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# EVALUATION OF TUBERCULOSIS PROGRAM IN INDIA

## WHO REPORT

**APRIL 2011**

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## ACRONYMS

ACSM	Advocacy, Communication, And Social Mobilization
AFB	Acid Fast Bacillus
AIC	Air Borne Infection Control
AIDS	Acquired immune deficiency syndrome
AP	Andhra Pradesh (India)
ART	Anti-Retroviral Therapy
ASM	American Society of Microbiology
BPHRC	Blue Peter Public Health and Research Centre
BSL3	Biosafety Level 3 (India)
CBO	Community-Based Organization
CDC	Centers for Disease Control
C-DOTS	Community-Based DOTS
C&DST	Culture & Drug Susceptibility Testing
CIDA	Canadian International Cooperation Agency
CMC	Christian Medical Centre
CTD	Central TB Division (India)
DCP	Drug Control Officer
DDG	Deputy Director General
DFID	Department for International Development
DMC	Designated Microscopy Centre
DOTs	Directly Observed Therapy, Short Course
DQA	Data Quality Assurance
DST	Drug Susceptibility Testing
DTC	District Tuberculosis Center
DTO	District Tuberculosis Officer
EQA	External Quality Assurance
FIND	Foundation for Innovative New Diagnostics
FY	Fiscal Year
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GLC	Green Light Committee
GoI	Government of India
HIV	Human Immunodeficiency Virus
HR	Human Resources
IC	Infection Control
IEC	Information, Education, and Communication
IMA	Indian Medical Association
IQC	Indefinite Quantity Contract
IRL	Intermediate Reference Laboratory
JMM	Joint Monitoring Mission
LED	Light Emitting Diode
LPA	Line Probe Assay
LRS	Institute of TB and Respiratory Diseases (in Delhi)
LF	Lab Technician
M&E	Monitoring And Evaluation
MDR-TB	Multidrug-Resistant TB
MOH	Ministry of Health
MSH	Management Sciences for Health
NAAT	Nucleic Acid Amplification Test
NGO	Nongovernmental Organization

NPO	National Program Officer
NRL	National Reference Laboratory
NTI	National Tuberculosis Institute, Bangalore
OPD	Outpatient Department
OR	Operational Research
PF	Provident Fund
PIH	Partners in Health
PMDT	Programmatic Management of Drug-Resistant TB
PMP	Performance Monitoring Plan
PP	Private Practitioner
PPM	Public-private mix
PR	Principal Recipient
QA	Quality Assurance
QC	Quality Control
RNTCP	Revised National Tuberculosis Control Programme (India)
SAMS	Strategic Alliance Management Services
SEARO	WHO Regional Office for South-East Asia
SLD	Second-Line Drug
SNRL	Supranational Reference Laboratory
SOP	Standard Operating Procedures
SLDST	Second-Line Drug Susceptibility Testing
SR	Sub-Recipient
STC	State Tuberculosis Centre
STDC	State Training and Demonstration Centre
STO	State Tuberculosis Officer
TA	Technical Assistance
TASC2	Technical Assistance and Support Contract II
TB TEAM	TB Technical Assistance Mechanism
TB	Tuberculosis
TDS	Tax Deduction at Source
ToR	Terms of Reference
TOT	Training of Trainers
TRC	Tuberculosis Research Centre, Chennai
TU	Tuberculosis Unit
TWG	Technical Working Group
USAID	United States Agency for International Development
WHO	World Health Organization
WHO-WR	World Health Organization Representative
WHO-SEARO	World Health Organization Regional Office for South-East Asia
XDR-TB	Extensively drug-resistant TB

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## EXECUTIVE SUMMARY

All of India has been covered with directly observed therapy, short course (DOTS), services—the internationally recommended strategy for tuberculosis (TB) control—since March 2006; targets of seventy percent case detection and eighty-five percent cure rate of new smear positive (NSP) cases have already been met for several years. Nevertheless, there is no proof that the Revised National Tuberculosis Control Program (RNTCP) has had an epidemiological impact; furthermore, India is facing a growing problem of multi-drug resistant tuberculosis (MDR-TB). In order to adequately cope with this MDR-TB burden, RNTCP needs to expand the network of accredited laboratories and involve the private practitioners (PPS) more effectively. Given that a significant fraction of the Indian population, including the poorest segments, consult private practitioners, an epidemiological impact can be reached only if the private sector becomes fully involved in TB diagnosis and care.

It is in this challenging context that USAID/India is supporting RNTCP through the services of the World Health Organization (WHO). The main objectives of the partnership are to (1) strengthen the **laboratory network** for mycobacterial culture, Drug Sensibility Testing (DST) and the introduction of line probe assay; (2) intensify the involvement of **private health care providers/organizations**; (3) support **operational research**; and (4) provide technical support to all RNTCP activities, via the RNTCP **consultant network**.

USAID/India contracted Social Impact, Inc. (SI), to carry out an in-depth evaluation of the support provided to RNTCP by the World Health Organization. The objectives of the evaluation were to determine the impact of WHO support, relative to stated objectives and achievements, and to make suitable recommendations for future direction and priorities. The evaluation team conducted an initial planning meeting with USAID/India, prepared an overall framework that was reviewed and approved by USAID/India (see Appendix A), and carried out a series of field visits and in-depth interviews in Andhra Pradesh, Uttar Pradesh, Maharashtra, Gujarat and Rajasthan.

The team made the following conclusions and recommendations, in reference to each of the key activities:

1. *Implementation arrangements.* While WHO's management of the USAID-funded TB project has been sufficient to deliver the desired results, the project is now entering a new, critical phase. Not only are the headquarters of WHO/India office severely understaffed, but the initiation of RNTCP3 and the quintupling of proposed resources will put heavy burden on the WHO/India office; it is difficult to envision how the WHO office could continue to function effectively if current staffing levels are maintained. The hiring of additional, well-qualified, senior-level staff with good managerial capabilities is of utmost and urgent importance. Though USAID/India may not have sufficient leverage with WHO/India and WHO/Geneva to ensure that this hiring takes place quickly, it may, in conjunction with USAID/Washington (and, perhaps, other donors), apply sufficient pressure on WHO in order that a significant number of the needed staff soon enter the recruitment process. USAID must make it clear to WHO that future funding decisions will be based on WHO's implementation of these decisions.
2. *Monitoring and evaluation.* Efforts to strengthen the public sector's M&E capacity through WHO must be put into context; M&E capacity varies greatly by state and, to date, M&E as a discipline has been subsumed into the other aspects of TB prevention and control efforts. In states that have sufficient M&E capacity for routine monitoring, the role of the WHO consultant has evolved into higher-level epidemiological functions, yet the corollary training for these functions is lacking. Likewise, there have been relatively few opportunities for the WHO consultants and their counterparts to meet and discuss TB M&E as a discipline in and of itself. This needs to change. Finally, M&E at the central level (Central TB Division, or CTD) has been driven primarily by WHO/India, as presently there is very limited capacity within CTD. A combination of actions, including WHO hiring sufficient M&E staff for its headquarters and then strengthening the M&E capacity of CTD, along with instituting a more organized and formal M&E training program for both its consultants and their public sector counterparts, should ensure that progress continues in strengthening the TB M&E system.



3. *The laboratory network.* USAID support allows WHO to provide technical assistance to build capacity at RNTCP national reference laboratories (NRLs) and intermediate reference laboratories (IRLs) in order to (1) perform culture and drug-susceptibility testing (DST) services; (2) develop and initiate a large scale demonstration and field evaluation of Nucleic Acid Amplification Testing (NAAT) for early and improved TB case detection; (3) create two additional NRLs with capacity for second-line DST (SLDST); and (4) create a RNTCP Laboratory Task Force and support its functioning. These activities have taken place as planned and were carried out adequately, with two exceptions: the national laboratory task force has not yet materialized due to administrative obstacles related to the use of funds by WHO, and the money for the NAAT field evaluations has not been spent yet for administrative and logistical reasons, although everything is ready to start soon..

