



## EVALUATION OF TUBERCULOSIS KNOWLEDGE IN GENERAL PRACTITIONERS

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### ABSTRACT

To assess the knowledge of tuberculosis among the general practitioners in Kadapa a cross-sectional study was conducted among general practitioner of Kadapa city by interview using a pretested semi-structured questionnaire during June – May 2014. Out of the 28 participating general practitioners, only 8 (28.6%) claimed to be using the drugs of alternative medicine for TB treatment. 64.3%, 25% and 10% believed that TB should be diagnosed by sputum microscopy, X-ray findings and sputum culture respectively. Health policy managers and DOTS implementers should encourage all doctors, particularly private sector doctors, to receive RNTCP training and follow DOTS methodology. Improvement is needed in RNTCP training, and emphasis needs to be given to correct diagnosis, management and follow-up of TB patients.

**Keywords:** Tuberculosis, Knowledge, General Practitioners

### INTRODUCTION

Tuberculosis, an infectious disease caused by *Mycobacterium tuberculosis* is a worldwide, chronic communicable disease with varied clinical presentation, host response, chemotherapeutic response, etiology, and social implications<sup>1</sup>. Detection of smear positive TB cases by direct microscopy is a key element of the DOTS (Direct Observed Treatment – Short course) strategy<sup>2</sup>. The success of this strategy depends on the ability of the health care system to identify and follow up TB suspects<sup>3</sup>. Health system's inability to diagnose and treat TB has been shown by many studies, both in low and high incidence countries<sup>4-8</sup>. This requires global attention. India's Revised National Tuberculosis Control Programme (RNTCP) has made significant progress in TB control over the last decade through countrywide DOTS implementation<sup>9</sup>. This also includes efforts to engage the private medical sector in TB care and control through various published schemes<sup>10</sup>. Due to its mode of transfer through air and its fast spread, most efficient method of its transmission prevention is identification (through case detection, diagnosis) and cure of the most potent source of infection – pulmonary tuberculosis patients excreting tubercle bacilli<sup>11</sup>.

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The capacity of the programme is indicated by smear sample, and elimination of source of infection, and it is an early surrogate of treatment outcome indicator<sup>12</sup>. Modern Anti-TB treatment can cure virtually all patients of tuberculosis provided it is taken regularly for the prescribed duration which is usually for six months. However, due to poor compliance due to several factors like ignorance, poverty, unemployment, illiteracy, a significant size of subgroups of patients are not cured, causing spread of the disease in the community, increase in incidence of MDR-tb, increase in case-fatality rate, besides increasing mortality, prevalence, and transmission<sup>13</sup>. So to achieve this idealistic goal of stopping tuberculosis, a breakthrough strategy known as DOTS (Directly Observed Treatment Short course) was adopted which is a comprehensive strategy including diagnosis, improved drug supply and programme monitoring. (1). Its high prevalence along with pandemic of HIV/ AIDS, MDR Tb and XDR Tb, a fire fighting strategy is required. It is very common in slum areas where overcrowding, low hygienic condition and malnutrition are highly prevalent. This study is conducted to know about awareness of the tuberculosis in general practitioner in Kadapa.

### OBJECTIVES

To assess the knowledge of tuberculosis among the general physicians in Kadapa

### METHODOLOGY

It was cross sectional conducted among general practitioner of Kadapa in Rajiv Gandhi Institute of Medical Sciences (RIMS) during June – May 2014. General practitioners were interview educing a semi

structured questionnaire. Data is compiled in Microsoft excel & analyzed using epi-info software, SPSS package.

## RESULTS

Out of total participating physicians maximum had over five years' experience in clinical practice and the median number of TB patients seen per month by a practitioner was eight. Only 8 of the 28 respondents claimed to be using drugs from alternative systems of medicine in the treatment of TB in addition to the modern drugs. 20 of responding practitioners said they referred their TB patients to DOTS centre for treatment. Table 1 demonstrates summary of other details of the participating

private practitioners. In response to the question regarding route of infection, all replied correctly. Regarding method of diagnosis of pulmonary, 7 out of 28 replied it is done by X-ray, 18 out of 28 considered sputum examination as the right method, while 3 out of 28 told sputum culture as the right method.

In response to a question regarding the choice of the best test to confirm the diagnosis of pulmonary TB, 18 (64.28%) considered sputum microscopy as the best test while 7 (25%) considered chest X- ray as the best method.

