

ORIGINAL ARTICLE

Challenges in management of tuberculosis under programmatic conditions: Perceptions of health care providers from four states of India

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Abstract

Background: Among the global estimation of 10.4 million new cases of Tuberculosis (TB) in 2015, 27% of cases are contributed by India. Revised national TB control program (RNTCP) started in 1993, and now heading towards for universal access. Despite its achievements, the program faces number of implementation challenges. This qualitative study explored 'what is healthcare providers take on it?'. **Material & Methods:** A total of 28 in-depth interviews were conducted in Uttarakhand, Chhattisgarh, Delhi and Maharashtra from October 2014 to January 2015, under the thematic areas of finance, human resource, and communications. Participants included senior level policy makers like principal secretaries of health, National Health Mission Directors, Director Health Services, state TB officers and district TB officers, medical officers, community volunteers and TB consultants from international agencies. Analytic induction method was used for data analysis. Results: Participants identified many barriers in the overall management and implementation of RNTCP. Convergence of RNTCP needs to be more effective. Inadequate Human resources, issues in public private partnership, insufficient budget allocation and interrupted fund flow, inefficient Information Education and Communication strategy are a few. **Conclusion:** This study could gather the perspectives of senior health officials, implementers and other stakeholders on challenges in implementation of TB control programme in four states. Challenges perceived by them are vital in strategic revisions of RNTCP.

Keywords

RNTCP; tuberculosis; in-depth interviews; challenges; perceptions; health care providers; implementation

Introduction

India bears the highest (estimated) burden (27%) of global tuberculosis (TB) cases. It gives us an alarming figure of 300,000 lives annually claimed, which

means nearly 1000 deaths per day. (1,2) Sustainable development goal (SDG) 3.3 kept the target of ending the global TB epidemic by 2035 through end TB strategy. To attain the SDG goals and target, Revised National TB Control Program (RNTCP) of

India also adopted the end TB strategy. RNTCP uses directly observed short course (DOTS) strategy since 1997. Political and administrative commitment, reliable and early diagnosis, an uninterrupted supply of budget and anti-TB drugs, DOTS and systematic monitoring are the main components of RNTCP. (3) The program is consistently maintaining the treatment success rate of more than 85% and new smear positive (NSP) case detection rate (CDR) of 70%. The program importance shifted to health system for sustained program success. Now the program is striding towards universal coverage of TB prevention and care through health system strengthening. (4,5)

However, there are numerous challenges, which are to be addressed in RNTCP to achieve the universal coverage. Majority of TB patients are not accessing the public health system, or accessing it late in the course of disease. There is delay in diagnosis and failure to notify the disease.⁶ Despite the achievements in predefined goals in NSP case detection and cure rate, the drug resistant TB levels are increasing every year.⁷ Similarly the retreatment cases are also increasing over these years. Co-morbid conditions like human immunodeficiency virus (HIV) infection and diabetes mellitus are further worsening the TB treatment outcomes and are of another serious concern.

Identifying the challenges of RNTCP from the health care provider's perspective is critical for policy revision and proper implementation. It is widely agreed that, the interactions and discussions between researchers and policymakers enhances the likelihood of research being used by policymakers. In the complex environment of policy making, to overcome the difficult relationships in policy processes, it is important to know the underlying agendas of implementers and the contextual factors in policy making. The present study pours light into the challenges in implementation of RNTCP, through the lenses of the health care providers in four states of India.

Aims & Objectives

This study tries to unravel policy makers and implementer's perceptions and motivations towards TB prevention and care in India.

Material & Methods

Study design: This was a qualitative study in which discourse analysis approach was used. **Study settings:** The study was conducted in four states

namely Uttarakhand, Chhattisgarh, Delhi and Maharashtra states of India. All are northern states except Maharashtra which is a southern state. These states contribute nearly 13% of the total registered TB cases of India in 2015. Technically, director health services (DHS) heads the health department at the state level. The general health system is under the national health mission (NHM) in which each health program is headed by state and district level program managers. RNTCP program has state TB officer (STO) and district TB officer (DTO) at state and district level respectively. Senior treatment supervisor (STS) and Senior TB laboratory supervisor (STLS) present at tuberculosis unit (TU) level which serves 500,000 population (250,000 in case of tribal area). Designated microscopy centre (DMC) caters 100,000 population in plain and 50000 population in tribal area. Designated medical officer (MO) takes care of the TU and DMC.

