

Original Article

Consultations of health service providers amongst patients of pulmonary tuberculosis from an urban area

Authors

Dr. Geeta S. Pardeshi,

Lecturer, Department of Preventive and Social Medicine, Government Medical College, Akola

Address For Correspondence

Dr. Geeta S. Pardeshi,

Prasthal, Opposite Head Post Office,
Off Station Road,
Akola 444001,
Maharashtra

E-mail: geetashrikar@yahoo.com

Citation

Pardeshi GS. Consultations of health service providers amongst patients of pulmonary tuberculosis from an urban area. *Online J Health Allied Scs.* 2008;7(3):3

URL

<http://www.ojhas.org/issue27/2008-3-3.htm>

Submitted: Jul 20, 2008; Accepted: Nov 15, 2008 Published: Nov 24, 2008

Abstract:

Aims: To describe the number, types and reasons of consultations amongst patients of pulmonary tuberculosis from an urban area. **Settings and Design** Cross sectional study was conducted amongst new patients of pulmonary tuberculosis initiated on DOTS at District Tuberculosis Centre (DTC), Yavatmal from January to June 2006. **Material and Methods:** The data regarding consultations were collected along a time line. The reasons for consultations were studied by in-depth interviews. **Statistical analysis:** Logistic regression analysis and transcripts of interviews. **Results and Conclusions** A total of 55 patients were studied in whom median duration between first consultation to treatment initiation was 15 days. A majority of cases (87.27%) had first consulted a private practitioner. A total of 32 patients reported more than two consultations and 19 had consulted more than two private health service providers. Amongst the movements between consultations, a majority were from private to government. Only four patients had come to DTC without any prior consultation. Many patients came to government health service provider on their own when the symptomatic treatment prescribed by the private practitioners did not relieve their symptoms.

Key Words: RNTCP, DOTS, Treatment seeking, Private health service providers

Introduction:

Early diagnosis and initiation of appropriate treatment is the mainstay in the prevention and control of Tuberculosis. The effectiveness of this intervention depends to a large extent on the treatment seeking practices of the patients and the efficiency of the health service providers in diagnosing and initiating appropriate treatment regimens. A number of studies have described the delays in diagnosis and treatment initiation. This includes delay in seeking treatment as well as health system delay. The studies done in India report a delay of 20 to 28 days for treatment seeking and a period of 7 to 28 days for health system delay. (1-4) The factors associated with the health system delays include type of first consultation, short duration of cough, alcoholism, distance of patient's residence from a health facility and cost of treatment. (1-4)

In addition multiple consultations by the patients is another feature reported by few studies. (3, 5, 6) In a study 21% patients indulged in one action prior to reporting to the Tuberculosis centre, while 39.6% indulged in two actions and 39 % reported more than two actions.(5) In another study, 38% patients had visited more than two sources of treatment after developing chest symptoms.(6)

This study assesses the number of consultations and describes the types and reasons of different consultations amongst patients of pulmonary tuberculosis from an urban area.

Material and Methods:

A cross-sectional study was conducted amongst patients registered and initiated on DOTS at DTC (District Tuberculosis Centre), Yavatmal during the six month period from January 2006 to June 2006. All patients with pulmonary tuberculosis residing in Yavatmal city were included in the study. The sample included only new cases of pulmonary tuberculosis i.e. those who had either previously not received DOTS or who had taken treatment for less than one month. The variables studied were age, sex, marital status, educational status, history of alcohol consumption and family history of tuberculosis. The information about the consultations from the onset of symptoms to treatment initiation was collected in a chronological order along a timeline. The data of onset of symptoms, first health service provider visited, other health service providers visited and initiation of DOTS was noted for each patient. The duration between initiation of symptoms and first treatment sought from a registered medical practitioner and the duration between the first consultation to the treatment initiation at DTC was ascertained along the time line.

