



Tuberculosis Control in India: Path to Achieve the Millennium Development Goal

Saurabh RamBihariLal Shrivastava*, Prateek Saurabh Shrivastava and Jegadeesh Ramasamy

Assistant Professor, Department of Community Medicine, Shri Sathya Sai Medical College & Research Institute, Kancheepuram, India

Abstract

Globally it has been estimated that in the year 2012, almost 8.6 million people developed tuberculosis and approximately 1.3 million succumbed to death owing to the development of complications. The contribution of India towards the global burden of TB is immensely large – 26% of worldwide cases and also accounting for highest number of Multi-Drug Resistant (MDR) TB cases. These estimates clearly reflect that the concerted efforts of India's program managers / stakeholders under the Revised National TB Control Program (RNTCP) to achieve Millennium Development Goal - 6 by 2015 have not delivered favorable results. Realizing the global public health concerns, World Health Organization (WHO) has identified five priority areas to accelerate the progress towards 2015 targets namely reaching the missed cases, addressing MDR-TB; accelerating the response to TB/HIV, augmenting financial support, and timely adoption of innovations in the program. To conclude, although off-late RNTCP has initiated multiple strategies to combat TB, these can become fruitful only when they are successfully implemented at the grass root level.

Keywords: Tuberculosis; private providers; Revised national tuberculosis control program; India

Introduction

Globally it has been estimated that in the year 2012, almost 8.6 million people developed tuberculosis and approximately 1.3 million succumbed to death owing to the development of complications [1]. Even though treatment for TB with short-course chemotherapy has been available for many decades, which has a cure rate of more than 90%, still the TB-specific mortality rate remains unacceptably high [1]. The contribution of India towards the global burden of TB is immensely large – 26% of worldwide cases and also accounting for highest number of multi-drug resistant (MDR) TB cases [1]. These estimates clearly reflect that the concerted efforts of India's program managers / stakeholders under the Revised National TB Control Program (RNTCP) to achieve Millennium Development Goal - 6 by 2015 have not delivered favorable results [1-3]. Realizing the global public health concerns, World Health Organization (WHO) has identified five priority areas to accelerate the progress towards 2015 targets namely

Reaching the Missed Cases

In response to RNTCP strategies annualized new smear positive case detection rate in the country has increased from 52% in 2000 to 68% in 2012. However, the case notification rate of smear negative cases and extra-pulmonary cases in the entire country is remarkably poor and a wide gap has to be still bridged to achieve the target of notifying 90% of all types of diagnosed TB cases (viz. new smear positive, new smear negative, retreatment, extra-pulmonary, pediatric TB, etc.) case detection rate. In order to augment the notification rate and reaching the missed cases since 2012, TB has been made a notifiable disease which essentially means that any case of TB diagnosed either clinically or based on laboratory/radiological investigation has to be reported to the public health authorities. In order to maximize the notification rates, District Tuberculosis Officers have been instructed to strictly monitor and supervise the process of notification from all stakeholders; to build partnership and linkages with professional bodies / non-governmental organizations; and to ensure continuous support / guidance to private sector health care providers / laboratories to encourage them to report all diagnosed TB cases [4]. Subsequently, to reduce the burden on treatment supervisors and other cadres of health workers, RNTCP has launched NIKSHAY software (a case based web-based monitoring) to

encourage online reporting [5]. In addition, contact tracing activity has been strengthened to reach all contacts of smear positive cases [3,6].

Addressing MDR-TB

Annual estimates have revealed that in the year 2012 in India alone 65225 patients of multi-drug resistant TB have been reported. Among all of them, the maximum percentages of MDR-TB cases have been diagnosed in patients who have been either categorized as failure (30%) or treatment after default (12%). To strengthen the country's capacity to diagnose MDR-TB cases, equally matched with ensuring uninterrupted supply of quality assured drugs, Programmatic Management of Drug Resistant TB (PMDT) component was launched in 2007, and since then the target is to geographically cover the entire country with MDR suspect criteria-C (viz. all re-treatment cases and all new cases at the end of intensive phase, if found smear positive, will be offered culture and drug sensitivity testing services to diagnose MDR-TB) by 2015 [7]. To overcome the burden of MDR-TB cases, program has adopted first line probe assay and then Cartridge-Based Nucleic Acid Amplification Test (CB-NAAT) technique to fast-track the process of diagnosis of drug resistant TB [8]. Even in the treatment aspect, five different weight-bands have been proposed to administer second-line drugs precisely [7]. Subsequently, different schemes have been proposed to facilitate and encourage the involvement of private sector in MDR-TB diagnosis and treatment services [6].

