



Evaluation of Non-Governmental Organization (NGO) Partnership Schemes under the Revised National Tuberculosis Program (RNTCP) in Gujarat, India

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ABSTRACT

Background: Government of India has started NGO schemes under RNTCP since 2001. However, there are no details available to show the impact or effectiveness of such interventions. The study was conducted to evaluate the NGO partnership schemes under RNTCP and to identify challenges and probable solutions for improvement of the same.

Methods: Mixed methods design: Quantitative data collection followed by Qualitative phase (personal interviews) during year 2016-17 across the Gujarat. 25% NGOs were selected from each scheme by two-stage random sampling.

Results: Most NGOs were enrolled in Scheme 1 and 2 (advocacy and slum). No NGOs enrolled in Scheme 10 and 11, while only 1 NGO was enrolled in Scheme 7, 8 and 9. All the NGO have registration number, submitted financial documents and 96.5% NGO were registered in NGO portal. Only 41.4% NGOs attended regular monthly DTO meeting. Almost 80% NGO had organized sensitization meeting among high risk groups. Sputum positivity was more than 5% in most NGO. Defaulter retrieval was high but actual number of patients was low.

Conclusion: NGO scheme under RNTCP are useful to reach the objectives, however they are underutilized and focused only in selected schemes/ geographic areas. RNTCP need to revise existing schemes to ensure more NGOs involved and work in larger geographic areas.

Keywords: NGO, Private Practitioners, RNTCP, TB

BACKGROUND

India accounts for one fourth of the global TB burden. In 2015, an estimated 28 lakh cases occurred and 4.8 lakh people died due to TB. According to Global tuberculosis (TB) Report 2016, highest burden of TB and Multi-drug resistance (MDR) is present in India. Around 1.3 lakh cases of MDR-TB with 79000 MDR-TB Patients estimates among notified pulmonary cases was reported in India. India bears second highest number of estimated HIV associated TB in the world.^{1,2}

Non-governmental organizations (NGOs) are 'private organizations that pursue activities to relieve

suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development'. NGOs have contributed to the development of communities around the world and are important partners of many governments - while remaining independent from governments.^{3,4}

With the aim of universally and maximal accessible and acceptable of treatment of TB patients, Revised National Tuberculosis Program (RNTCP) give the importance to decentralization of treatment services. Non-governmental organizations (NGOs) have a long history of supporting health

services at the community level, often with remarkable effectiveness and rapport with communities.^{5,6,7}

In India, the private sector, which is estimated to include 80% of all qualified doctors, 75% of dispensaries and 60% of hospitals, remains an important health care provider, catering to 75-80% of those seeking health care in urban and rural areas^{14,15}. Almost 87% of the total health care expenditure is reported to be in the private sector and 85% of the total health expenditure is out-of-pocket.⁸

Government of India has started NGO PP program since 2001. So, system efforts are ongoing to actively involve NGOs and PPs in the RNTCP to increase the outreach through NGOs and bring ownership and accountability of PPS. So, present study was conducted with the objectives for the NGOs working under RNTCP in Gujarat to assess the indicators of performance of NGO partnership schemes implemented, identify challenges and probable solutions for implementation of these schemes

MATERIALS AND METHODS

This was an explanatory mixed methods design, where quantitative phase (record review based data regarding NGO-PP scheme running under RNTCP was evaluated. Study was cross-verify the data provided by NGO and stakeholders) was followed by qualitative phase (personal interviews) of stakeholders and NGO staff conducted during June 2016 to March 2017 in Gujarat state after getting ethical permission from Institutional Ethical Committee (IEC) of GMERS Medical College & Civil Hospital, Gandhinagar.

Study was selected 25% NGO from each scheme by two-stage random sampling using probability proportional to size (PPS) methodology. In first stage, probability proportional to size (PPS) method was applied to select total number of sample. In second stage, NGO was selected by random sampling. If schemes are less than 5, then, all schemes was evaluated. Selected samples were as below.

Regarding selection for sample of private providers, they were selected from Surat city, Surat Rural, Ahmedabad city, Mehsana city and Bhavnagar city. Study was selected 8 to 10 PP from each city with purposive sampling.

Study included the participants for quantitative data analysis – Study was evaluated the data of each related scheme of 2nd, 3rd, 4th quarter of year 2015 and 1st quarter of 2016 of RNTCP; and Personal interview – District TB officer (DTO), NGO staff and Private Practitioners working under RNTCP.

