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### HEALTH SEEKING BEHAVIOUR OF PATIENTS REGISTERED AS RETREATMENT CASES UNDER RNTCP IN DISTRICT ANAND, GUJARAT

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#### ABSTRACT

Tuberculosis has been reported as one of the most important public health problems all regions of WHO. India is estimated to have more than one-fifth of the global TB burden. India, however, disproportionately accounts for nearly half of re-treatment TB cases notified globally. Health seeking behavior of patients is important to diagnose and treat them early. A cross sectional descriptive study was conducted in two TB units of district Anand, Gujarat using pre-tested questionnaire in Gujarati language. A sample size of 100 patients was selected to estimate 50% prevalence of Non-RNTCP treatment with allowable error of 20%. Cough and fever were found to be most common symptoms in 72% and 69% participants respectively. 52% of participants took their treatment from private practitioners. Side effects of anti-tubercular drugs were common factor defaulting the treatment. Awareness about the symptoms, early diagnosis, treatment and its compliance has to be created in the community. Patients must be educated about possible side effects of the drugs and to provide support to overcome them.

**Key Words:** RNTCP, Retreatment cases, Tuberculosis, Private practitioners.

#### INTRODUCTION

*M. tuberculosis* is an ancient infectious killer that still remains one of the leading causes of death worldwide. TB inspired writers such as John Bunyan to aptly describe this deadly and mysterious disease in 1660 as “the captain of all these men of death that came against him to take him away, was the consumption for it was that brought him down to the grave [1].

Disease primarily affects lungs causing pulmonary tuberculosis and it may also affect lymph node, bone, intestine, meninges and skin. Tuberculosis still remains a worldwide problem, despite its causative organism, was discovered more than 100 years back and effective anti-tuberculous drugs have been invented decades ago.

Tuberculosis has been reported as one of the most important public health problems by all regions of WHO. There were an estimated 9.4 million incident cases TB globally which is equivalent to 137 cases per 100000 population. Most of the estimated number of cases in 2009 occurred in Asia (55%) [2]. The five countries with the largest number of incident cases in 2009 were India (1.6–2.4 million), China (1.1–1.5 million), South Africa (0.40–0.59 million), Nigeria (0.37–0.55 million) and Indonesia (0.35–0.52 million). In 2009, 622,342 (10%) of the 6.12 million of global total TB notifications were re-treatment TB cases. Retreatment cases include defaulters, relapse and failure cases.

India alone accounts for an estimated one fifth (21%) of all TB cases worldwide, and China and India combined account for 35%. India is estimated to have more than one-fifth of the global TB burden. India, however, disproportionately accounts for nearly half of re-treatment TB cases notified globally, with 289,756 notified re-

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treatment cases in 2009. The notification rate of re-treatment cases has increased by 67% over the past 12 years, from 15 per 100,000 population in 1999 to 25 per 100,000 population in 2010. During the last quarter of 2010, over 1.84 million TB suspects were examined, 201550 sputum positive cases were diagnosed and 347636 TB cases were registered for treatment in India. There were an estimated 440000 cases of multi-drug resistant TB (MDR-TB) in 2008. The four countries that had the largest number of estimated cases of MDR-TB in absolute terms in 2008 were China, India, the Russian Federation and South Africa. The annualized total case notification rate is 118 cases/100,000 populations. The new sputum positive case notification rate is 49 per 100,000 population (65%). There are 29% of retreatment cases out of all smear positive cases in Gujarat [3].

Retreatment group is extremely diverse, with patients having been treated with varying durations and anti-TB regimens. Retreatment patients may have been treated many years prior or may have only recently failed or defaulted, and may have been treated by the private or public sectors (or both) in the past. Among patients being retreated for TB because of initial treatment failure, default from initial treatment, or relapse following initial treatment, drug resistance is common and retreatment outcomes inferior [4,5].

