

# PhD defence Vijayashree Yellappa

## Optimising the Involvement of Private Practitioners in Tuberculosis Care and Control in India

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Dit is de omschrijving

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### Background

In India, the private health sector plays an important role in the provision of health care. Government of India has been involving the Private Providers (PPs) through Public Private Partnerships (PPPs) in realising public health goals through different partnership mechanisms. We proposed to study PPP in Revised National Tuberculosis Control Programme (RNTCP) in Tumkur District, situated in Karnataka, South India.

RNTCP draws special attention here, because of its long history of efforts to involve PPs (Private Practitioners), which dates back to 1995. In spite of the availability of free diagnostic and treatment services at the public facilities, more than 50% of TB patients, irrespective of the income group, are estimated to seek care from PPs. However, studies have demonstrated that PP's TB management practices in India are sub-optimal and often TB is inaccurately diagnosed and ineffectively treated, thus posing a higher risk of mortality and drug resistance.

The Indian Government is involving PPs in RNTCP through PPM (Public Private Mix) strategy since 2001, to link RNTCP with PPs, so as to detect TB timely and provide standardised treatment to TB patients. Despite the promise shown by PPM-DOTS models, uptake of PPM schemes by PPs has been poor. The questions remain as to how best to pursue sustainability and scalability of such initiatives. Therefore it is essential to recognise 'what works for whom, and under what conditions' to improve the understanding of 'how' partnerships with PPs work (or do not) by unpacking the dynamics of health system components.

With this as the context, we designed a PPM model to optimise the involvement of for-profit allopathic PPs in RNTCP in a south Indian district. The study was conducted in four phases to improve referrals of presumptive pulmonary TB patients from PPs to RNTCP for sputum smear microscopy, and notification of TB patients to RNTCP who were either diagnosed and/or started on private TB treatment by PPs.

### Methodology

**(i) Pre-conditions phase (2012-2013):** We assessed the involvement of formal for-profit allopathic PPs in RNTCP in terms of referrals of presumptive pulmonary TB patients through review of RNTCP reports and registers.

**(ii) Pre-implementation (2013-2014):** In-depth interviews were conducted with stakeholders (PPs, TB patients, and RNTCP staff and managers) to understand the barriers for PPM implementation and PP's referred modes of collaboration.

**(iii) Implementation phase (2014-2015):** 316 PPs were identified through census and they were randomly allocated to an intervention and a control group. Activities were aimed at improving the collaboration between PPs and RNTCP. We chose randomised control trial to evaluate the intervention by

proportionate random allocation of PPs practicing in the study area to an intervention and a control group.

**(iv) Maintenance Phase (2016-2017):** The positive findings from the study were integrated into the programme. During the project, the capacity of RNTCP staff was built to collaborate with PPs which enabled them to adapt the positive findings from the study.

## Results

The duration of the intervention was 12 months starting from December 2014. As main outcomes, we assessed the proportion of PPs referring presumptive TB cases to RNTCP and the proportion of PPs notifying TB cases on private treatment to the RNTCP, in the intervention versus control group at the end of the intervention. During the study period, PPs referred 836 patients and 176 were diagnosed with pulmonary TB. The proportion of referring PPs, mean referral rate per PP-year and smear-positive TB case-finding rate per PP-year were significantly higher in the intervention arm than the control arm. PP's referrals contributed to 20% of the sputum-positive pulmonary TB patients detected by RNTCP in study area (14% were from intervention arm PPs).

## Conclusion

We demonstrated that a system-oriented intervention implemented by RNTCP staff based on the establishment of a strong referral and communication system with PPs, improved PP's referrals of presumptive pulmonary TB patients to RNTCP. Our study conducted in routine programmatic settings provides important information about the systemic impediments that affects engaging PPs in public health programmes. Nonetheless, replication warrants examination because the ability of a programme to transplant its model from one context to another context. Based on the outcomes of this study, intervention is extended to the control arm in the study area. Further, the model is rolled out and evaluated in rural parts of the same district.