Table 1: Number of selected NGO as per sampling method (N=29/87)

| Scheme Name | Visits |
|---|-----------|
| TB advocacy, communication, and social mobilization (ACSM) | 10 |
| Slum Scheme: Improving TB control in Urban Slums | 7 |
| DMC Scheme: Designated Microscopy Cum Treatment Centre (A) | 4 |
| DMC Scheme: Designated Microscopy Cum Treatment Centre (B) | 4 |
| Transport Scheme: Sputum Pick-Up and Transport Service | 0 |
| SC Scheme: Sputum Collection Centre/s | 2 |
| Culture and DST Scheme (CDST): Providing Quality Assured Culture and Drug Susceptibility Testing Services | 0 |
| TB-HIV Scheme: Delivering TB-HIV interventions to high HIV Risk groups (HRGs) | 1 |
| Adherence scheme: Promoting treatment adherence | 1 |
| LT scheme | 0 |
| TU Model | 0 |
| Total Visit | 29 |

Method of data collection: Data collection was done in four phase for each scheme among selected NGO and private providers.

Phase 1: This was included DTO of selected district. Data regarding MOU, SOE, UC, reports submitted by NGO, minutes of meeting conducted in each month among NGO etc was collected. Personal interview regarding scheme information (like feasibility, challenges) was taken of DTO.

Phase 2: This was included evaluation of selected NGO. Study was cross-verified the Data regarding activities done by NGO (like community meeting, beneficiaries meeting, IEC preparation etc.) allotted under RNTCP. Study was prepared separate evaluation for each scheme for data collection. Personal interview of NGO staff regarding scheme was taken.

Phase 3: Personal interview of selected private providers.

Prior permission was taken before interview.

RESULT AND DISCUSSION

Figure 1 shows that, there is no NGO working or enrolled in the 11 districts of Gujarat and more than 70% NGOs were concentrated at central, western (Saurashtra) and south Gujarat region, while only few NGOs present in farthest districts of western (Saurashtra), South and North Gujarat region.

Figure 2 shows that Most of NGOs enrolled in ACSM and Slum scheme under RNTCP NGO-PP

scheme, No NGO enrolled in TU and LT scheme, only one NGO enrolled in the CDST, Adherence and TB-HIV Scheme each, There are few number of NGOs enrolled in the SC, Transport, DMC 4A & 4B but they are concentrated in the selected district.

Table 2 shows that all the NGO have registered number and 96.5% NGO were registered in NGO portal. This shows that almost all the NGOs following the guideline of Government of India for compulsory registration of all NGO on NGO portal. Average duration of NGO working in NGO-PP scheme under RNTCP was 13.7 years (\pm 8.9 years). All the NGO are working in RNTCP since long time and may have long experience in RNTCP at ground level. Only 41.4% NGOs have attended regularly in monthly meeting at DTO office. Study observed less number of NGOs were attended the DTO monthly meeting. By attending regular meeting of DTO, NGO staff can get regular updation in RNTCP program, building repo with staff of RNTCP working in their area, understand the financial guideline, and discuss any patients/treatment related issues. Study observed local presence of NGO was 93.1%. Investigator observed local presence of more than 90% NGOs which shows that they have good repo and communication with people/patients of their catchment area and RNTCP staff. Good local presence is very helpful to serve or fulfill the purpose/objectives of RNTCP. All the NGOs have submitted pre-planned activity, SOE & UC to DTO office timely and regularly which indicate the active participation of NGOs, good utilization of fund and financial transparency. More that 90% NGO were working in other field (like BetiBachao, HIV, MahilaSurksha etc.) than RNTCP which shows that they have great experience of working among different community of remote area.

Scheme 1: TB advocacy, communication, and social mobilization (ACSM):

According to RNTCP NGO-PP guideline of ACSM scheme, NGOs have to organize community meeting (48), patient's provider meeting (48), school activities (12), sensitization meeting (12) and reproduce IEC material at 10,00,000 population with budget of Rs. 1,50,000. Present study observed that 70% NGOs has organized more or equal number of community meeting, Only 40.0% NGOs had organized patients provider meeting, 80% NGOs had conducted school activities among school children for awareness for TB, Almost 80% NGOs had organized sensitization meeting among high risk groups and health workers and 80% had reproduce IEC materials (printed awareness message on bag, kite, notebook, ballpen, pamphlets, calander etc.) as per RNTCP guideline for ACSM scheme.