Evidences of related literature revealed that health system, community, family, and other personal issues are influencing factors for the effective health seeking behaviors and case findings. Individual ways of experience of own symptoms and illness, perceived causes and experiences with the health care system are some aspects of personal issues.

### Objective

- To assess the health seeking behaviour of the participants.
- To obtain information about previous treatment history and practices.

### MATERIALS AND METHODS

A cross sectional descriptive study was conducted in two TB units (TUs) Petlad and Anklav of district Anand, Gujarat during April 2009- March 2010. By simple random sampling method, two TB units (TUs) were selected.

A List of registered retreatment cases were taken from District TB Centre (DTC),

We assumed that 50% of the re-treatment cases would have previously been treated under Revised National TB Control Programme (RNTCP). A sample size of 100 patients from Petlad TU & 50 from Anklav TB units (TUs) was selected to estimate 50% prevalence Non-RNTCP treatment with allowable error of 20%. Sample size =  $4PQ/L^2 = 4 \times 50 \times 50 / 10 \times 10 = 100$ . 100 participants have been included in the study. Patients who

were on retreatment regimen (registered as failure, relapse, and treatment after default) at the two TB units (TUs) under the study during the period of April 2009-March 2010 and aged 15 and above were included in study. Patient who did not give consent, died but registered as retreatment cases and who has migrated to another area were excluded from the study. After collecting the name and address of retreatment cases registered under RNTCP from DTC Petlad, they were approached at their addresses and data collection was done through individual interviews.

A pretested, structured and coded questionnaire was used while conducting the interview to record the responses of the participants. The interview started only after the participant signed the informed consent form in Gujarati.

The analysis was done using the software SPSS for the Windows Version.15.0. Frequency tables were prepared for the various nominal variables. For the continuous variable (viz. age) median and mean with 95% confidence intervals were calculated. To find out the association between two categorical variables, Chi-square test was applied.

### RESULTS

There were 100 participants in total with a mean age of 42 years. Majority of them were above the age of 40 years and major proportions of the participants were in the age group of 40-49 years. (Figure 1) There were 65% male participants and 35% female.

**Figure 1. Age wise distribution of the participants**

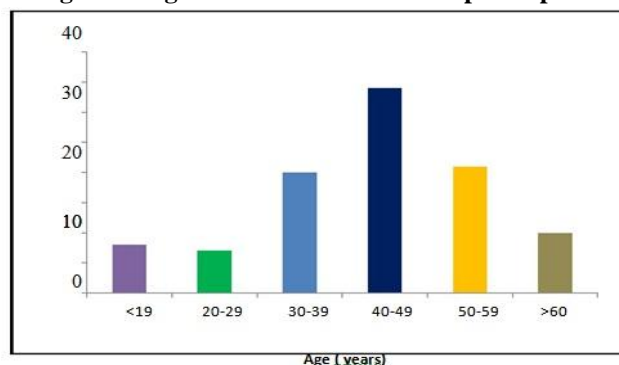


Table 01 depicts that 72% participants had cough and 69% had fever. Table 02 reveals that 52% of participants have consulted to the private physician at the first. Table 03 suggested that 61% of participants examined their sputum in government health facility. 33% of the participants started their treatment from private practitioners and 67% from public health facility.

Table 4 shows that 67% of the participants took treatment from government health facility.

**Table1. Distribution of symptoms among participants**

Symptoms	Frequency	Percentage
Cough	72	72.0
Fever	69	69.0
Chest Pain	19	19.0
Weight loss	24	24.0
Night sweat	7	7.0
Loss of appetite	16	16.0

#As most of the participants had more than one symptoms, so frequency is more than 100

**Table 2. Distribution of Type of consultation**

Consultation	Frequency	Percentage
Private	52	52.0
Government	48	48.0
Total	100	100

**Table 3. Distribution of place of sputum examination**

Sputum Examination	Frequency	Percentage
Private Lab	39	39.0
Govt. lab	61	61.0
Total	100	100.0