Study population: In-depth interviews were conducted with key personnel in RNTCP as well as health department of these four states. These interviews were held during the scoping visits for the coordinated health access intervention initiative which intended to interact and establish a rapport with the health system administrators and to update them about the goals and objectives of the future projects. The selection of participants was purposive and was based on their positions at policy and operational level of the programs. They are directly in charge of developing and implementing policies of RNTCP.

Sample Size: The sample size was decided by the saturation basis. It has been suggested that the saturation is arrived at with 5- 30 interviews.⁸ A total of 28 interviews were conducted between October, 2014 and January, 2015. Two DHS, one additional program director (APD), four State TB Officers (STOs), one state programme manager (SPM) of NHM, one senior programme officer (SPO) of state health system resource centre (SHSRC), two District TB Officers (DTOs), five Medical Officers (MO), one TB hospital superintendent, one faculty each from two medical colleges, one intermediate reference laboratory (IRL) technician, one Senior TB Laboratory Supervisor (STLS), one statistical assistant of NHM, one secretary of Indian medical association (IMA), two non-Governmental organization (NGO) representatives and three community volunteers (CV), were interviewed.

Study tools: In-depth interviews were conducted using interview topic guide. The interviews were conducted by one the investigator who is a public health professional and trained in qualitative research. Verbal informed consent was obtained from the participants before the interview. Privacy and confidentiality were ensured. The duration of interviews ranged between 30 and 60 minutes. Transcriptions of the interviews were done immediately following the interviews. After the interview, the summary of the interview was read back to the participants to ensure participant validation.

Statistical analysis: The principal investigator noted down the proceedings of the interviews and transcribed on the day of the interview. Thematic analysis of the transcripts was performed manually by the principal investigator to generate themes. Two experts in qualitative research crosschecked the codes identified for consistency. Ambiguities identified through peer review were resolved in an iterative manner.

Ethical issues: Ethical Advisory Group (Institute ethics committee) of International Union Against Tuberculosis and Lung Disease, Paris gave exemption for the study from ethical review. Individual participation in the study was voluntary and no incentives were provided for participation. Verbal informed consent was obtained from individual interviewees by explaining the purpose of the study

Results

From the interviews, following themes emerged as affecting the implementation of RNTCP in India. The thematic network is also given as non-hierarchical figure ([Figure 1](#)). These include issues related to

1. Information Education and Communication (IEC) issues

All senior health system administrators have agreed and accepted the issue of IEC. They agreed that more than 50% of the patients are seeking private health care and pointed towards unawareness as the main cause. However, NGO workers responded that it is due to the distasteful behaviour of the government staff. Stigma and discrimination among the health care workers is higher towards staff working in Tuberculosis. Doctors and nurses themselves are victim to it in the health sector.

Drugs are having side effects and the need of counseling is imperative in TB services, however

delivery of it in the current settings is minimal and its need is often neglected.

"The major problem is that, community members are not well aware of the services under RNTCP. IEC work often remains as a ceremony on world TB Day, no sufficient coverage has been given to remote areas." (STO & DTO).

"IEC activities are insufficient in the state, especially in remote hamlets." (DHS, STO & DTO).

"Though we make people aware about RNTCP Services, members in our locality prefer to go to private clinic. They say the attitude of the government staff towards them is not welcoming; often they feel ignored in those settings. These patients often frown when we ask them to go to a government hospital." (Community Volunteers-NGO)

"People do not want to continue their work in this TB hospital due to stigma of TB and they apply for transfer. 10 out of our 1450 staffs in the hospital regularly contract TB infection in every year and that includes staff nurses and doctors. They suffer from post TB issues and leading to absenteeism." (TB Hospital Superintendent)

"We need to understand the importance of counselling in TB prevention and care." (APD-NHM & DTO)

2. Human Resource:

One of the important debilitating issues of RNTCP in states is the lack of sufficient staff. All respondents, agreed with this. One of the respondents, who were a former STO, pointed towards the low level of motivation of TB staff and DOTS providers. RNTCP was a vertical programme and now integrated with the health system. However, lack of coordination is still an issue between the staff of National Health Mission and RNTCP, pointing towards needs to strengthen the integration and convergence for Universal Health Coverage.

"DOT Providers are not devoted to their work. They have multiple responsibilities other than RNTCP; we have to increase the incentives of the DOTS providers." (a former STO).

"The commitment from our own salaried staff towards the programme is poor." (STOs)

"Support towards RNTCP, from the general health staff, is limited. There is lack of coordination from top to bottom." (STOs)

Vacant positions of doctors and laboratory technicians are wide spread. Respondents

mentioned, in some districts medical officers were absent more than two years.