USAID should continue to support WHO's execution of the NAAT field trials, in order to allow RNTCP to incorporate this highly promising test into a diagnostic strategy in field conditions. Better coordination between the engagement of WHO and PATH is desirable in order to optimize the efficiency of their joint efforts in lab strengthening, especially given that both are financially supported by USAID. Build-up of strong laboratory leadership and technical staff might be considered for extra support; USAID should insist that the government of India (GoI) create the conditions necessary to attract and keep valuable technical staff, and support the enrollment of the private laboratories in external quality assurance (EQA) programs and in networking with the intermediate reference laboratories (IRLs) and national reference laboratories (NRLs).

4. *Engaging non-public providers.* Pilot projects have demonstrated that public-private mix (PPM) is feasible in TB control in India and has a proven potential to increase RNTCP performance. Field observations made during this review have identified that scale-up is constrained by a series of factors related both to the PPs themselves and to the public sector authorities. The conditions underlying the potential success of PPM include a clear understanding and delineation of the roles, responsibilities, and accountabilities of both public and private sector actors in a true spirit of partnership, equity, risk sharing, and transparency. Given that the involvement of PPM in RNTCP3 will need to increase substantially, the following actions are recommended: (1) carry out a study to ensure RNTCP3 is conducting activities based upon evidence-based assessment and (2) carry out action researches to optimize effective implementation of RNTCP3's novel approaches. Efforts should be made to ensure the partnership with PPs are mutually beneficial, which requires exploring what a "win-win" situation would look like for the several groups of PPs; their monetary and non-monetary expectations with respect to their active participation in PPM; the amount of time they are willing to spend on PPM; and the maximal administrative burden they are willing to accept. Via the consultants' network, WHO should indicate any special needs with regards to the transition from RNTCP2 to RNTCP3 at the state and district levels, and state what support the private sector could offer to bridge those gaps.
5. *Support Operational Research through TRC.* The USAID funds utilized to support TB operational research (OR) in India have provided some of the best returns on investment. Not only are the results used to provide better prevention, care, treatment and support (and thus save lives), but they have also led to cost-savings within the TB program. This is highly commendable, and most of the credit belongs to the Tuberculosis Research Centre (TRC) in Chennai, which has received guidance from WHO through USAID support. However, much of the progress in moving the TB OR agenda forward could be lost in the upcoming years. Currently, TRC is facing a serious staffing shortage. A large cohort of senior-level experts and managers are retiring, with few mid-level managers to replace them. In addition, TRC is understaffed, in general. Additional challenges that need to be addressed include: (1) determining TRC's future role in OR, both in India and internationally; (2) remedying the lack of collaborating partners in India; (3) ensuring that its research methods remain up-to-date; and (4) possible cash flow and cash management issues.
6. *WHO consultants' network.* The principal factor of DOTS' successful implementation in India has been—and still is—the involvement of WHO-contracted local consultants, who provide technical support at CTD, state and district levels. Indeed, eighty-six field-level consultants are assigned to specific states and work closely with district and state TB officers, enhancing the capacity of district health systems for supervision,

monitoring and evaluation; assisting in data management and electronic transmission of the quarterly surveillance data to the national level; and improving record-keeping and monitoring the consistency and accuracy of the quarterly cohort data. Additionally, they provide feedback on RNTCP performance to the national level. Half of the financial support for this network is provided by USAID and half by the United Kingdom Department for International Development (DFID). Since September 2008, the consultants depend administratively on RNTCP only, while the management of the network is outsourced. This change of label is of great concern to the consultants, diminishes the attractiveness of the position, and increases the turnover. The network has contributed significantly to the good performance of RNTCP, and provided an element of stability and continuity within a context of frequently-changing GoI staff at the state level. This network is of low cost, but it produces tremendous benefits for TB control at the state, district and even national levels in India. It is recommended that USAID continue to support this network up to the end of the launching period of RNTCP3 (2017), and, if possible, take over full financial support once DFID withdraws its support in December 2011. In order to increase the sustainability of RNTCP performance, a concrete plan to operationalize the transfer of their knowledge and skills to the homologues in the RNTCP system should be prepared by WHO, CTD and the state tuberculosis officers (STOs), detailing precise benchmarks for the transfer.

In addition to the eighty-six state-level consultants, ten other consultants provide technical support to the CTD, with thematic responsibilities in the domains of PPM, HIV/TB, HR, advocacy, communication and social mobilization (ACSM), etc. They are one of the pillars of CTD's good performance, but they have no real counterparts, which handicaps an eventual exit strategy. Their present job satisfaction is found to be very high, although their career development opportunities are minimal, and the present salary is less attractive than it has been in the past. This network provides excellent value for money. As CTD is moving quickly to take up the RNTCP3 challenges in 2012, the consultants' role will become more crucial than it is today, because there is yet no model in the country to reach the ambitious RNTCP3 targets.

A case study carried out in East Uttar Pradesh state has learned that the WHO consultants play an important role in correctly performing districts as well as in poorly performing ones: in the latter, the consultants' support is crucial to maintaining a minimum level of case finding and case holding services.

## **GENERAL CONCLUSIONS AND RECOMMENDATIONS**

The evaluation recognizes the crucial role that WHO plays in the implementation of RNTCP2. It is a key observation that, without the heavy involvement of WHO, RNTCP would not have been able to reach the targets of universal coverage, of seventy percent case detection and eighty-five percent cure of NSP cases, in such a short time and in so many states and districts. The question of "value for money" invested by USAID/India in WHO support to RNTCP can be answered, without any doubt, positively for all the domains that were reviewed. The role that the WHO consultants play at state and CTD levels is of capital importance for the good performance of TB control in India. In those states and districts where RNTCP performance is still sub-optimal, the involvement of the WHO consultants prevents decreases in performance; in states and districts where the performance reaches the case detection and cure targets, their involvement allows exploration of methods to increase the quality of the RNTCP implementation and strengthen evidence-based program management.

The evaluation team recommends continuing and, if possible, increasing the level of funding of WHO, and especially taking over the full support of the WHO consultants network once DFID terminates its financial support in December 2011. However, guarantees should be obtained for the transfer of skills to homologues within the system, and benchmarks should be established for monitoring this transfer. Support to the WHO-consultants network should continue until the end of the launching of the RNTCP3 program (2017).

## I. INTRODUCTION

A review mission of USAID support provided to the Revised National TB Control Program (RNTCP) through WHO took place from February 2, 2011 to March 30, 2011. The team, comprising of six experts,<sup>1</sup> visited Dr. L.S. Chauhan, acting Deputy Director General of the Central TB Division, CTD; and Dr. P. Dewan, WHO-WR international TB expert. The team also interviewed a series of key staff working in partner organizations (see list in Annex 4) and carried out field visits in various states, including Andhra Pradesh, Uttar Pradesh, Rajasthan, Gujarat, and Maharashtra. The main content of this WHO review was discussed with USAID technical staff on March 16, 2011, and with the USAID Front Office on March 18, 2011.

WHO provides technical support to the RNTCP in the areas of planning, capacity building, monitoring, surveillance, evaluation, drug distribution, electronic connectivity, Public-Private Mix (PPM), and operational research.<sup>2</sup> This support to RNTCP started in 1993 and increased when RNTCP extended Directly Observed Therapy—Short course (DOTS) coverage from 1998 onwards. India has faced several challenges in implementing RNTCP, including (1) sub-optimal functioning of the general health services, which has a negative impact on case finding indicators and on the start of treatment; and (2) the huge role of the private sector in health care delivery and provision of outpatient services (OPD). Unfortunately, the services provided by the private sector are still of inconsistent quality. Unequal socio-economic development in the states and districts influences access to health services and adherence to treatment. Additionally, differentials exist in the attention that individual states give to health (as health is a state matter), affecting the filling of staff positions, the transfer rate of staff, etc.<sup>3</sup>

In spite of these challenges, RNTCP has realized the remarkable achievements of reaching universal coverage by March 2006, and of achieving the case detection target of seventy percent and the treatment success target of eighty-five percent. Nevertheless, there is as yet no objective evidence of an epidemiological impact on the incidence of TB. This implies that, in order to influence the incidence, extra measures need to be taken, such as (1) involving the private sector right from the TB suspect's first contact with the health system; (2) improving the sensitivity of the diagnostic tests (to avoid labeling TB cases as “non cases” when in fact they are the consequence of a “false negative test only”); (3) improving the early detection of cases through active contact tracing; and (4) continuously monitoring the trends of TB suspects examined, cases found, and cases treated/cured through modern surveillance techniques.