The movements between consultations were classified as follows:

1. Direct: if the patient visited DTC directly.
2. Private to private: the patient moved from one private practitioner to another.
3. Government to private: If the patient moved from the Government health service providers to Private practitioner.
4. Government to government: If the patient moved from one government health service provider to another.
5. Private to Government: If the patient moved from the private practitioners to government health service.

In-depth interviews were conducted in some of the patients to study the reasons for such movements. The names and addresses of the health service providers were recorded to ascertain which system of medicine they practiced.

Analysis of the data was done by calculating mean, median, proportions and logistic regression analysis. In depth interviews were analysed by preparing transcripts and free listing of the responses obtained during in-depth interviews.

Results:

A total of 55 patients with new pulmonary Tuberculosis residing in Yavatmal city were registered at the DTC. Of these 32 were males and 23 were females. The median duration of symptoms prior to treatment seeking was 30 days and median duration between first consultation to treatment initiation was 15 days. A total of 4 patients were initiated on DOTS within one week of first consultation. A total of 28 patients were initiated on DOTS within fifteen days, 14 were initiated on DOTS after a period of fifteen days to one month of consultation and 13 patients were given DOTS after more than one month of first consultation.

Amongst the 55 patients, only four had visited DTC directly without any prior consultations. A total of 24 patients were referred from the Medical College Hospital, ten patients were referred by a private practitioner and 17 came on their own after consulting a private practitioner. Only four patients were referred by a private practitioner with a diagnosis of Tuberculosis which were all based on X ray findings.

A majority i.e. 48 (87.27 %) patients first consulted a private practitioner for their symptoms. The government health services were first consulted for treatment by only 7 (12.73 %) patients. A total of 23 (41.82%) patients had visited up to 2 health service providers and 32 (58.18%) patients had visited more than two health service providers. A total of 19 patients had consulted two or more private practitioners and 27 patients had visited two government health service providers i.e. both the Government Medical College as well as District Tuberculosis Centre. (Table I)

Table I: Number of health service providers visited by the patients.

Number of Health service Providers visited	No. of patients (n=55)		
	Private HSP	Government HSP	Total HSP
0	7 (12.73)	0 (0)	0 (0)
1	29 (52.73)	28 (50.91)	4 (7.27)
2	16 (29.09)	27 (49.09)	19 (34.55)
3	2 (3.64)	0	20 (36.36)
4	1 (1.82)	0	9 (16.36)
5	0 (0)	0	3 (5.45)

Patients reporting more than two consultations were more likely to report a delay of more than fifteen days. [OR=5.4091 (1.6584-17.6426; p=0.0051)]. Table 2 describes the characteristics of the respondents according to the number of consultations. On logistic regression analysis patients with a family history of tuberculosis were found to seek lesser number of consultations. None of the other variables were significantly associated with number of consultations. (Table 2)

Table 2: Characteristics of patients

Variables	More than 2 HSP (32)	Upto 2 HSPs (23)
Age Mean (sd)	30.59(14.19)	32.91(15.59)
Sex Female N(%)	14 (43.75)	9 (39.13)
Educational status Secondary school and above N (%)	22 (68.75)	15 (65.22)
History of alcohol consumption N (%)	6 (18.75)	6 (26.09)
Family history of TB N(%)	5 (15.63)	9 (39.13)

Table 3: Univariate and multivariate OR (95%CI) logistic regression analysis for number of consultations

Variables	Univariate	P	Multivariate	P
Age	0.9892(0.9536-1.0261)	0.5618	0.9806(0.9350-1.0284)	0.4198
Sex	0.8265(0.2778-2.4591)	0.7320	0.8726(0.2270-3.3537)	0.8427
Educational status	1.0334(0.9054-1.1795)	0.6266	0.9882(0.8447-1.1560)	0.8817
History of alcohol consumption	0.6538(0.1807-2.3662)	0.5173	0.7155(0.1549-0.6682)	0.6682
Family history of TB	0.2881(0.0809-1.0253)	0.0547	0.2211(0.0552-0.8861)	0.0331

An analysis of the movements between the consultations is shown in Figure 1. A majority of the movements were from private to government (48.54%) followed by government to government (23.30) and private to private (20.38%).