To achieve the objectives of the scheme, NGOs

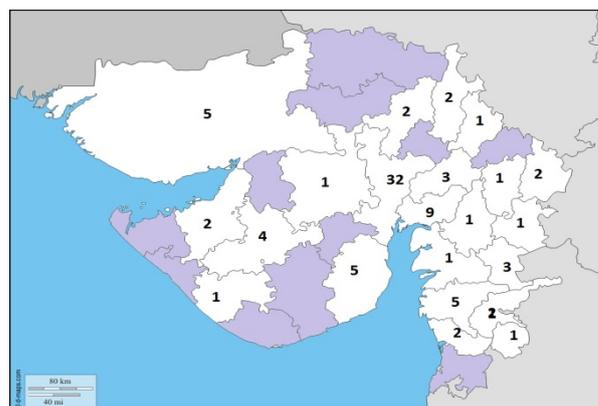


Figure 1: District wise number of NGO working under NGO-PP Scheme in Gujarat

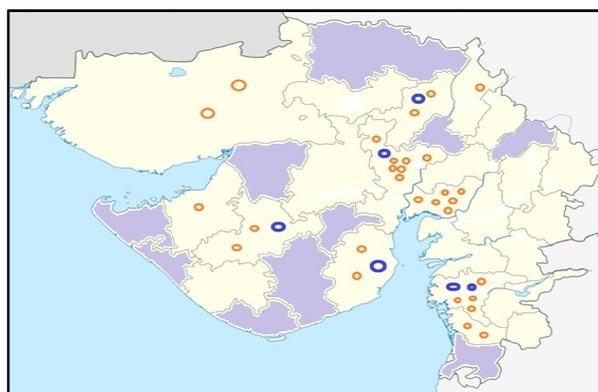


Figure 2: Location of enrolled NGOs and PP selected for the study

Table 2: General information of NGO working in NGO-PP scheme during year 2015-16 (N=29)

| Variable | NGOs(%) |
|---|----------------|
| NGOs with Registration Number | 29 (100) |
| NGOs Registered at NGO portal | 28 (96.5) |
| NGOs have MOU with DTO | 29 (100) |
| Total years of NGO working in RNTCP scheme (mean \pm SD) | 13.7 \pm 8.9 |
| NGO staff Attend monthly meeting at DTO office | 12 (41.4) |
| Local presence of NGOs observed | 27 (93.1) |
| Pre-planned activity submitted by NGOs at DTO office | 29 (100) |
| Timely reporting submitted by NGOs at DTO office | 29 (100) |
| Regular and complete submission of SOE & UC submitted by NGOs at DTO office | 29 (100) |
| NGOs Working in other field other than RNTCP Programme | 28 (96.5) |

should be enrolled throughout the state particularly for the rural and difficult to reach area. However, Most of NGOs enrolled in the ACSM scheme were concentrated at urban area, so the utilization of this scheme is limited and huge scope of expansion

sion of this scheme to achieve the objectives of this scheme. (figure 1 & 2). One of similar study⁹On evaluation of ACSM scheme observed that a combination of factors including the participation of NGOs, regular training and updating the NGOs and PPs regarding RNTCP guideline, increase communication and repo with front line health workers and community groups, and maximum use of resources available among community, awareness program to improve the knowledge regarding TB in the targeted districts. Project activities also contributed towards improving health worker and community effectiveness to raise the TB agenda, and improved TB literacy and treatment adherence.⁶

Scheme 2: Sputum Collection (SC) scheme and Scheme 3: Transport Scheme:

Present study observed that NGO working in the SC scheme were also working in Transport scheme so we evaluated such NGOs for both the scheme. NGOs enrolled in this SC and transport scheme were present in only 4 districts of Gujarat and 50% NGOs are situated in the Anand district. Anand district using the benefits of this important scheme. Thirteen (13) samples were positive out of 100 samples (positivity rate 13%) and 9 samples were found positive out of 163 samples (positivity rate 5.5%) collected and transported by NGO to designated health facility in study duration. Results also indicate that NGOs did not do follow-up of suspected patients whose sample was transported by NGO.