To face these challenges, India is now ready to embark on a major new initiative to provide universal access to TB care, decrease treatment delay, increase treatment outcomes, address on a large scale the problem of multi-drug resistance, and involve the private sector in a full-fledged and comprehensive manner. This ambitious plan, referred to as *RNTCP3*, will require early and complete detection of TB, a significant increase of human resources, an expansion of laboratory and treatment centers, a major involvement of private providers, and innovative strategies to deliver care to vulnerable populations.<sup>4</sup>

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<sup>1</sup> A list of the team members and their domains of expertise is included in Annex 1.

<sup>2</sup> Sahu, S. & L. S. Chauhan. “The role of WHO in the successful implementation and expansion of the DOTS program in India.” Agarwal, S. P. and L. S. Chauhan. “Tuberculosis control in India,” Elsevier, New Delhi, 2005: pp. 187–190.

<sup>3</sup> Khatri GR & Frieden TR. Controlling tuberculosis in India. NEJM 2002; 347: 1420-1425.

<sup>4</sup> “TB India 2010, RNTCP Status Report,” Central TB Division, Ministry of Health and Family Welfare, March 2010

## II. PURPOSE OF THE EVALUATION

USAID/India contracted Social Impact, Inc. to carry out an in-depth and thorough evaluation of the support provided by WHO to RNTCP using the financial and technical support delivered by USAID. The objectives of the review are to:

- Determine the impact of WHO relative to stated objectives and achievements;
- Make suitable recommendations for the future direction and priorities of the WHO support to RNTCP.

The original statement of work (SOW) called for a comprehensive evaluation of WHO support, considering the appropriateness of the project activities in achieving the objectives, the level of impact, cost-effectiveness, and future directions. Based on an in-country meeting with USAID/India, the focus of the evaluation shifted to address the issue of *value for money* and answering the question of whether, and to what extent, the resources provided by USAID to WHO to support RNTCP activities have been well spent. Consequently, the focus of the evaluation became much more qualitative and descriptive, rather than a study focusing on the level of targets reached, project performance with respect to effectiveness, efficiency and equity, and impact achieved.

The review team examined project trends, investigated the “pull and push” factors that determined the level of achievements, and assessed the quality of implementation. The assessment explored the main successes and lessons learned from the present WHO support provided to RNTCP2 and focused especially on the level of preparedness of the TB services at national, state, district and lower levels to take on the huge challenge of RNTCP3 conceptualization, implementation and monitoring.

## III. RESEARCH DESIGN AND EVALUATION METHODOLOGY

The evaluation team conducted an initial planning meeting with USAID/India and then prepared an overall framework that was reviewed and approved by USAID/India (see Annex 2). The evaluators used a range of methods and approaches for collecting and analyzing the information required to assess the project against the evaluation objectives.

### METHODS

- Desk review of documents (see list in Annex 3)
- Attendance of 2 workshops held on Feb 17–18 in Delhi on the following topics: DOTS+ and RNTCP3
- Adaptation of the SOW (a framework was developed and approved by USAID/India; see Annex 2)
- Interviews of key informants (see full list in Annex 4)
- Validation of the received information
- Field visits: Gujarat, Andhra Pradesh (AP), Uttar Pradesh (UP), Rajasthan and Maharashtra
- Inventory of activities
- Views of authorities (DDG, DTOs, STOs, ex-STOs, etc.)

### Team Planning Meeting (TPM)

An initial teleconference facilitated by the team leader was held before the evaluation began. This presented an opportunity for the mission members to present the purpose, expectations, and agenda of the assignment. In addition, the TPM also:

- Clarified team members' roles and responsibilities
- Established the timeline, shared experiences and thoughts on the evaluation methodology
- Allowed for the exchange of ideas about the data collection tools and guidelines

### **Site Visits and Interviews**

- A thorough review of the various projects was carried out through site visits and interviews of project staff, and key informants.
- Interviewees included key members from all stakeholder groups, including RNTCP, WHO, other donors, partners in TB control, and beneficiaries.
- An interview questionnaire was prepared, presented to USAID/India for comments, and updated where necessary; written approval by USAID/India was obtained.
- Various site visits were carried out focusing especially on the assessment of specific activities of RNTCP supported by WHO.
- The team evaluated the state and district level periodic reports to take stock of the performance indicators.
- With respect to the review of the performance of the state WHO consultants, interviews were carried out with the Deputy Director General (DDG), four STOs and twenty consultants. In addition, in-depth interviews were conducted with fourteen newly-hired consultants, twelve consultants with more on-the-job experience, and four former consultants. The in-depth interviews were based on a specially developed questionnaire and on group discussions. The plausibility of the findings was reviewed by the WHO international consultant, and the findings were compared with those of a recent MBA thesis authored by Dr. Lal.<sup>5</sup> With respect to the performance of the WHO consultants working at the CTD level, the review is based on interviews of the DDG, and four STOs, and also in-depth interviews of nine CTD consultants. The in-depth interviews were based on an ad hoc questionnaire and group discussions.

### **The Evaluation Framework**

The framework of this evaluation focused on a set of questions about the program's management and operations, along with a set of specific technical questions pertaining to the level of achievement of the WHO-supported program objectives. Details are given in Annex 2.

In addition, questions were posed with an aim towards identifying contributing factors and barriers that determine the level of achievement of the objectives, and probing whether WHO occupies any specific niche for providing technical assistance in India. Based on the evaluation, the team prepared a set of recommendations for each of the activities.

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<sup>5</sup> Dr Lal has been employed as WHO consultant in Kerala; afterwards, he joined WHO as PPM expert, and is presently employed by the Global Fund Headquarters in Geneva.

## IV. FINDINGS

### PROCESS FINDINGS ABOUT THE MANAGEMENT AND IMPLEMENTATION OF THE PROGRAM

#### Implementation Arrangements, Management and Program Monitoring

USAID/India's support to the World Health Organization has been channeled through a USAID/Washington-managed grant. Though this implementation arrangement allows the WHO great flexibility in being responsive to changing CTD and USAID priorities, and reduces the management burden on USAID, it does have some drawbacks. First, it reduces the direct connection between USAID/India and WHO's office in India, which has made the decision-making and information-sharing processes between the two organizations and other stakeholders less transparent. The grant structure also makes determining WHO's contribution to TB prevention and control efforts in India difficult to ascertain, due to the lack of a formal, high-level monitoring structure. There has never been a Performance Management Plan associated with WHO's activities. Finally, the grant structure provides little leverage to the donor when critical issues arise regarding WHO's management of its activities.

The most critical issues that the WHO in India faces in managing the USAID-funded TB support is that currently, it is severely understaffed. A single, CDC-seconded medical officer, Dr. Puneet Dewan, supervises more than ninety consultants in addition to preparing donor reports, organizing workshops, and performing other necessary activities to ensure program success. This is not sustainable. It is of the utmost urgency that the WHO hires additional (national and possibly international) senior-level staff to support its efforts. While it is recognized that the WHO hiring process is often slow and arduous, this current situation is unacceptable. Unfortunately, USAID/India has little influence in these matters; thus, USAID/Washington must exert pressure on WHO/India and WHO/Geneva to rectify this matter.

One additional issue which should be examined is that WHO's most important partner for OR, the Tuberculosis Research Centre (TRC) in Chennai, has noted that the transfer of funds from WHO during the last few years has often been inconsistent and delayed. This has led to having to halt and/or discontinue implementation of research projects. Whether this cash flow issue is internal to TRC (see Operations Research section) or is the responsibility of WHO needs to be investigated and quickly rectified. This is especially crucial given the planned scale-up of funding as part of RNTCP3.

#### Core Recommendations

WHO/India, in conjunction with USAID/Washington and USAID/India, must develop an organizational chart, along with a timeline and associated actions, to ensure sufficient senior-level staff for WHO/India headquarters is hired by or before the end of 2011. Of particular importance, WHO/India must have at least one professional manager dedicated to providing technical and mentoring support to the WHO consultants. WHO/Geneva should be clearly informed that both performance and future funding decisions by USAID will be made based on its ability to move forward with this hiring.

#### Additional Recommendations

1. While it is not necessary for **WHO** to develop a formal Performance Management Plan (PMP), a *longer-term framework for monitoring and evaluation* should be designed to provide a better understanding of WHO's output contributions to TB control and prevention efforts in India under USAID support.