"Majority of the DTOs are not full time, often they have additional duty or deputed from other departments to RNTCP. There is no new recruitment for a long time. Senior bureaucrats are well aware of the issue. Sanctioned positions of the 23 DTOs are also stuck with the ministry due to red-tapism. The distribution of the available staff is uneven. Appointed staff does not want to work in the scattered hamlets of the rural areas." (STO)

"Major workforce of the health system, (the Accredited Social Health Activists-ASHAs) is not well coordinated in the battle against TB. We have 70,000 ASHAs, but TB is not their priority; she is not answerable to the officials of RNTCP, as she has many other responsibilities under NHM to cover. On the other hand the ground staffs under the RNTCP is not bound to report to the to the general health system." (SPM & SPO)

"We have been trying to set up a microscopic centre in our pulmonary department, but could not secure it yet due to the bureaucratic delays and lack of coordination among various departments of health." (Head Pulmonary Medicine Department, Medical College)

"Capacity building and sensitization to the medical practitioners on TB Control are necessary, we have observed some doctors prescribing the second line TB drugs where it is not needed" (Head Pulmonary Medicine Department, Medical College)

"Capacity building for the RNTCP staff members is nominal." (STOs)

3. Public Private Mix:

India has a rampant private health care system, largely unregulated and dubious in quality. In 2012 India made TB notification compulsory, but despite continuous efforts notification by the private practitioners are lying low.

"About 50% of the TB patients are going to the private practitioners and a very less number of private practitioners are notifying TB Cases to the health system. We have conducted sensitization workshops, but results are meager." (STO)

"Private practitioners are afraid that they will lose a patient if notified to the government system. NGOs working under RNTCP, is not committed to the programme." (STO)

"Chemists should be sensitized on the issue of over the counter sales of drugs." (HOD, Pulmonary medicine)

"There is a trust deficit between government and private practitioners on notification of TB disease." (Secretary, Indian Medical Association)

4. Interrupted fund flow:

The current fund flow architecture i.e. the transfer of Central grants to State Health Society through treasury route is resulting in unnecessary delays in fund transfers, which has been implemented from the financial year 2014-15. All states face funds flow issues and field level contractual staff did not receive their salaries for many months.

"We have seen delays, but this seems very severe, we do not know why this happens, there are people who could not receive salary for more than nine months, I myself could not receive it for the last four months, we have our families, who will tell the authorities about this." (Statistical Assistant, NHM)

"Our contractual staffs are demotivated..... There is no hike in their salaries for many years..... if there is a request sent to the centre only 50% of funds are getting sanctioned and we have to run the programme within that limit...in this situation how can we expect efficacy??" (STO)

"We face delay in getting money from the state pool, thus disbursement to districts is delayed." (STO)

"There is no way to support TB patients, at least for their travel or for some nutrition supplementation. There is no flexibility in the budget." (DTO)

"There is no support in travel cost for the patient; often they have to skip their daily wage to attend the clinic and a patient has to visit the clinic many times." (CVs Project Axshya)

In addition to this, respondents highlighted issues of poor supervision, lack of money for lab consumes, interrupted drug supply, shortage of medicine for multidrug-resistant (MDR) TB and extensively drug-resistant (XDR) TB, missing of cases and issues in sputum collection and transportation.

Discussion

The role of health system administrators in setting the agenda for health policy making is significant. Normally, the researchers and decision-makers are divided by a gulf of misunderstanding. The researcher is often oblivious to the difficult terrain in

which the policy-maker entangled in dealing with competing components of public health, and the externalities that must be factored in policy formulations. Whilst, the policy-maker doesn't recognize the researchers by considering as they produced ill affected solutions for problems or are viewed with sectarian interests. This study attempted to explore the policy makers and implementer's perspectives on the challenges of managing tuberculosis programme in India. As these responses are based on their long experience with the health system, has its own importance in the agenda setting for policy formulations.

The study explored the perceptions of all types of program staffs with a hierarchy from Director Health Services to community volunteers. As per authors' knowledge, this is the first study reported from India which explored the health care providers' perspective on RNTCP program implementation. The study result has to be interpreted with caution since there was no objective assessment done using pre-tested, validated tool. Similarly, it explored only the healthcare provider's perspective and the patient's perspective on quality of care provided and related challenges faced by them were not explored. Generalizability of the results is also another limitation since these states shares only 13% TB burden of the country and may not represent the whole country. Otherwise this is also one of the limitations of the qualitative research.

Specific concerns voiced out were need for more IEC; interrupted budget flow, human resource issues, low participation from the private practitioners. IEC coverage is critically important for TB control to enhance treatment seeking behaviour and treatment adherence. There is a strong need of massive IEC activities in the country, especially where population live in congested areas like urban slum. A study in New Delhi, India observed that people in the slum areas and re-settlement colonies had never observed an IEC message on TB. (9).

