



Original Article:

Assessment of Knowledge and Practices of Referring Private Practitioners Regarding Revised National Tuberculosis Control Programme in Nagpur City - A Cross Sectional Study

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Abstract: Objectives: To assess knowledge, diagnostic and treatment practices of the referring private practitioners of Nagpur city regarding Revised National Tuberculosis Control Programme (RNTCP). **Methods:** The study involved interview of 103 Private Practitioners (PPs) of Nagpur city. Knowledge of private practitioners was assessed based on questions related to diagnosis, categorization, treatment regimens & follow up. Practices of private practitioners were assessed based on which investigations and treatment regimen they advise & whether they offer supervised treatment. Their willingness to get involved in the programme was also recorded. **Results:** Only 49 (47.6%) private practitioners knew sputum smear examination as primary tool of diagnosis of TB. Only half, 52 (50.5%) of the private practitioners knew number of categories of tuberculosis correctly and 64 (62.1%) private practitioners did know how to categorize TB patients. Chest X-ray and Mantoux test (38.5%) was mainly used by the PPs for TB diagnosis. 42.7% of PPs were prescribing treatment for TB and among them only 8 were prescribing as per RNTCP guidelines and just one provided treatment under direct observation. Different combination of HRZE and HRZES was prescribed for variable period ranges from 2-8 months. And only 12 (11.6%) private practitioners expressed their willingness to get involved in RNTCP for TB control. **Conclusion:** There is lack of adequate knowledge, diagnostic and treatment practice among PPs as per RNTCP guidelines and further encouragement is required for their participation in the programme.

Key Words: Private Practitioner; Tuberculosis; Knowledge; Practices; India

Introduction:

Tuberculosis (TB) is the cause of 1.8 million deaths annually; 98% of these occurs in developing countries and among the poorest people of these countries.¹ In 2008, there were estimated 9.4 million new cases equivalent to 139 cases per 100,000 population of TB globally.² Multi drug resistance

occurring primarily as a consequence of poor treatment services, could lead to emergence of XDR TB if MDR TB is not managed properly. There were an estimated 0.5 million cases of MDR-TB in 2007. The country that ranked first in terms of total number of MDR-TB cases in 2007 was India (131 000).³ The Indian Revised National Tuberculosis Control Programme began large scale nationwide implementation of the World Health Organization's global tuberculosis control strategy (DOTS) in 1998 and has since expanded rapidly. Today, almost half of patients with tuberculosis in India may initially seek help from the private healthcare sectors, where diagnosis, treatment, and reporting practices often do not meet national or international standards for tuberculosis.⁴⁻⁶ Subsequent delays in diagnosis and inadequate treatment may result in extended infectiousness, acquired drug resistance, treatment failure, and high rates of relapse—all of which may impair efforts for tuberculosis control in India. Collaborations between the public and private health sectors, or public-private mix, may be an important solution. Public-private mix has been defined by WHO as strategies that link all healthcare entities within the private and public sectors (including health providers in other governmental ministries) to national tuberculosis programmes for expansion of DOTS activities.⁷ And thus private practitioner has a important role play to reach the Millennium Development Goal (MDG) related to TB by 2015.

Materials and Methods

The present cross-sectional study was carried out in OPD of TB & Chest Diseases of Government Medical College & Hospital (GMCH), Nagpur and at clinics of private practitioners in Nagpur city. RNTCP in Nagpur city is under City TB Control Society of Nagpur Municipal Corporation and City TB Officer is accountable for quality implementation of the programme in all four Tuberculosis Units of Nagpur city. The department of TB and Chest Diseases of GMCH, Nagpur is the head-quarter of one of the four Tuberculosis Units of Nagpur city.

Total 452 newly registered Tuberculosis (TB) patients at OPD of TB & Chest Diseases in the month of May and June 2008 and out of total 155 referring private practitioners; 105 (67.8%) were from Nagpur city and 50 (32.2%) were from outside Nagpur city. Only private practitioners from Nagpur city were included in the study. Out of 105 private practitioners of Nagpur city, 2 (1.9%) refused to participate in the study. Thus data from 103 private practitioners was analysed finally. Out of 103 private practitioners, 99 (96.1%) were interviewed using pretested proforma to collect information about their knowledge and practices regarding RNTCP. Only 4 (3.9%) private practitioners insisted on filling up the same proforma on their own. Knowledge of private practitioners was assessed based on questions related to diagnosis, categorization, treatment regimens & follow up. Practices of private practitioners were assessed based on which investigations and treatment regimen they advise & whether they offer supervised treatment. Their willingness to get involved in the programme was also recorded. Knowledge and diagnostic practices of private practitioners were analysed against diagnostic algorithm, treatment categories & regimens and case definitions in RNTCP. Data thus collected was analysed using Microsoft Excel to obtain Percentages & proportions.

Results:

Table 1 shows the distribution of private practitioners. Out of 47 Allopaths, 17 were graduate doctors and 30 were postgraduate doctors. Among 30 postgraduate doctors 21 were physicians, 2 were surgeons, 3 had diploma in child health and 1 had diploma in TB & Chest diseases. Among 34 Ayurved doctors, 10 were postgraduate doctors. Out of 22 Homeopaths, 17 had degree and 5 had diploma in Homeopathy.