This framework should specifically include output-level baselines demonstrating links to outcome level targets, indicators and benchmarks for WHO's draw-down plan for its consultants, and specific management performance indicators (i.e. WHO's ability to sufficiently staff its India headquarters).

2. **USAID/India** may want to explore the possibility of moving toward a *bi-lateral cooperative agreement* with WHO, although this may not be possible. Missions in other countries in some instances have been able to negotiate these types of agreements with WHO's regional office. Furthermore, USAID/India may consider placing the support to WHO under a larger health-systems-strengthening project, delegating the authority over the implementation arrangements to the primary implementing partners.
3. **USAID/India and WHO/India** need to establish a **more formal feedback mechanism** for all documents (work plans, quarterly reports, activity reports, etc.) submitted by WHO/India to USAID/W. Currently, USAID/W is providing guidance and support to WHO/India, but USAID/India needs involvement that is more intensive.

## Monitoring and Evaluation

It must be recognized at the outset that the capacity of the public sector to conduct TB M&E varies greatly by state. Some states are still struggling with basic TB reporting, while others have not only mastered the required reporting, but have also strengthened their capacity such that their ability to conduct M&E even exceeds that of the central level. It is within these varying capacities that the WHO consultants must define their roles. In some states, WHO consultants' primary focus is on basic data collection, collation, analysis and interpretation, while in other states that role has evolved into a quality-check function, and in still other states the public sector is driving the M&E agenda while the WHO consultants focus on special initiatives, operations research, and higher-level analysis. Finally, it must also be recognized that in some states with particularly well-developed M&E systems, it is the public-sector personnel who have the stronger M&E skills in comparison to their WHO counterparts.

Yet, despite all of this developing capacity, the process for skills transfer and skills building remains informal and unstructured for both WHO consultants and public-sector employees. Though there have been previous M&E trainings, such as the "Managing Information for Action (MIFA)" courses, there has been insufficient follow-up and refresher trainings to further strengthen these acquired skills. Indeed, in the states visited by the team, there was no observed formal and continuous program for strengthening M&E skills in terms of training or mentoring. The whole process was conducted on-the-job, leaving little time for reflection or long-term planning for sustainable M&E capacity building. In fact, M&E as a discipline has apparently been ignored and relegated to a supporting function within other TB technical areas and efforts. This should cease; M&E must be recognized as a specific technical skill area requiring both initial and refresher trainings.

Regardless of these challenges, the data generated is being utilized for decision-making. At the district and state levels, there are numerous examples, including the tracking and analysis of trends in case detection and rates and their correlation with accessibility, and equipment status and its impact on indicators. Likewise, at the central level, generated data and subsequent reports are utilized, though primarily for providing feedback to states on their progress. Further, it must be acknowledged that at the central level it is mainly WHO that drives the M&E process, primarily because of a lack of capacity within CTD.

### Additional Recommendations

1. WHO needs to hire its own *senior-level M&E specialist* within its Delhi headquarters and ensure that the CTD has someone (either a public-sector employee or WHO consultant) with sufficient M&E skills to act as a focal point. Once in place, they can then begin to strengthen the M&E skills of CTD staff

such that the routine reporting, recording, monitoring, and evaluation functions increasingly are managed by CTD staff. WHO consultant support can thus be gradually phased out in this area.

2. **WHO** headquarters, in conjunction with its state-based consultants and state-level M&E counterparts, needs to develop a **formal skills transfer mechanism**, including a work plan with specific activities, a timeline with milestones, and supporting instructive activities. While it is recognized that there may be a turnover of staff within the public sector, by developing the supporting documents (including SOPs, M&E Plans, and DQA guidelines) M&E skills will instead be institutionalized rather than residing solely within individuals.
3. **WHO's consultants**, likewise, need **additional training** if they are to assume higher-level M&E functions. While many of the consultants adequately manage these additional responsibilities, there will, in the near future, be a point where the cohort of WHO consultants performing higher-level functions will be sufficient and the demand for higher-level skills great enough such that formalized trainings and a training schedule will be needed.
4. **WHO** needs to initiate **national-level workshops** and other forums in which TB M&E is treated as its own specialized technical discipline. These forums would not only allow training for multiple stakeholders at all levels, but would allow also sharing of best practices, innovations, and lessons learned. WHO and CTD may also consider allowing both WHO consultants and public sector employees in one state to participate in the periodic site reviews of other states.

## OUTCOME AND RESULTS

### Findings About the Project's Achievements and Consequences, Conclusions and Activity-Specific Recommendations

The objective of WHO's support is to provide technical assistance (TA) to RNTCP via the following:

- Strengthening the **Laboratory network** for mycobacterial culture, Drug Susceptibility Testing (DST) and introduction of line probe assay (LPA)
- Strengthening the involvement in RNTCP of **private health care providers**, focusing on medical colleges and professional medical societies
- Supporting **collaborative research activities** with the TRC on epidemiological impact assessment, drug resistant TB and HIV-associated TB
- Technical support to all RNTCP activities, via the RNTCP **consultant network**<sup>6</sup>

#### Strengthen the Laboratory Network

The expansion phase of the DOTS program in India has focused, until 2006, on geographic coverage, including the establishment of microscopy services for TB diagnosis at a decentralized level. However, progress toward the elimination of tuberculosis has remained elusive so far, despite intensified implementation of the DOTS strategy. This

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<sup>6</sup> This network was originally called, "WHO consultants' network." Today, some of the CTD consultants are still "WHO consultants" in the true sense of the concept, while all the others are "RNTCP consultants." At any event, both groups carry out the same tasks. To avoid confusion throughout this report we prefer to call them "WHO consultants" and not "RNTCP consultants."



sub-optimal performance is partly the result of insufficient access to advanced diagnostic tests.<sup>7</sup> Indeed, for decades little effort has been made to improve techniques for diagnosing tuberculosis; consequently, tuberculosis tests are antiquated and inadequate.<sup>8</sup> Fortunately, there has been a recent, unprecedented level of interest, funding support, and focus on the development of new and improved diagnostics such as the nucleic-acid-amplification test (NAAT), of which WHO has endorsed widespread use.

The expanded role of laboratories involves the use of more advanced techniques and requires building critical laboratory capacity. USAID/India has provided technical assistance to TB-control efforts via WHO to strengthen the laboratory network for mycobacterial culture, and DST has introduced LPAs and prepared field testing of NAAT.<sup>9</sup> The latter test may allow a relatively unskilled health care worker to diagnose tuberculosis and detect resistance to a key anti-TB drug within ninety minutes.

## Findings

Additional laboratory specialists—such as an international laboratory focal point based at WHO/SEARO with seventy percent of work-time allocated for India-related activities—have been in place since February 2009, in order to provide in-country assistance in strengthening laboratory capacity for quality assurance, culture, and DST, and in further expanding laboratory services for the rapidly-expanding MDR-TB treatment program.

The national plan for scale-up of the RNTCP laboratory capacity to perform culture and DST was developed in 2009. Laboratory-related technical guidelines for culture and DST were developed and updated, and were revised by CTD in August 2010.

WHO Supranational Reference Laboratory (SNRL) staff undertakes frequent field visits to the state-level laboratories in order to supervise, monitor and provide technical assistance to the NRLs. The proposition in FY 2010 that an international laboratory expert from a WHO SNRL should undertake two assignments to India under USAID support did materialize; indeed, external assistance for SLDST capacity building came from Ms. Dorris Hillmann of the Borstel laboratory, who provided TA to TRC and NTI during two separate visits in 2009. Afterwards, another visit from a European microbiologist was felt to be no longer necessary because WHO preferred to send NRL staff to TRC for Second-line DST testing, with the consequence that, at present, all NRLs are trained and accredited for SLDST.

By mid-2010, two additional NRLs<sup>10</sup> had been established for DST testing in NTI and LRS. These NRLs are of the “stand-alone” type, implying that they are rather small, have limited staff and service support, and can barely share services such as support staff, equipment and supplies—nor do they have a sufficient critical mass of laboratory peers who can share technical expertise.