Sputum collection scheme specially designated for the areas with sub-optimal access to DMCs, it is envisaged that NGO/private provider supported sputum collection centers can be established to provide ease of accessibility to patients. Sputum specimens collected will be subsequently transported to the nearest DMC, enhancing the coverage of RNTCP and improving convenience to patients. Sputum transport scheme designated for safe and timely transportation of sputum while maintaining the acceptable quality of collected sample for microscopy examination, the programme envisages a Sputum Specimen Pick-up and Transport Service of these samples by non-governmental organizations or private agencies having their presence in the identified areas. Provision of such services would enable the programme to access the underserved populations of the country, enhancing the coverage of RNTCP and improving convenience to patients.^{6,9}

Scheme4: Designated Microscopic Centre (DMC) 4A Scheme and Scheme 5: Designated Microscopic Centre (DMC) 4B Scheme:

Present study observed that there is a variation

found in the detection rate of TB patients by NGO. Same variation was also found in provision of DOT to TB patients deleted by NGO. Some NGOs done nice job in detection, diagnosis and DOT provision in the scheme of DMC 4A. Detection rate of AFB positive was found more than 5% in almost NGO. Total 617 TB suspects examined to near health facility by NGO working in DMC 4B scheme under NGO-PP scheme. Out of 617 suspects, 73 diagnosed as TB positive. Detection rate of AFB positive was found more than 5% in all NGO.

At present in our country, 75 New smear-positive cases per 100,000 population per year is the the estimated incidence of TB cases but the world and Indian target is to catch at least 70% of the total estimated cases - i.e. 53 cases per 100,000 per year¹⁰. NGOs working in this scheme were present in 8 districts of the Gujarat and around 50% NGOs were present in Kutch district. This scheme effectively utilizes by Kutch district by enrolling five numbers of NGOs in hard to reach area. Similarly, 7 other districts were also utilizing this scheme in hard to reach area. It seems that RNTCP infrastructure adequately present in most the districts through public health care delivery system. So very limited utilization of this scheme seen in only few districts. However, DTO should encourage to utilizing this scheme wherever it is needed through effective NGO collaboration.

Scheme6: Laboratory Technicians (LT) Scheme: Strengthening RNTCP diagnostic services:

Present study observed that no NGO working in the LT scheme under RNTCP NGO-PP scheme. It may be because all the health facility providing RNTCP services are saturated with laboratory technician. The LT is to be recruit by NGO is supposed to be working in the public health facility under direct supervision and monitoring of RNTCP. So this may be administratively difficult and practically less feasible/convenient, which may another reason for no involvement of NGO in this scheme.

Scheme7: Adherence Scheme:

NGO found and follow 9 defaulter TB patients and retrieval action was taken in all patients. One of study done in 2005 in Tamilnadu measure total cost of treatment of New case of TB patients was 1398Rs and another study done in Thailand measured cost of re-treatment of TB patients was 32710 Rs per patients. Results shows that success rate to retrieval of TB defaulters was high but actual number of patients was very low.

NGOs and PPs have a major role to provide the accessible and acceptable high-quality TB treatment to the all patients.⁶

Scheme 8: Slum Scheme:

Present study observed that 13 samples were positive out of 100 samples (positivity rate 13%) and 9 samples were found positive out of 163 samples (positivity rate 5.5%) collected and transported by NGO to designated health facility in study duration. Results also indicate that NGOs did not do follow-up of suspected patients whose sample was transported by NGO. Only one (14.3%) NGO was done activity of defaulter retrieval of TB patients.

Urban slum population require highest priority and backing in RNTCP program. Because this population cannot reach the universally accessible and acceptable complete TB treatment which leads them into the unfavourable treatment outcomes including deaths, defaults, failures and drug resistance.^{6,11}

Scheme 9: Tuberculosis Unit Model scheme

At present, no NGO was involved in this scheme, this may be due to that in state like Gujarat, sufficient health facilities with adequate infrastructure and manpower is available. RNTCP facilities are reached up to remote area of Gujarat.