Table 1: Distributions of Private Practitioners According to their Systems

Systems	Private Practitioners	
	No.	(%)
Allopathic	47	(45.6)
Ayurvedic	34	(33)
Homeopathy	22	(21.4)
Total	103	(100)

Private practitioner's Knowledge

Maximum, 72 (68.9%) private practitioners (PPs) had heard of RNTCP but only 37 (35.9%) of them knew full form of the same. Only 49 (47.6%) PPs knew primary tool of diagnosis of TB (sputum smear examination). Time of sputum collection remained un-answered by 65 (63.1%) PPs and only 27 (26.1%) knew it correctly. Almost one third, 34 (33.0%) PPs had incorrect knowledge while 32 (31.0%) did not know about action to be taken if all sputum samples for diagnosis are negative. Only half, 52 (50.5%) of the PPs knew number of categories of tuberculosis correctly while 46 (44.7%) did not answer. Maximum, 64 (62.1%) PPs did know how to categorize TB patients and only 8 (7.8%) PPs knew categorization correctly for each category. Treatment regimens of category I, II and III were not known to 75(72.8%), 87 (84.4%) and 92 (89.3%) PPs respectively. Only 8 (7.8%) PPs knew treatment regimens correctly for each category.

Private practitioner's Practice

Only 38 (36.9%) private practitioners were using sputum microscopy as primary tool of diagnosis and the remaining 65 PPs used different combinations of investigations for diagnosis of TB were mainly chest X-ray and Mantoux test (38.5%), followed by chest X-ray & sputum microscopy (23.1%) and sputum microscopy, Mantoux test and CBC-ESR (13.8%).(Table 2)

Out of total 103 PPs, 59 (57.3%) were referring the patients for treatment and only 44 (42.7%) were treating them. Out of

44 PPs treating TB, only 17 were giving anti-TB medicines in two phases, intensive and continuation. Out of these 17 PPs, 8 were prescribing treatment regimens recommended by RNTCP & 9 PPs were prescribing daily regimens (HRZE+HR), continuation phase of which varied from 6 to 8 months. Out of remaining 27 PPs, 20 were prescribing HRZE & 7 were prescribing HRZES, duration of which varied from 2 to 8 months. Anti-TB treatment under direct observation was provided by just one, 1 (0.9%) private practitioner. And sputum microscopy for follow up during anti-TB treatment was advised by only 24 (23.3%). Very few only 12 (11.6%) private practitioners expressed their willingness to get involved in RNTCP for TB control.

Table 2: Distribution of Private Practitioners according to their practices when not following RNTCP guidelines for diagnosis

Practices of diagnosis TB	Private Practitioners (n=65)	
	No.	%
Chest X-ray & Mantoux test	25	38.5
Chest X-ray & sputum microscopy	15	23.1
Sputum microscopy, Mantoux test and CBC-ESR	9	13.8
Sputum microscopy & CBC-ESR	7	10.8
Chest X-ray, sputum microscopy & Mantoux test	6	9.2
Chest X-ray, sputum microscopy and CBC-ESR	2	3.1
Mantoux test and CBC-ESR	1	1.5

Discussion:

In our survey of private practitioner in Nagpur city, we identified several knowledge gaps, this includes gaps regarding diagnosis, categorization, regime and treatment. PPs relied more on Chest X-ray and Mantoux test for confirmation of clinical diagnosis and only 36.9% relied on sputum examination. A study conducted by Uplekar MW in Bombay (1993) reported that only 38% GPs relied on sputum examination.⁸ Similar findings were reported from other studies.⁹⁻¹¹ So diagnosis of tuberculosis patient by PPs on the basis of X-ray, Mantoux and CBC/ESR subjects the patients to unnecessary toxic medication and expense. Nearly half, 44 (42.7%) of the PPs were treating the patients, out of them only 8 PPs were treating as per RNTCP guidelines (but not under direct observation), only 1 on direct observation and rest giving treatment either as daily regime or not giving TB-medication in two phases. Different combination of HRZE and HRZES were prescribed for variable duration ranging from 2 – 8 months and this variable treatment and duration might potentiate the development of drug resistance. 57.7% of PPs were referring the patient either to some private hospital or to TU. Thus some of the TB patients are lost without notification. Our findings are similar to those of surveys done elsewhere in different part of the country by Thakur JS et al (2006)¹² in Chandigarh and Baxi RK in Vadodara (2006)¹³. Majority of the private practitioner did not give emphasis on screening the family member for TB, as contacts of the tuberculosis patients are 10-60 times more likely to have disease than the general population.^{13,14} However active case finding is not a part of RNTCP but this strategy can help in diagnosis of hidden burden of disease. Our study finding also revealed that only 11.6% of PPs were willing to be involved in RNTCP, this give us an insight to find out various operational difficulties for involvement of PPs in RNTCP and require further study to clearly know the reasons for their non-involvement. RNTCP itself has a component of training and involvement of PPs, but present study revealed this area need strengthening. There is a need for better communication between the private doctors and those

implementing disease control programme, so as to enable them to follow appropriate clinical and public health practice.

Conclusion:

PPs have a lot of scope for improvement in the management of tuberculosis as per the RNTCP guidelines; they should also be encouraged to participate in the programme and there should be better advocacy of the scheme to ensure participation of private practitioner in to the programme.

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