As per the recommendation of the Joint Monitoring Mission (JMM) 2009, establishing a national laboratory task force to accelerate the process of accreditation of culture & drugs susceptibility testing (C&DST) labs across the country has become a priority. This task force is to be based at the National TB Institute, Bangalore—one of the RNTCP national reference laboratories. Key activities will include laboratory design consultation, bio-safety design and assessment of compliance, and training of laboratory staff, as well as on-site mentoring through the accreditation process. This task force was to be in place by June 2010, but this has not materialized due to administrative issues related to the use of

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<sup>7</sup> Wallis, R., M. Pai, D. Mennes, et al. “Biomarkers and Diagnostics for Tuberculosis: Progress, Needs and Translation Into Practice,” *The Lancet*, 2010; 375: 1920-1933.

<sup>8</sup> Small, P. M., M. Pai. “Tuberculosis Diagnosis—Time for a Game Change,” *NEJM*, 2010; 363: 1070–71.

<sup>9</sup> This is very important, because quality-assured culture and drug-susceptibility testing at the state level will also be a prerequisite for the future availability of treatment of MDR/TB.

<sup>10</sup> The four NRLs are TRC, NTI, LRS and JALMA Institute, Agra. They work closely with the IRLs, monitor and supervise the IRLs’ activities, and undertake periodic training for the IRL staff in EQA, culture, and DST activities.

funds by WHO and insufficient technical manpower at WHO/India office. This review examined how this delay is affecting the lab strengthening effort. Operationally, WHO managed to achieve the national goals of laboratory accreditation through greater involvement of NRLs, including standardization of training across both key training sites; through TA from Dr. Ranjani (the international laboratory focal point based at WHO/SEARO) directly to IRLs; TA from WHO-RNTCP medical consultants in the field to overcome some of the implementation issues; TA from FIND, including detailed standardized lab assessments, upgrading of facilities, and development of LPA; and also through support from PATH for minor upgrading in a few labs. Because of these joint measures, the handicap imposed by the delay in setting up the lab task force was overcome; RNTCP achieved its targets for laboratory accreditation. In fact, as of June 2011 there will be twenty-seven accredited labs (eighteen government, nine other sector), including ten accredited for LPA and following informed WHO authorities. CTD expects to be on target for the national lab scale-up plan.

The protocol for the field evaluation and demonstration of NAAT has been developed; the large-scale field testing was planned to be initiated by the end of 2010. However, nothing had happened at the time of this review. According to high-level WHO authorities, this delay is due to (1) the lab committee's lateness in granting national approval for the project (in February 2011), which was required to move the project,<sup>11</sup> and (2) the lack of senior technical manpower at WHO/India office. The field evaluation at eighteen sub-district level settings will be ready for implementation from mid-2011 onwards.<sup>12</sup>

## Conclusions

Although it is virtually impossible to assess the efficiency of USAID support to lab strengthening through direct or indirect economic indicators, this exhaustive review allows the evaluation team to declare that the financial support has been spent in a very effective way with respect to time and cost. With respect to time, important progress has been made in the period reviewed. With respect to the amount of money spent on the various supported activities, especially with respect to the development of the national plan to scale-up the RNTCP lab capacity, and the technical assistance, the progress has been considerable although the money spent was minimal and even some of the allotted money will only be spent now.

The choice of the intermediaries for support, such as the focal points in CTD, SEARO, support to TRC, etc., seems to have been a very judicious one for a number of reasons—a major one being that these intermediaries fall under the leadership umbrella of either CTD or WHO.

According to the available literature,<sup>13</sup> NAAT has high specificity and positive predictive value, but policy development requires that this new tool be field tested before it can be implemented broadly in real-world situations in India. The planned field trials will be of utmost importance. One laboratory focal point in the CTD does not seem to be sufficient for the multitude of tasks to be carried out, and may cause a delay in establishing the remaining IRLs.

The question about the overall relevance of the USAID support to lab strengthening of RNTCP is difficult to answer if one looks only at isolated supported activities. On the contrary, one has to look at the broader picture of total support to lab strengthening, of which USAID support is only one component. This global picture allows the evaluators to confirm that RNTCP has significantly strengthened lab support to the program.

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<sup>11</sup> It seems that there was some reluctance on the part of the NRLs to use an untried technology.

<sup>12</sup> This delay has allowed a substantial refinement in the field testing plan, including expansion of the sites through cost-sharing with Bill and Melinda Gates Foundation and other partners using the same protocol.

<sup>13</sup> Pai, M., J. Minion, K. Steingart, A. Ramsay. "New and Improved Diagnostics: Evidence, Policy, Practice and Impact," *Curr Opin Pulm Med*, 2010; 16: 271–284.

## Core Recommendations

1. USAID support for the expertise at SEARO and CTD should be prolonged and may be increased, so as to allow the creation of a functional, national laboratory task force to support the process of accreditation of C&DST.
2. USAID should allow WHO to spend the remaining allocated sum, within the agreed-upon lab strengthening framework, on the other key lab activity—the gene-expert demonstration—because there is budget inflation due to cost escalations relative to original projections.

## Additional Recommendations

1. USAID should support the building up of strong laboratory leadership and technical staff through funding of advanced training and regular exposure to international experiences in high-level laboratories.
2. USAID is encouraged to support financially the enrollment of private laboratories in EQA programs and their networking with the IRLs and NRLs.

## **Support of Operational Research (OR) through TRC**

USAID's support to TB OR through WHO technical assistance can be considered a major success; there are numerous examples of how the results of the OR have impacted lives in India, either directly or indirectly. For example, it was USAID-funded OR which led to a reduction in the number of samples needed for diagnosis, leading to increased lab efficiencies and, thus, providing labs the opportunity to diagnose more TB suspects. This led then to more persons initiating treatment and, therefore, better treatment outcomes (the greater the number and the earlier patients initiate treatment, the more likely the chances of increased numbers of patients successfully treated). Likewise, the OR done on infection control policies can potentially reduce nosocomial (facility-acquired) TB transmission in hospital and lab staff as well as patients, thereby reducing the number of new TB cases. Other examples of USAID-supported OR's influence on policies, protocols and practices include:

- Optimizing Public-Private partnerships
- Setting standards for External Quality Assurance
- Conducting prevalence studies
- Providing guidance on TB/HIV policies
- Revising the reporting and recording system
- Guiding implementation of community-based DOTS
- Examining why patients default from treatment
- Establishing policies for the introduction of rapid diagnostics

These are just a few of the examples of a research agenda that is relevant, expanding, and utilized by international experts. It should be noted that initially, TRC's OR focused solely on the clinical aspects of TB, but during the last decade has increasingly moved into areas such as socio-behavioral characteristics, economic impacts, and cost-benefit analysis. It can no longer be considered a Model DOTS project, as originally named under USAID support, and must change its name to reflect this expanded role.

The current structure for USAID's funded TB OR begins with funds given to WHO, which then supports TRC to conduct the actual research. This is not to say that WHO has a minimal role; indeed, its role is quite substantial. WHO provides strategic support to TRC and the OR agenda in general by: (1) organizing instructive workshops (for example, on how to write and submit proposals for international support) and coordination workshops (annual OR

agenda setting meetings); (2) screening and reviewing TRC's proposals; (3) mentoring and providing technical assistance to TRC on cutting-edge methodologies; (4) facilitating the OR collaborative process with medical colleges and other institutions through its WHO Consultants Network; and (5) providing forums, within which results can be analyzed, interpreted, and disseminated.

Despite all of these successes, TRC is currently at a crossroads that could determine if it will continue to achieve similar results and successes as previously. It faces a number of challenges it must address—some critical—to ensure the successful future implementation of the OR agenda. These include: (1) resolving staffing issues; (2) determining its future role in OR, both in India and internationally; (3) remedying a lack of collaborating partners in India; (4) shoring up weak coordination of research centers in India; (5) ensuring that its research designs and methodologies remain up-to-date; and (6) facing possible cash flow and cash management issues.

Most critical of all of TRC's present challenges is staffing. For the past several years, TRC has been understaffed and a large cohort of senior managers, researchers and scientists will be retiring shortly. Few of the mid-level staff can replace them; instead, previous retirees are brought back to TRC on short-term contracts to continue providing senior-level guidance. Given these impending retirements, there will be a large loss of not only technical knowledge and expertise, but also of mentors for junior-level staff. The institution and its ability to conduct high quality OR potentially may suffer. While WHO and USAID are constrained in how much leverage can be brought to bear on the government of India's bureaucratic process, some attempt must be made to rectify this situation.

