside the State, the City unit received feedback on only 31 cases.[7]

The study Further revealed that the feedback received was limited toreceipt of cases/starting of treatmentin466(87.1%) cases and the feedback related to outcome of therapy was negligible.The treatment cards maintained at the referring centre were observed to be incomplete in absence of an effective feedback.A study from Malawi reported that it was common for patients to be transferred between treatment units, but the quality of the data for patients who transfer was poor, 58% of all patients had an unknown outcome.[9]No feedback, incomplete feedback or delayed feedback may have an adverse impact on the morale of treating physicians if they don't know the outcome of their prescriptions and performance indicators of the programme such as the cure rate. It may also lead to treatment default or missing cases and hence the program performance.A substantial proportion of patients with TB are managed at medical colleges across the country. Over the last decade, medical

colleges have consistently contributed to nearly 25 per cent of the chest symptomatic referred for sputum smear examination and nearly 20 per cent of new sputum smear-positive patients detected annually.[11] In addition, the role of medical college faculty in TB control as key opinion leaders and role models for practicing physicians and as teachers imparting knowledge, skills and shaping the attitude of medical students cannot be underestimated. There is a pressing need for all medical colleges to advocate and practice DOTS strategy which provides the best opportunity for cure of TB patients. It has been reported that referring the patient back to the treating physician after completion of treatment increases the confidence among the physicians.[12] Under such circumstances there is a pressing need to improve the feedback system under RNTCP to increase confidence of the treating physicians in the programme.

Conclusion:

Despite existing comprehensive feedback guidelines under RNTCP, a lack of commitment in implementation of such guidelines has been revealed by the present study. It is recommended to create awareness among the health workers involved in implementation of DOTS regarding the importance of complete and timely feedback to the referring centre and motivate them do the same.

Table 1. Year-wise profile of patients diagnosed with TB at the DOTS centre in a Private Medical College Hospital of South India from 2006-2010

Year of registration	Patients diagnosed with TB					No. of Patients initiated on treatment at DOTS centre	No. of patients referred to other health facility
	Total	Sputum Smear		Type			
		Positive	Negative	Pulmonary	Extra Pulmonary		
2006	105 (100)	62 (59)	43 (41)	75 (71)	30 (29)	105 (100)	105 (100)
2007	111 (100)	62 (55.9)	49 (44.1)	87 (78.4)	24 (21.6)	111 (100)	111 (100)
2008	100 (100)	59 (59)	41 (41)	78 (78)	22 (22)	100 (100)	100 (100)
2009	123 (100)	55 (44.7)	68 (55.3)	80 (65)	43 (35)	123 (100)	123 (100)
2010	96 (100)	40 (41.7)	56 (58.3)	64 (66.7)	32 (33.3)	96 (100)	96 (100)
Total	535 (100)	278 (52)	257 (48)	384 (72)	151(28)	535 (100)	535 (100)

Table 2. Year-wise distribution of TB patients put on DOTS at the DOT centre in a Private Medical College Hospital of South India from 2006-2010 according to the type of cases

Year	Type of TB cases referred					
	Total	New case	Treatment after default	Treatment failure	Relapse	Others
2006	105 (100)	89 (84.7)	9 (8.6)	1 (1)	4 (3.8)	2 (1.9)
2007	111 (100)	91 (82.0)	6 (5.4)	1 (0.9)	5 (4.5)	8 (7.2)
2008	100 (100)	76 (76)	8 (8)	1 (1)	10 (10)	5 (5)
2009	123 (100)	101 (82.1)	8 (6.5)	2 (1.6)	6 (4.9)	6 (4.9)
2010	96 (100)	80 (83.3)	5 (5.2)	1 (1.1)	3 (3.1)	7 (7.3)
Total	535 (100)	437 (81.7)	36 (6.8)	6 (1.1)	28 (5.2)	28 (5.2)

Table 3. Showing the extent and quality of feedback received at the referring centre from the receiving centres where the patients were referred.

Location of the health facility to which the patient was referred	Total no. of patients referred	No. of patients for whom the Feedback was received*						
		On Receipt of the patient	On Treatment Continuation	On Treatment Completion	On Cure	On Default	On Death	No feedback received
Within Same TB unit	186 (100)	182 (97.8)	6 (3.2)	7 (3.8)	17 (9.1)	7 (3.8)	8 (4.3)	4 (2.2)
Other TB unit in same district	154 (100)	150 (97.4)	4 (2.6)	1 (0.7)	5 (3.3)	2 (1.3)	6 (3.9)	4 (2.6)
Other district in same state	31 (100)	27 (87.1)	2 (6.5)	0 (0)	2 (6.5)	2 (6.5)	1 (3.2)	4 (12.9)
Other state	164 (100)	106 (64.6)	8 (4.9)	1 (0.6)	0 (0)	0 (0)	3 (1.8)	56 (34.2)
Total	535 (100)	466 (87.1)	20 (3.7)	9 (1.7)	24 (4.5)	11 (2.1)	18 (3.4)	68 (12.7)

*in some cases feedback was received on more than one occasion.

Table 4. Showing the relationship between the source of DOTS feedback and the location of the DOT centre of the patients referred to other DOT centres

Year	Total patients referred	Patients referred within the same TB unit				Patients referred to other TB unit in same district				Patients referred to other districts in same state				Patients referred to other state			
		Total	Feedback received		No feedback received	Total	Feedback received		No feedback received	Total	Feedback received		No feedback received	Total	Feedback received		No feedback received
			From the DOT centre	Through STS			From the DOT centre	Through STS			From the DOT centre	Through STS			From the DOT centre	Through DTO	
2006	105 (100)	44 (100)	0 (0)	42 (95.5)	2 (4.5)	28 (100)	11 (39.3)	14 (50)	3 (10.7)	4 (100)	0 (0)	3 (75)	1 (25)	29 (100)	1 (3.4)	22 (75.9)	6 (20.7)
2007	111 (100)	44 (100)	3 (6.8)	40 (90.9)	1 (2.3)	31 (100)	19 (61.3)	12 (38.7)	0 (0)	7 (100)	3 (42.8)	2 (28.6)	2 (28.6)	29 (100)	7 (24.1)	13 (44.8)	9 (31)
2008	100 (100)	34 (100)	3 (8.8)	30 (88.2)	1 (2.9)	33 (100)	15 (45.5)	17 (51.5)	1 (3)	9 (100)	3 (33.3)	6 (66.7)	0 (0)	24 (100)	9 (37.5)	6 (25)	9 (37.5)
2009	123 (100)	33 (100)	2 (6.1)	31 (93.9)	0 (0)	34 (100)	6 (17.6)	28 (82.4)	0 (0)	7 (100)	3 (42.9)	3 (42.9)	1 (14.2)	49 (100)	2 (4.1)	26 (53.1)	21 (42.8)
2010	96 (100)	31 (100)	0 (0)	31 (100)	0 (0)	28 (100)	3 (10.1)	25 (89.9)	0 (0)	4 (100)	0 (0)	4 (100)	0 (0)	33 (100)	2 (6.1)	20 (60.6)	11 (33.3)
Total	535 (100)	186 (100)	8 (4.3)	174 (93.6)	4 (2.1)	154 (100)	54 (35.1)	96 (62.3)	4 (2.6)	31 (100)	9 (29)	18 (58)	4 (13)	164 (100)	21 (12.8)	87 (53)	56 (34.2)

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