The NGO ensures full services for microscopy, treatment, direct observation, defaulter retrieval, recording and registration, supervision, etc. NGOs should comply with the relevant sections of the Operational Guidelines of the RNTCP (particularly Chapter 2, Organizational Structure and Functions) and ensure all programme implementation responsibilities. The NGO must also coordinate closely with all public and other health facilities in the area. The NGO must ensure the fulfilment of all the general functions of the Tuberculosis Unit. It is of utmost importance that the NGO scrupulously maintains RNTCP records and submits quarterly reports to the District TB Officer in the prescribed manner and in a timely fashion.^{6,12}

Scheme 10. TB-HIV Scheme:

Present Study observed that only one NGO was working in the TB-HIV scheme under NGO-PP scheme of RNTCP in Gujarat. NGO screened total 6690 patients as per guideline, out of that it found 9.0% suspected cases. NGO send 57.0% suspected cases for smear microscopy, 9.4% suspected cases for Chest X-ray and 0.7% cases send for both chest X-ray & Smear microscopy. NGO put all the TB patients on DOTS treatment (0.7%).

Personal Interview:

Study observed that all the **DTO** knew about NGO working in the revised NGO-PP scheme in that district and almost 86.2% DTOs send the beneficiaries to take the benefit of services provided by NGOs. Remaining DTOs were not pleased to take the ser-

vices of NGO due to issues like less Staff in NGO, Low remuneration for NGO staff, Communication gap, Fund utilization, Reporting quality and Completeness of allotted work. Suggestions given by DTOs to further improve the services of NGOs are Collaboration of NGO with PP, Regular evaluation of NGOs services by external agency, Increase fund, Appreciation to NGO staff for their achievement /work / continuous motivation, Increase specific type of NGO (e.g. DMC), Recruit efficient staff (MBBS doctor), More laboratory investigation other than related to TB at specific NGO (DMC), Develop IEC material by NGO, Increase/regular Training of NGO-PP staff, Expand role / Increase catchment area of NGO specific slum area, Nutrition provided to all TB patients, Special remuneration to NGO staff on special day activity /festival, Increase local presence by creating local leader/contact by NGO, Regular reporting (monthly) instead of quarterly reporting, Nutritional distribution through PDS system, Infrastructure improvement at NGO.

Study found that NGO get complete co-operation from DTO office. **NGO staff** gave suggestions to improve further NGO-PP scheme under RNTCP like Increase fund, Proper training or guideline, Establish Regular feedback mechanism, Want to expand role/catchment area, Appreciation of NGO work, Increase co-operation of local RNTCP workers, Want to attend 7th monthly meeting, Lack of staff at nearer health facility, Lack of staff at NGO to do field activities, Infrastructure development / x-ray facility at nearer health facility, Patients friendly treatment at nearer health facility, Expand role / Increase catchment area of NGO specific slum area, Camp organize by DTO office with collaboration with NGO, Social scheme for TB patients related issue, Increase nutritional support to TB patients and Not provide free treatment to beneficiaries.

In Gujarat, more than 5000 **Private Practitioners (PPs)** were working in NGO-PP scheme under RNTCP. Study found that average duration of PP working in different scheme of NGO-PP was 7.1 years with 6.4 SD and all the PP getting full co-operation from DTO office. Only 56.9% PP were aware about NGO working in NGO-PP scheme in their area and out of that, only 46.5% PP refer the patients to NGO. Almost 12.1% PP were experienced difficulty to get the services of NGO. Suggestions from PP to improve NGO-PP scheme were Free camp organize for TB patients, Free Nutrition / multivitamin tablets for TB patients, Treatment at own centre in spite of refer to NGO/DTC, Regular training regarding updates in TB treatment guideline, Transport allowance given to TB patients, Regular follow-up of TB patient's treatment, Facility for sputum transportation, Fa-

cility for sahay yojana related to TB patients, Increase IEC activity.

CONCLUSION

NGO scheme under RNTCP are useful to reach the objectives, however they are underutilized and focused only in selected schemes/ geographic areas. RNTCP need to revise existing schemes to ensure more NGOs involved and work in larger geographic areas. There is a urgent and paramount need to engage more NGOs and Private practitioners specially where NGOs are not working under RNTCP scheme in Gujarat. Still there is larger case load of TB and associate diseases present in the all district of Gujarat. Still scenario of left unaddressed, undetected and non-diagnosed cases of TB is exist in present study area which contributes to increasing multi -drug resistance and to a dilution of the epidemiological impact of DOTS in the Region. It's almost more than 15 years to start the NGO-PP scheme starter under RNTCP programme, DOTC get remarkably successful and paved the way for a paradigm shift in policy from restricting DOTS services within the public health domain to the exclusion or strict regulation of the private sector, to adopting a partnership approach with the private health provider. There was ubiquitous unanimity that policy makers should make the the national policy guidelines which permit the development of public-private partnerships at local operational levels.

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