If these staffing and other issues can be resolved, then TRC will need to address its future role, both within India and internationally. Historically, most TB OR has been centered within TRC and other institutions, such as the National Tuberculosis Institute (NTI, Bangalore) and, more recently, the L. R. S. Institute of Tuberculosis and Respiratory Diseases, New Delhi (LRS). Recent challenges at NTI have reduced its OR role, and LRS only recently has become fully engaged in OR. However, there is a plethora of field-based research being done by other partners—such as PATH and the Union—which could provide a great variety of experiential data that TRC could analyze. Currently, almost all of TRC's OR is focused on one district within the state of Tamil Nadu which, because of its specific socioeconomic, demographic, and epidemiological characteristics, limits TRC's ability to generalize results. Given the large investments that have been made in TRC, this seems an opportune time for TRC to move into a mentoring function. In other words, it needs to position itself to assist fledgling TB research institutions and other partners within India, and help them develop their own OR capacity. Furthermore, TRC needs to start establishing itself as a true, international research institution. Currently, while it often collaborates with other international organizations, it is most often in the position of a junior partner in these efforts and/or provider of field data. This, in the long-term, is detrimental for TRC. USAID can support this process by ensuring in the short-term that TRC staff has adequate opportunities (and funding) to attend and participate in both state-of-the-art conferences and trainings, such that TRC's experiences are presented to global audiences and submitted to international peer review. Long-term, USAID can require that funded partners give TRC, as much as feasible, the technical lead and conduct periodic, external reviews of this process to guarantee that there is a true transfer of skills and promotion of TRC as a leading agency.

However, if TRC is to move into a more internationally renowned position, it must ensure that the quality of both its research and its underlying methods remains state-of-the-art. While TRC is producing reliable results, often its research uses epidemiological and other methods that are no longer the most current. Improvements in study design and advanced statistical methods now allow for quicker studies and smaller sample sizes (and subsequently, less expensive and of shorter duration), which nevertheless provide results of equal (or even higher) validity. TRC, with WHO in a mentoring and reviewer role, needs to update its efforts in these areas.

Finally, as mentioned previously in reviewing the WHO's management of the overall TB control efforts, there may be an issue with the flow of funds to TRC or within it. During the site visit to TRC, it was noted by several researchers that tranches of funds were at times delayed for long periods of time. Consequently, research that was underway had to be suspended or halted. These types of managerial delays can invalidate results and lead to greater overall costs. The WHO must investigate this issue immediately and identify suitable remedies.

## Core Recommendations

1. **WHO must increase its oversight role with regards to TRC, focusing especially on issues of staffing, cash management and cash flow, and improvement of research methodologies.** While it has been recognized previously that WHO and USAID exert limited influence on TRC's ability to hire people, both organizations working together can bring pressure on the government of India to move forward with the additional hires. Furthermore, in the process of recruitment WHO can play an important function in ensuring that potential candidates are of the highest caliber by participating in the screening and interview process. WHO must also work immediately with TRC to address its cash flow issues and prepare a brief report for USAID on the fundamental issues and how they will be resolved. Finally, in its ongoing role of mentor, WHO must review and then improve TRC's epidemiological methods through workshops, advanced seminars, distance learning, or another effective modality. All of these recommendations are, of course, predicated on WHO having sufficient staff (see WHO Management section).
2. Given current human resource constraints within WHO, **if WHO is unable to provide the increased oversight role, per Recommendation 1, USAID should either request that WHO, or itself directly, provide TRC with technical assistance in the areas of financial supervision, human resources development, and general management practices.** This can be achieved by either providing intermittent technical assistance (via a WHO partner or, perhaps, a pre-existing USAID management consulting partner) or by issuing a separate agreement to establish a partnership program with a similar organization that not only has the technical skills but, more importantly strong management practices.<sup>14</sup> WHO/India and USAID should explore the possibility of creating a broader forum of research institutes in India for conducting TB OR. These centers could then develop and carry out multi-center and multi-cluster research in the various ecological niches of the country. This approach might have a number of advantages, including: (1) creating a stronger expertise base; (2) reducing variance between geographical areas and, therefore, reducing needed sample sizes; (3) improving the ability to generalize the findings; and, (4) increasing national ownership of research results.

## Additional Recommendations

1. **WHO and TRC must collaborate** in developing a *long-term strategy* for TRC for its future function within India and internationally. This strategy must address how TRC will build its own capacity first, such that it can move into a mentoring role within India and then, finally, as a true international partner. In addition, it must identify which organizations it considers to be the most promising potential partners, with a specific focus on utilizing data and results from areas outside of Tamil Nadu.
2. **USAID, WHO, and TRC must rename the USAID-funded work to reflect its current agenda. *Model DOTS is no longer appropriate.***

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<sup>14</sup> For example, in Latvia the WHO Collaborating Centre for Research and Training in Management of MDR-TB first was partnered with CDC to develop its technical skills; once the skills had reached a high-level of proficiency, the center was then partnered with a university hospital (University of Arkansas for Medical Sciences) to focus on developing stronger management practices, including business, marketing, and research plans.

## Engage the Private Sector in TB Control

The private sector in India is vast and heterogeneous and remains the primary source of health care for the majority of households in both urban and rural areas. It is essential that all actors of the private sector become effectively engaged in TB control, especially now that RNTCP3 intends to provide universal access to TB care and decrease pre-treatment delay. The total pre-treatment delay consists of two components, patient delay and health system delay, and might last almost one year (between 23 to 321 days).<sup>15</sup> Long health system delays were observed when private providers were consulted first.<sup>16</sup>

The RNTCP has made several attempts so far to engage the private health sector in general and private practitioners in TB control in particular.<sup>17</sup> Vast numbers of private providers (PPs) across the different states are affiliated with the Indian Medical Association (IMA, see Annex 5) under the support of GFATM. Medical colleges with 289 hospitals are providing TB services. Presently, there are 2,500 NGOs and over 30,000 PPs involved in TB care. However, these impressive numbers comprise only a minuscule fraction of the large private sector in the country, and their precise contribution to TB control as yet is not fully known.

A study carried out two decades ago in Mumbai revealed the extent of inappropriate tuberculosis management practices among private practitioners<sup>18</sup> and stimulated national efforts to educate and engage the practitioners in TB control. A 1998 follow-up study<sup>19</sup> showed that the average patient generally did not take the drugs as prescribed by their doctors and the treatment completion rates were rather poor. A recent study carried out in the same area noted that, unfortunately, little seems to have changed over time.<sup>20</sup>

Although several pilot projects have demonstrated that PPM is feasible in TB control and that it has the proven potential to increase RNTCP performance, field observations made during this review mission have identified that up-scaling is constrained by a series of factors, including the following:

- Current system of supervision is unpalatable to PPs. RNTCP relies heavily on intense supervision to guarantee the quality of diagnostic and treatment practices. A special cadre has been created, called the senior treatment supervisor (STS) and the senior TB lab supervisor (STLS); both are non-doctors, and their supervision is not acceptable to PPs.
- Private sector apprehension related to financial viability, due to reported delays in payment of remunerations/incentives to physicians participating in PPM
- PPs remain reluctant to sign MoUs with the GoI, as is evidenced by the participation of an important number of PPs in PPM that have not signed an MoU
- Limited use by the PPs of the “special sputum collection and transportation centers” created by RNTCP
- PPs feel that the required recording and reporting of DOTS activities provide no additional value to their work
- PPs’ contributions to referrals are poorly documented
- Currently, various STOs or DTOs do not report private sector performance

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<sup>15</sup> Bawankule, S., Q. Zahiruddin, A. Gaidhane, N. Khatib. “Delay in DOTS in new pulmonary TB patient from rural area of Wardha district, India,” *Online Journal of Health and Allied Sciences*, 2010; 9 (1) : 1–7.

<sup>16</sup> Rajeswari R., V. Chandrasekaran, M. Suhadev, et al. “Factors Associated With Patient and Health System Delays in the Diagnosis of Tuberculosis in South India,” *IJTLD*, 2002; 6: 789-795.

<sup>17</sup> Central TB Division. “Directorate General of Health Services,” Ministry of Health and Family Welfare, 2008. Available at <<http://www.tbccindia.org>>.