**Table 4. Distribution of place of treatment**

Place of Treatment	Frequency	Percentage
Private Practitioners	33	33.0
Govt. health facility	67	67.0
Total	100	100.0

**Table 5. Distribution of factors defaulting initial therapy**

Factors	Frequency	Percentage
Side effects	12	32.43%
Did not like the drugs	5	13.5%
Not appreciate drugs effects	4	10.8%
Long duration of treatment	3	8.10%
Feel better	9	24.32%
Others	4	10.8%
Total	37	100% <sup>s</sup>

**Table 6. Association between side effects and defaulters**

Side effects	TAD		Total
	Yes	No	
Yes	12 32.43%	9 14.29%	21 21%
No	25 67.57%	54 85.71%	79 79%
Total	37 100%	63 100%	100 100%

Chi-square value-4.6, df=1, p=.03

Table 5 revealed that Side effects 24.32% and feel better 24.32% was common factors for discontinuing the treatment. Table 6 shows that among the TAD, 32.43% of participants had side effects but in non-TAD it was 14.29%, Side effects were more among TAD compared to non-TAD which was statistically significant.

## DISCUSSION AND CONCLUSION

This present study is cross sectional descriptive study conducted to explore the health seeking behaviour among the patients registered in RNTCP as retreatment cases. In this study majority of respondents were above the age of 40 years and major proportions of the participants were in the age group of 40-49 years. There

were 65% male participants and 35% female. A study conducted by Jha Ugra Mohan *et al* showed that more number of male patients were registered compared to female patients under retreatment cases and 27% of participants were from age group of 35-44 years and the mean age of participants was 42 years [6].

In this study a mean age of respondents was 42 years, same mean age of retreatment cases was found in a study conducted by Mukherjee A *et al* in West Bengal [7].

The presenting complaints among the participants before getting treatment were cough 72.00% and fever 69.00% in this present study. Similar finding has been observed in the studies carried out by Jagdish Rawat *et al* [8] in Dehradun and study conducted by Jacqueline M *et al* in USA [9].

In the study association of symptoms like cough, fever, chest pain, night sweat, loss of appetite and other symptoms were not found significantly associated with participants to compel them moving for consultation and treatment. In present study 52.00 % of the participants consulted a private physician. A study conducted by Pardeshi GS in Akola, Maharashtra showed that 87% of the participants first consulted private practitioner [10].

An another study conducted by Uplekar M, *et al* in Western part of India and it was found to be 85% participants first consulted private practitioner. [11]

Tuberculosis still carries stigma in society, so people do not want to disclose it and seek the consultation and treatment from private practitioner instead of taking treatment from the govt. physician. In this study go to Government hospital 67.00% and 33.00% go to private hospital .

Study carried out by Sachdeva Kuldeep Singh *et al* in Gujarat, showed that 44% of participants took their treatment from Non RNTCP sources [12].

Among the defaulter participants most common cause of non-compliance was side effect in 33% of them followed by feeling better in 24% of the participants.

A study conducted in Meerut by Mittal Chaya *et al* showed that 43% of participants defaulted because of side effects followed by 15% of cases because of improvement in symptoms [13].

A previous study conducted by N Pandit *et al* in Anand District in 2006, observed that majority 63.2% of patients on DOTS stopped treatment because of toxicity of drugs. The other reasons were feeling better during treatment 15.8% and lack of knowledge about various aspects of TB and its treatment 10.5% [14].

Side-effect had a significant relationship with treatment interruption ( $p < .05$ ), thus every efforts should be made to educate patients in such a way to reduce those unwanted side-effects. A study done by Chatterjee P *et al* in West Bengal reported that improvement in symptoms 56.00% intolerance to drugs 9.00% [15].

Present study has got certain limitations, like use of non-probability sampling and inclusion of patients seeking only government facilities for DOTS.

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