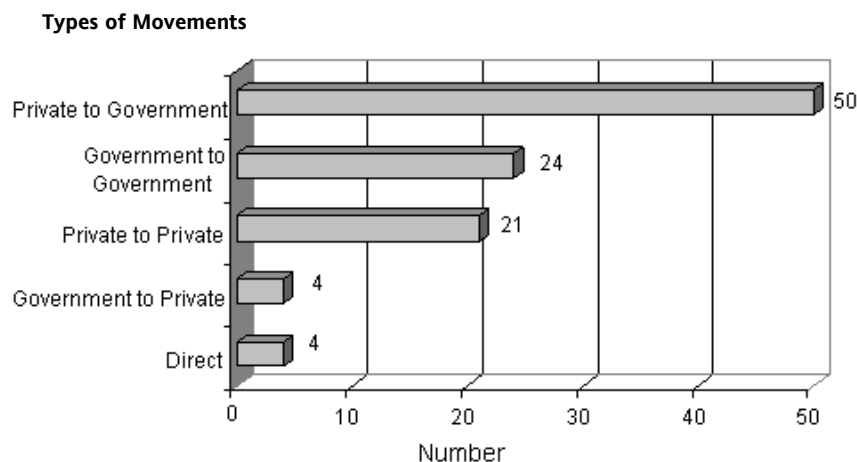


Figure 1: Movements between consultations

Reasons for movements:

In-depth interviews were conducted in ten patients. Self medication by taking over-the-counter drugs was reported by some patients. In a majority of cases the patients had taken home based treatment in the form of cumin seeds (*Jeera*), ginger, turmeric powder in warm milk etc. before consulting a health service provider. The private service providers included allopathic doctors, *ayurvedic* as well as homeopathic doctors.

Private to Government Health service providers: The Private practitioners usually provided symptomatic treatment. When their symptoms did not regress the patients approached the government health centres on the advice of a friend, relative or family member. Sometimes the Private practitioner suspected tuberculosis and referred the patient to GMC or DTC. In a few cases the diagnosis was made by the private practitioner and then the patient was referred for treatment to the DTC. In yet a few instances the patients were diagnosed to be suffering from tuberculosis and treatment was initiated. After some days when the patient could not afford the expenditure on the drugs the patients were referred or went to a government health centre on their own.

Private to private health service provider: When in spite of the treatment provided by the private practitioner symptoms persisted, the patients consulted another private practitioner on their own.

Government to Government: These were patients who were referred from the Medical College to the DTC. Some were referred for investigations and some after diagnosis for treatment initiation. It was also noted that some patients avoided visiting the DTC.

"When I suffered from the symptoms I first consulted a private practitioner. When the symptoms persisted my niece who is a nurse advised me to visit the DTC. I was not ready to visit the DTC. So she took me to the Medical College where I was diagnosed to have TB. After she convinced me that there was no need to worry and I would be cured if I take treatment I agreed to come here."

"When I developed cough and fever I visited three private practitioners. None told me it could be TB. They gave me some tablets and a liquid medicine for my symptoms. When the symptoms persisted my mother forced me to come here. I however was reluctant to visit the DTC."

Government to Private: In a few instances it was noted that even after the diagnosis of tuberculosis was made in the Government health centres the patient consulted a private practitioner. This was to confirm the diagnosis.

"No one in my family had this disease; I could not believe that I had TB."

Direct to DTC: A few patients came to the DTC directly. They had a family member or friend who had been diagnosed to be suffering from TB and was treated or was being treated at the DTC.