<sup>18</sup> Uplekar, M. W., D. S. Shepard. “Treatment of Tuberculosis by Private General Practitioners in India,” *Tubercle*, 1991; 72: 294–290.

<sup>19</sup> Uplekar M., S. Juvejkar, S. Rangan, P. Nunn. “Tuberculosis Patients and Practitioners in Private Clinics in India,” *IJTLD* 1998; 2: 324-329;

<sup>20</sup> Udhwadia Z. F., L. M. Pinto, M. W. Uplekar. “Tuberculosis Management by Private Practitioners in Mumbai, India: Has Anything Changed in Two Decades?” *PLoS ONE* 2010; 5(8): e12023. doi:10.1371/journal.pone.0012023.

- It was observed that some constraints are the result of the attitude of the public sector itself, corroborating the findings reported by the JMM<sup>21</sup> 2009 mission:
  - Engagement of the private care providers does not seem to be a high priority
  - The available staff at all levels have little capacity to undertake PPM activities seriously
  - The state and district expenditures on PPM are very low
  - The name of the referring private provider is rarely recorded and feedback is seldom sent
  - Anti-TB drugs are widely available through private pharmacies without prescription.

Based on these observations, it might be concluded that the key conditions that underlie the potential success of PPM hinge upon the clear understanding and delineation of the roles, responsibilities and accountabilities of both public and private sector actors in a true spirit of partnership, equity, risk-sharing and transparency. An effective intervention package should therefore include the following provider-side components:<sup>22</sup>

- Improved referral and information system that uses simple, practical tools
- Adequate monitoring and supervision of the PPs
- Provision of free anti-TB drugs to patients treated in the private sector
- A strong commitment on the part of RNTCP to supporting, supervising and evaluating PPM projects
- Use of NGOs and/or medical associations as intermediaries

The WHO has supported the PPM initiative from its inception in 2003 in fourteen major Indian cities, and has adopted a systems approach for the phased scale-up of PPM activities that incorporates local mapping of all care providers in a systematic manner, prioritizes the providers most likely to contribute to TB case notification and treatment, agrees on the provider-specific task mix, establishes a surveillance system to measure the contribution of the different providers, and implements and evaluates the results.<sup>23</sup> WHO also contributes to PPM through its consultants' network. The consultants guide the PPM implementation to the extent of their capacity, and their efforts have contributed significantly to the growing success of PPM. However, many challenges and barriers remain.

### Recommendations

Given that PPM involvement in RNTCP3 will need to be much bigger and more intensive than in RNTCP2, those challenges have to be met,<sup>24</sup> and to do so, the following actions are recommended:

### Core recommendations

1. Efforts should be made to make the partnership with PPs mutually beneficial,<sup>25</sup> which requires exploring what a “win-win” situation would look like for the several groups of PPs.

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<sup>21</sup> Joint Monitoring Mission RNTCP, India; 15-28 April 2009. SEA–TB 321.

<sup>22</sup> Lönnroth, K., M. Uplekar, V. K. Arora, et al. “Public-Private Mix for DOTS Implementation: What Makes It Work?” Bull. WHO, 2004, 82: 580–586.

<sup>23</sup> Lal, S. S., S. Sahu, F. Wares, et al. “Intensified Scale-Up of Public-Private Mix: A Systems Approach to Tuberculosis Care and Control in India,” IJTL 2011; 15: 97–104.

<sup>24</sup> Bhatia, V. “Enhancing Private Sector Contribution to TB Care in India,” Jan 2010. GFATM, p. 24.

<sup>25</sup> Unfortunately, this review mission offered insufficient opportunity to hold extensive in-depth interviews and focus groups with representatives of the different types of private practitioners operating in the various geographical regions and socio-cultural networks of the country. These would have allowed us to explore what a “win-win” situation would look like for each of these groups, what monetary and non-monetary expectations they might have with respect to their active participation in PPM, how much time they would be willing to spend on PPM, the maximal administrative burden of reporting and quality control measures they would be willing to accept, and what the terms of an acceptable MoU would look like.

2. Via the consultants' network, WHO should indicate any special needs at the state and district levels for the transition from RNTCP2 to RNTCP3, and state what support the private sector could offer to bridge those gaps.
3. WHO and CTD should develop an effective system to supervise PPs who participate in PPM that is guided by a concern for continuous education and motivation, and is acceptable to the PPs. Action-research initiatives are needed to develop and optimize such a supervision system.
4. There is a need to adapt the current surveillance system so that it is able to capture data on referral practices by PPs at state level; and include the performance of PPs in TB control as an integral part of every quarterly report at district and state level;
5. USAID should continue and even increase its financial support to RNTCP via WHO, in order to allow CTD to successfully implement RNTCP3.

#### Additional recommendations

1. Organize specialized PPM training for the WHO consultants. Every state requires an approach customized to its resources and specific challenges.
2. WHO should provide TA to the STOs to map the private practitioners in all states, not only focusing on their number and localization, but also on their strengths and core competences.
3. WHO should support, financially or otherwise, local initiatives, because it has been shown that local initiatives are key to the success of PPM initiatives.
4. The IMA should continue its pilot project to find the best way for PPs to refer their clients. WHO has supported a pilot project on sputum collection and transport in Lucknow. This pilot should be continued and expanded to other states. Private labs should be developed as an alternative to public sector microcopy centers in order to serve PPs who remain reluctant to refer their patients to government centers.

#### **WHO Consultants' Network**

Many factors have contributed to the successful implementation of DOTS in India. One important factor has been the use of WHO-contracted local consultants to provide technical support at CTD, state and district levels.<sup>26</sup> Eighty-seven field-level consultants work closely with the district and state TB officers; an additional ten consultants provide technical support to the Central TB Division. This network of advisors, based on experiences gained from the polio eradication program in India, started in August 1999. In the beginning, it was sponsored by WHO and the Canadian International Development Agency (CIDA); once CIDA withdrew its support, USAID and DFID stepped in to guarantee continuity. DFID will withdraw its financial support to the network in December 2011.

After a decade of field experience, the consultants continue to serve an important role, linking state and district staffs with national and international guidelines and supporting good TB practice, while at the national level, consultants

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<sup>26</sup>Khatri, G. R., and T. Frieden. "Controlling Tuberculosis in India," NEJM 2002; 347: 1420–1425.



play a lead role in carrying out the mission and core functions of CTD. Given important differences in their ToRs, the state level consultants and the CTD level consultants are discussed separately below.

### State Level Consultants

#### *Findings*

At present there are eighty-seven consultants working at state level; some concentrate on basic DOTS implementation in a series of adjacent districts, while others focus more on specific themes.

- **Administrative dependence:** Prior to September 2008, WHO consultants, although never serving as actual WHO staff, served under the umbrella of, and were directly hired by, WHO. This association with WHO stimulated their performance, provided access to senior decision-making and also gave their recommendations authority and credibility. Since Sept 2008, the administrative hiring and management of the consultant network has been outsourced to a firm called Strategic Alliance (SAMS). This was the consequence of WHO-HQ's concern about the possible legal liability of engaging hundreds of public health professionals in India under a special scheme, called "SSA" employees.
- Presently, the WHO consultants are project-specific employees of SAMS, which is responsible for compliance with all statutory obligations with respect to provident fund (PF) and tax deduction at source (TDS); specifically, SAMS is responsible for leave, salary and benefits administration, payroll and claims processing, activity reporting, triangulation of claims, district visit monitoring, and technical and financial assurance review. SAMS also provides centralized travel management and arranges biannual meetings and conferences. However, WHO continues to provide day-to-day technical direction and guidance to the network.
- **Recruitment** is based on strict eligibility criteria (MBBS and field experience of one to two years, at least). Age does not seem to be a selection criterion. Short-listing happens through a series of consecutive interviews, leading to the decisive technical interview by experts from the office of the WHO-Representative (WHO-WR)/Delhi. Longer field experience and public health training are not selection criteria; however, both increase the chances of selection. This procedure has been maintained from the start of the network and has maintained its objectivity and transparency over time.
- **Profile:**<sup>27</sup> The current age of recent consultants is thirty-one; thirty-two for those that joined since August 2008, and thirty-six for those already employed in August 2008. Taking age as a proxy for experience, this suggests that the consultants have less professional expertise than previously. This is proven by their prior work experience, which decreased from seventy to fifty months. However, of the consultants who joined recently, more have postgraduate training in public health than the previous batch. Indeed, of the forty-two consultants who were in service in Sept 2008, eighty percent had postgraduate training in public health, while of those who have joined since Sept 2008, ninety-one percent earned a postgraduate degree. Becoming a WHO consultant seems to attract mainly males: as of Sept 2008, eighty-three percent of the consultants were males, and ninety-three percent of the new recruits are males.