The performance RNTCP is dependent on the role of the key persons involved, especially when the programme is more field oriented. The STS has various roles to play for the success of RNTCP, from the role of a field worker to treatment organizer, trainer, colleague, subordinate, teacher, health educator, advisor, well-wisher, supervisor, etc.

Reports indicate that, out of 89 sanctioned positions of the STS, only 41 people were filled in 2015 at New Delhi. The situation is also applicable to medical officer post at TU and DMC level. Respondents in this study pointed that, even appointed, medical officers are often, absent for long time citing various reason. Contractual staff is poorly motivated due to delay in salary disbursement and no increment or incentives is provided to them and frontline work force like Accredited Social Health Activists (ASHA) is not reporting to RNTCP staff.

The current role and space of the private health care practitioners in TB control is very limited. Arinaminpathy et al reported missing TB cases treated with private sector which is two to three times more than what was assumed in India. (10) Private practitioners were reluctant to follow DOTS regime, and disease notification due to misconception about the program like daily regime patients need not to be reported to RNTCP, patient confidentiality, stigma and discrimination, and lack of cohesion and coordination between public and private health sector. (11) In a similar qualitative study conducted at Thailand-Myanmar border to explore the challenges in treating TB patients in which coordination and collaboration between various stakeholders was emerged as one of the main theme. (12)

All respondents unanimously agreed that fund delays are a major problem. Uninterrupted budget flow is one of the key components of the RNTCP. Budget plays the key role in implementation of all proposed activities, resolving human resource issues, and for proper tie-up with private practitioners. Though global TB report 2015 identified the funding problem, India was not one among the countries with poor funding 1, but at state level delayed and irregular release of funds disrupting the programme. For example, policy change to transfer of central money through state treasuries has disrupted the TB control activities in 2013-14. The financial management of the program is the crucial step in implementation of any program and is applicable to RNTCP. As per WHO estimates, India requires US\$788 million to address the TB epidemic fully. However, under its five year (2012-17) National Strategic Plan (NSP), RNTCP received only US\$680.6 million. It was interesting to note that, a total of US\$322million (less than 50% of NSP)

budget was approved and released by the government of India till date. Due to limited budget, numbers of activities were cut down in the proposed program implementation plan (PIP) of states. Appropriate funding will help to implement the full PIP of any state in terms of coverage through improved staffing, case detection, patient follow up and infrastructure strengthening.

Conclusion

This study could gather the perspectives of senior health officials, implementers and other stakeholders on challenges in the implementation of TB control programme in four states. The perceptions of the health care providers, implementers and administrators are important considerations for crafting effective policies. Challenges identified and recognized in TB prevention and care by these people in this study may be helpful to feed back into the strategy revision of RNTCP in those states.

Recommendation

The underlying causes of poor performance of our health programmes may be too much implementation workload on policy-makers, and high-level of fragmentation. Important decisions pertaining to the disease are still lying with many other ministries. There is a strong need for a preventive care, which is to be explored at field level, and implemented through appropriate policy changes. However, good policies are always produced by good policy-making processes. For this, continuous programme evaluation, which feeds back into the policy, with close involvement of policy makers, policy implementers and researchers, are essential. By working in togetherness with the policy makers, implementers, and researchers we can undertake researches, which are better responsive to national priorities and achieve improved health systems for universal health care.

Relevance of the study

Twenty years ago, Government of India revitalized its National TB Programme (NTP), to the Revised National TB Control Programme (RNTCP). As per its National Strategic Plan 2012–17, the program has a vision of achieving a "TB free India", and aims to achieve Universal Access to TB control services. However, India bears the highest burden of TB epidemic and suffering from poor implementation and governance.

In this scenario, policy dialogues and debates directed towards revisiting its current strategies is pertinent. This manuscript has been written with that aim to see the challenges in the National TB Control Programme (RNTCP), through the lenses of health care administrators and providers of India. In this study, the senior policymakers and implementers of the programme recognize the barriers and ditches of RNTCP. Given the complexity of priority agenda setting in public health, engaging the policy makers in the research are important, especially those who decide the policy processes and agenda. This will enhance the likelihood of research findings accepted for policy formulations

Authors Contribution

All authors have contributed equally in this manuscript.

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Figures

FIGURE 1 THEMATIC ANALYSIS SHOWING “CHALLENGES IN IMPLEMENTATION OF RNTCP” AT FOUR STATES OF INDIA