Discussion:

Considering the fact that the private practitioners are the first choice for consultations and the number of private health service providers visited by the patients, their involvement is inevitable for the successful implementation of RNTCP. Numerous studies have highlighted the need of involving private sector in prevention and control of tuberculosis.(7-10) A number of pilot projects in PPM (Private-Public mix) for DOTS have been conducted in India.(11-17) Evaluation of such projects has indicated improved case detection, case notification and good treatment success rates. The PPM was also found to be affordable and cost effective.(18-20) From the year 2002 RNTCP has expanded PPM DOTS activities countrywide using programme guidelines for involvement of NGOs as well as private practitioners.(21,22)

The patients with a family history of TB tend to seek lesser number of consultations prior to visiting DTC. These patients may be more aware of the symptoms, feel less stigma and have observed the experiences of their kin and hence know the services available at the centre.

The movements between the private practitioners and less number of referrals from the private practitioners indicate that the private sector needs to be mobilized further to achieve full potential as a resource. A few other studies have shown that the knowledge and practice of a majority of the private health service providers in diagnostic evaluation and prescriptions of

treatment regimens is not as per RNTCP recommendations.(23-25) Apart from training, identifying clearly their roles and responsibilities, improving communication and networking between the government and private sector is essential.

Very few patients have reached the Tuberculosis Centre directly without any prior consultations with private practitioners or Government Medical College hospital. In urban areas with meager setup of government health facilities, the private practitioners are an important link in the diagnosis and treatment initiation of Tuberculosis. Hence apart from other vital components of DOTS such as microscopy and treatment, creation of a link in the referral system between the private and public sectors and strengthening it will reduce the delays and contribute to timely diagnosis and treatment initiation. A number of practitioners of indigenous system of medicine have been consulted by patients. These practitioners should also be included in the programme.

A Medical College hospital and District Tuberculosis centre were located in the city where the study was conducted. A large number of patients have reached the DTC from the Medical college hospital. The issue of stigma in Tuberculosis has been expressed as delays in seeking treatment, reluctance to disclose diagnosis, hiding self identity and poor adherence.(6)The findings of this study indicate a reluctance to come directly to the tuberculosis centre. The availability of services under RNTCP through generalized health services addresses this issue effectively.

In addition IEC campaigns have been shown to not only increase awareness but also affect the health seeking behaviour favorably with increase in the choice of DOTS centres as the first choice of treatment. (26) Efforts to reduce the delays in diagnosis and treatment initiation will benefit the patients at the individual level as well as lead to interruption of transmission of the infection.

References:

1. Dhingra VK, Rajpal S, Taneja DK et al. Health care seeking pattern of tuberculosis patients attending an urban TB clinic in Delhi. *J Commun Dis.* 2002 Sep;34(3):185-92.
2. Rajeswari R, Chandrasekaran V, Suhadev M et al. Factors associated with patient and health system delays in the diagnosis of tuberculosis in South India. *International J Tuberc Lung Dis.* 2002 Sep;6(9):789-95.
3. Tobgay KJ, Sarma PS, Thankappan KR. Predictors of treatment delays for tuberculosis in Sikkim. : *Natl Med J India.* 2006 Mar-Apr;19(2):60-3.
4. Selvam JM, Wares F, Perumal M et al. Health-seeking behaviour of new smear-positive TB patients under a DOTS programme in Tamil Nadu, India, 2003. *International J Tuberc Lung Dis.* 2007 Feb;11(2):161-7.
5. Tobgay KJ. Health seeking behaviour and delays in diagnosis and treatment in patients reporting with cough of three weeks or more to tuberculosis units & microscopy centres in east Sikkim. Working Paper No. 6 Achutha Menon centre for health science studies. Sree Chitra Tirunal Institute for Medical Sciences and Technology. July 2004.
6. Juvekar SK, Morankar SN, Dalai DB et al. A social and operational determinants of patient behaviour in lung tuberculosis. *Ind. J. Tub.* 1995;42:87-94
7. Uplekar MW, Rangan S. Private doctors and tuberculosis control in India. *Tuberc Lung Dis.* 1993 Oct;74(5):332-7.
8. Uplekar M, Pathania V, Raviglione M. Private practitioners and public health: Weak links in tuberculosis control. *Lancet* 2001;358(9285):912-6.
9. Brown P. Private doctors must improve their treatment of tuberculosis, says WHO. *BMJ.* 2002 Dec 7;325(7376):1320.
10. Grover NK. Role of private practitioners in tuberculosis control in India. *Journal of the Indian Medical Association* 1996;94:370-71.
11. Dewan PK, Lal SS, Lonnroth K et al. Improving tuberculosis control through public-private collaboration in India: literature review. *BMJ.* 2006 Mar 11;332(7541):574-8.
12. Arora VK, Sarin R, Lonnroth K. Feasibility and effectiveness of a public-private mix project for improved TB control in Delhi, India. *International J Tuberc Lung Dis.* 2003 Dec;7(12):1131-8.
13. Ambe G, Lonnroth K, Dholakia Y et al. Every provider counts: effect of a comprehensive public-private mix approach for TB control in a large metropolitan area in India. *International J Tuberc Lung Dis.* 2005 May;9(5):562-8.
14. Murthy KJ, Frieden TR, Yazdani A et al. Public-private partnership in tuberculosis control: experience in Hyderabad, India. *International J Tuberc Lung Dis.* 2001 Apr;5(4):354-9.
15. Sehgal S, Dewan PK, Chauhan LS et al. Public-private mix TB activities in Meerut, Uttar Pradesh, North India: Delivering DOTS via collaboration with private providers and non-governmental organizations. *Indian J Tuberc.* 2007 Apr;54(2):79-83.

16. Balasubramanian R, Garg R, Santha T et al. Gender disparities in tuberculosis: report from a rural DOTS programme in south India . . *International J Tuberc Lung Dis*. 2004 Mar;8(3):323-32.
17. Krishnan A, Kapoor SK. Involvement of private practitioners in tuberculosis control in Ballabgarh, Northern India. *International J Tuberc Lung Dis*. 2006 Mar;10(3):264-9.
18. Floyd K, Arora VK, Murthy KJR et al. Cost and cost-effectiveness of public and private sector collaboration in tuberculosis control: evidence from India. *Bulletin of WHO* 2006;84:437-45.
19. Cost and cost-effectiveness of public-private mix DOTS:evidence form two pilot projects in India. Geneva: WHO; 2004.
20. Pantoja A, Lal SS, Lonroth K et al. Cost and cost-effectiveness of scaled-up and intensive PPM DOTS in Bangalore. *International J Tuberc Lung Dis*. 2006;10:528.
21. Involvement of non-governmental organizations in the Revised National Tuberculosis Control Programme. Delhi: Central TB Division, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. 2001.
22. Involvement of private practitioners in the Revised National Tuberculosis Control Programme. Delhi: Central TB Division, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. 2002.
23. Prasad R, Nautiyal RG, Mukherji PK, et al. Diagnostic evaluation of pulmonary tuberculosis: what do doctors of modern medicine do in India? *International J Tuberc Lung Dis*. 2003 Jan;7(1):52-7.
24. Prasad R, Nautiyal RG, Mukherji PK et al. Treatment of new pulmonary tuberculosis patients: what do allopathic doctors do in India? *International J Tuberc Lung Dis*. 2002 Oct;6(10):895-902.
25. Greaves F, Ouyang H, Pefole M et al. Compliance with DOTS diagnosis and treatment recommendations by private practitioners in Kerala, India. *International J Tuberc Lung Dis*. 2007 Jan;11(1):110-2.
26. Sharma N, Taneja DK, Pagare D et al. The impact of an IEC campaign on tuberculosis awareness and health seeking behaviour in Delhi, India. *International J Tuberc Lung Dis*. 2005 Nov;9(11):1259-65.