Accelerating the Response to TB/HIV

In the year 2012, overall 44063 cases of TB-HIV co-infection have

***Corresponding author:** Saurabh RamBiharilal Shrivastava, Department of Community Medicine, Shri Sathya Sai Medical College & Research Institute, Ammapettai village, Thiruporur - Guduvancherry Main Road, Sembakkam Post, Kancheepuram-603108, Tamil Nadu, India, Tel: +919884227224; E-mail: drshishr2008@gmail.com

Received October 25, 2013; **Accepted** November 23, 2013; **Published** November 27, 2013

Citation: Shrivastava SR, Shrivastava PS, Ramasamy J (2013) Tuberculosis Control in India: Path to Achieve the Millennium Development Goal. Primary Health Care 3: 141. doi:10.4172/2167-1079.1000141

Copyright: © 2013 Shrivastava SR, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

been reported. Furthermore, total 3528 TB-HIV co-infected patients have died and almost 2644 cases of MDR-TB have been diagnosed in the co-infected persons in the entire country. As the burden of the co-infection is enormous and the socio-demographic parameters / environmental factors are favorable to progression of both the diseases, RNTCP in partnership with the National AIDS Control Organization has developed the Intensified TB-HIV collaborative package services under which any person diagnosed with TB will be offered HIV testing and similarly any person diagnosed with HIV, if symptomatic will be subjected to sputum microscopy for ruling out TB [1,3,6]. This initiative has significantly improved the early diagnosis of opportunistic infections in the out-patients [9].

Augmenting Financial Support

Owing to the life threatening nature of the disease, ubiquitous distribution, immense risk of transmission, necessity of regular sensitization of the health care providers, and expensive diagnostic / treatment services, the program has received additional financial support in contrary to other national health programs. Moreover, success of RNTCP and PMDT depends upon one of its key element which is sustained political commitment (viz. Government pledge to ensure adequate financial support, appropriate infrastructure, development and retention of human resources, facilitate inter-agency cooperation, develop TB control policies) to bridge all existing resource gaps [1,3,6].

Timely adoption of innovations in the program: Adoption of newer tools and strategies for promoting better diagnosis and treatment has been advocated to expand the coverage and benefit of the program to different beneficiaries. Initiatives such as extension of TB-Diabetes Mellitus collaborative activities in 100 districts of country every year under the National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke [10] involvement of school teachers and students in the Advocacy, Communication & Social Mobilization activities [6] stringent implementation of the airborne

infection control guidelines in health care institutions [11] building partnership with the Medical Council of India and organization of regular state / zonal / national task force committee meetings to facilitate modification in the existing guidelines [6] conduction of regular training / sensitization sessions for program managers / private medical practitioners / health care providers based on the community need assessment approach [6,7]; and exploring the legal provisions to restrict over-the-counter sale of anti-TB drugs by involving pharmacists associations [3] have been adopted in different parts of the country to reach the difficult to reach cases.

To conclude, although off-late RNTCP has initiated multiple strategies to combat TB, these can become fruitful only when they are successfully implemented even at the grass root level in an integrated and evidence-based manner to achieve millennium development goal.

References

1. World Health Organization. Global Tuberculosis Control Report 2013. Geneva: WHO press; 2013.
2. Ministry of Health and Family Welfare. National family health survey (NFHS-3); 2005-06.
3. TBC India. Managing the RNTCP in your area - A training course (Modules 1-4).
4. TBC India. Guidance for TB Notification in India, 2012.
5. TBC India. NIKSHAY.
6. TBC India. Managing the RNTCP in your area - A training course (Modules 5-9).
7. TBC India. Guidelines for PMDT in India, 2012.
8. RNTCP-FIND-WHO CBNAAT Project.
9. Shrivastava SR, Shrivastava PS (2013) HIV – Tuberculosis Interface: A comparison of collateral prevalence of HIV and tuberculosis (TB) in an urban health centre. *Annals of Tropical Medicine and Public Health* 6: 290-296.
10. Operational guidelines - National programme for prevention and control of cancer, diabetes, cardiovascular diseases & stroke (NPCDCS), 2012.
11. TBC India. Guidelines on airborne infection control in healthcare and other settings. New Delhi, 2010.