**Table 1: Demographics and practice details**

S. No.	Frequency	Route TB spread
1.	Respiratory	28
2.	Contact	0
3.	Oral	0
4.	Vector born	0
<b>Most common method used for diagnosis of pulmonary TB</b>		
5.	X ray	7
6.	Sputum microscope	18
7.	Blood examination	0
8.	Sputum culture	3
<b>How will you start treatment of Pulmonary TB</b>		
9.	Start antibiotic & symptomatic treatment	2
10.	Categorized patient & put on DOTS	6
11.	Referred the patient to DOTS Centre	20

**Table 2: General characteristics of the GPs participating in the study (n= 154)**

S.No.	Characteristic	Observations
1.	Age in years (mean)	45.2
2.	Professional Experience in years(mean)	18.9
3.	Male (%)	19
4.	Found/ followed up TB case last year (%)	10.4
5.	Attended TB training course during the last 5 years (%)	11.0

**Table 2:** Shows general characteristics of GPs in the study. The average age of the GPs was 45.2years with an average experience of 18.9 years. A private GP was 10.4% diagnosed or followed up a TB case in the last year. Less than 11% of GPs had attended TB training courses during the last 5 years.

**Table 3: Numbers and percentages of GPs who considered TB as one of the three possible Diagnoses in any of the 5 clinical TB-cases**

S.no	Clinical Vignette	Private (%)	P Value
1.	TB case 1 (5 weeks cough, loss of weight)	17(60.4%)	0.002
2.	TB case 2 (HIV with prolonged cough)	22(77.3%)	0.526
3.	TB case 3 (loss of weight, night sweats)	20(72.2%)	0.003
4.	TB case 4 (cough with haemoptysis)	19(70.8%)	0.382
5.	TB case 5 (Cough, crackles at the apex)	22(77.3%)	0.001
6.	Pneumonia	1 (5.5%)	0.001
7.	COPD	2 (9.0%)	0.420

Furthermore, for cases of COPD, more than 50% of all GPs were not able to mention the correct diagnosis with no significant difference with private GPs. Pneumonia was correctly diagnosed by more than 5.5% of private GPs (no statistically significant difference was observed).

**Table 4: Median and Inter quartile range of TB suspicion and TB knowledge Scores**

	Score	Private	P- value
1.	TB Suspicion Score (maximum 15)	10.0(7.0–12.0)	0.001
2.	TB Knowledge Score (maximum 20)	7.0(5.0–9.0)	0.001
3.	Diagnosis (max 5)	2.0(1.0–3.0)	0.037
4.	Treatment (max 8)	3.0(2.0–5.0)	0.001
5.	Follow up (max 4)	1.0(1.0–1.0)	0.199
6.	Contacts screening (max 3)	1.0 (0.0–1.0)	0.041

Tables 4 present the results of simple and multiple robust linear regressions, respectively, with TB suspicion and TB knowledge scores as dependent variables and general characteristics of GPs as independent. "Sector of work"(private) and "finding or following a TB case last year" was related to TB suspicion score using simple robust regression analysis. However, in the multiple analyses, sector of work was the only variable associated with TB suspicion score with private GPs scoring 1.6 points. In simple analysis, sector of work, nationality, attending TB training course and "finding or following a TB case last year" was independently related to TB knowledge score. GPs having attended TB training course in the last 5 years scored 2 points more than those who did not 95%CI; (0.71, 3.24).

#### DISCUSSION

Complete cure from TB requires compliance not only of patients but also of physicians. Although their knowledge regarding the transmission of TB is adequate but regarding diagnosis only 64.28% considered sputum smear examination as the best method for diagnosis of pulmonary TB. So sputum examination as the right method for diagnosis and treatment monitoring needs emphasis. This poor management not only compromises patient outcome but also exposes other family members to unnecessary risk. This in appropriate regimen would

increase the prevalence of MDR-TB in a community which is already overburdened by TB. General practitioners knowledge may have an impact on their patients' health. An important implication of our results is that there can be delays in diagnosis of TB cases, especially among those attending private clinics or hospitals 8. Therefore, there is a need to evaluate if there is a delay in diagnosis among TB patients as this may hinder the efforts to control TB. A well designed health care seeking behavior study for TB patients and TB suspects would help to identify factors related to both patients and health system delay. Private GPs should be actively engaged in TB control activities in a strategy of "Private Public Mix (PPM) for TB control in Surat". Such a strategy should explicitly highlight the rules for private sector in TB control, through implementing some of the practical tools recommended by the WHO, e.g. referral and notification as these are believed to increase case detection<sup>14</sup>.

#### CONCLUSION

Health policy managers and DOT Simple mentors should encourage all doctors, particularly private sector doctors, to receive RNTCP training and follow DOTS methodology. Improvement is needed in RNTCP training, and emphasis needs to be given to correct diagnosis, management and follow-up of TB patients.

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