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<sup>27</sup> The sole data available are those collected by SAMS; their earliest data available are those of the consultants taken over by SAMS when the management was outsourced in August 2008. If the data of age and experience, at the year of joining the network had been available, then the eventual shift in the age and experience profile would have been easy to determine through a cohort analysis.

- **Preparation for the job:** There is an initial induction training on technical and operational aspects of RNTCP, including how to carry out supportive supervision and provide adequate feedback; this inductive training also aims to enhance skills related to different aspects of management, use of computer data, data analysis and interpretation, writing and presentation skills. The training lasts three weeks, and is preceded or followed by a “shadowing” period in the state of employment (depending on the availability of a senior consultant); however the shadowing did not always occur, because some consultants were asked to start work immediately.

Observation in the field has shown that the short duration of “induction training” does not allow trainees to cover in-depth the whole spectrum of skills they need, and that several consultants have insufficient skills in the domain of evidence-based program management, finance and budget management, ACSM, PPM and/or OR.

- **ToRs:** Written ToRs existed from the start of the network. In the initial years, the ToRs were limited to core functions only; they became more elaborate afterwards and even included the concept of reporting of activities to the STO, which created a conflict of authority in some states. Reporting to the STO was removed again some years ago, and presently the ToRs are restricted to the components of the Stop TB strategy. At present, the ToRs are rather general in nature and broad in scope, allowing the individual consultants to put quite a lot of creativity into their implementation.
- **Job implementation:** The consultants are assigned to specific states, and work closely with state and district TB officers. At the launching of RNTCP in a given state, the consultants assisted in the preparation of the action plans and commencement of the DOTS services. Once the basic DOTS services had been implemented, the consultants then enhanced the capacity of the district health system for supervision, monitoring and evaluation. Presently, they assist in data management and electronic transmission of quarterly surveillance data to the national level, improve record keeping and monitor the consistency and accuracy of the quarterly cohort data, and support supervision, monitoring and evaluation of the DOTS implementation at district and state levels. They provide feedback on RNTCP performance to the national level.<sup>28</sup>

The job duties in the field generally follow the ToRs, although occasional deviations towards other tasks that routinely correspond to STC staff were reported by some consultants. Many STOs rely heavily upon those consultants and delegate various responsibilities to them; for example, some WHO consultants mentioned that they are heavily involved in routine supervision activity itself, rather than providing support to routine supervisors. Recently, some consultants tasked with providing thematic support to PPM, ACSM, OR, or HIV-TB programs.

The interviewed DDG, STOs and DTOs expressed full satisfaction with the high level of engagement of the WHO consultants in RNTCP and the quality and seriousness of their work. Without their involvement, RNTCP would not have reached the high level of performance it has now.

- **Relationship with state WHO consultants:** Apparently, there are few links between the CTD consultants and those working at state level.
- **Supervision & performance appraisal:** Various modalities have existed over time. In Dr. Tom Frieden’s era, there was very close supervision with personal visits and regular telephone contacts. Afterwards, the supervision became limited to the monthly report and the end-of-assignment report with regular feedback, the nature and frequency of which depended on the available WHO staff. In recent months, routine technical

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<sup>28</sup> Sahu, S. and L. S. Chauhan. “Role of the World Health Organisation in the Successful Implementation and Expansion of the DOTS Program in India.” In: Agarwal, S. P. and L.S. Chauhan. “Tuberculosis Control in India,” Elsevier, New Delhi, 2005: 187–190.

supervision seems to have become less regular, due to the fact that the position of National Program Officer (NPO) of WHO is not yet filled.

In AP and some other states, the consultants organize a monthly meeting that serves as an opportunity for peer review of their activities and also for updates on administrative and technical issues.

- **Job satisfaction:** The perceived level of job satisfaction appears to be high. Employment as a “WHO consultant” is felt to be conducive to professional development, personal growth under the technical guidance of high-level international WHO experts, and development of managerial and diplomatic skills.

The level of job satisfaction seems to be influenced by the umbrella of the “WHO” brand. The recent change of the title, from “WHO consultant” to “RNTCP consultant” seems to be a serious concern affecting perceived authority and credibility. It not only provokes uncertainty about their status and future, but has a negative impact on their level of job satisfaction, and could have a negative impact on job stability and retention. The decreased age at recruitment and the big turn over could be an indication of a diminishing of the job’s appeal.

- **Transfer of knowledge & skills to STC and DTC staff:** The obligation for such transfer is not part of their ToRs, and consequently there are no transfer targets, and no guidelines or benchmarks. However, the consultants are aware of the need to transfer their knowledge and skills to someone in the health system. Some spontaneously mentioned having the opportunity to transfer skills to the STO as well as the medical officer (MO) state TB cell; others refer to transfer of skills to selected staff from the state, such as trainers from the medical colleges, etc.
- **Career development:** Guidance or efforts towards professional development from the National WHO office were at some times sporadic or even non-existent. Until recently, little or no career development concerns were shown by the National WHO office, as mentioned by several interviewees. According to one interviewee, “No efforts were made for career or professional development or at least to provide guidance to the consultants. In spite of our requests, no steps were taken to provide link ups with international organizations or universities. Nor were there any career opportunities with TB programme above the level of consultant. Hence the interest would stagnate after a period of time.”

All interviewees agreed that they expect their employer to be attentive towards their individual career/personal development and to show that concern through granting personal development initiatives, such as allowing them to assist during professional meetings, encouraging and guiding them to publish their experience, etc.

- **Remuneration:** Until recently, the salary and other benefits were substantially higher than what they would have received as GoI staff, but the present lack of a competitive salary scale is reported to be a serious concern, which could jeopardize their sustainability on the job.

### *Conclusions*

- **Contribution to RNTCP performance:** This network has contributed significantly to RNTCP’s positive performance. It proved to be an element of stability and continuity within the context of a frequently-changing cadre at the state level; guaranteed the quality of program implementation; facilitated introduction of novel strategies; and allowed maximum adaptability of the new strategies to the realities on the ground. In those states where the conditions were suboptimal, the presence of WHO consultants has allowed a reasonable level of performance; in those states with excellent RNTCP performance, the WHO consultants provide TA, facilitate the training of district personnel, contribute to improving data quality, strengthen

evidence-based program management, and introduce novel methods and strategies. If the consultants would had not been there, the case finding and case holding targets would have been achieved at a much slower rate.

- **Role in supervision of RNTCP:** On-site supervision by specialized staff from outside the program (WHO consultants) has been—and still is—a pillar of RNTCP’s success. Although consultants in some states are involved in field supervision, routine engagement in field supervision is not part of their ToRs; they are supposed to give only support and TA to the supervisory cadre of the district (DTO, STS, STLS). This task is essential to maintaining the quality of the supervision and follow-up on the corrective actions taken.
- **Administrative cadre:** The recent change in title (from being “WHO consultant” to “RNTCP consultant”) is a crucial issue and has important implications for the performance, perceived authority, and credibility of the consultants. It may affect their performance, and even the global performance of RNTCP2, and certainly of RNTCP3.
- **Comparative advantage:** Most of the interviewees are of the opinion that the WHO consultants’ network has a definite impact on quality—especially in the areas of data management, training, and continued capacity building. Without the network, routine surveillance reports would have been less reliable. The urgency behind and motivation for pushing the program forward and ensuring its success would have been substantially weaker without these consultants. RNTCP performance in various districts certainly would have been much lower if the consultants had not been there. DOTS Plus program implementation definitely would have been hindered if the consultants had not provided critical support.

Historical data have shown that preparatory activities for DOTS implementation was fifty percent faster in districts that were supported by a WHO consultant than in those districts that lacked such support.<sup>29</sup>

- **Value for money:** The financial investment in this network is low and the routine expenses are limited. However, the cost-benefits for the program are tremendous. Although this evaluation did not receive exact financial data to calculate cost-benefit ratios, and to estimate the number of TB deaths averted through the involvement of the WHO consultants and the number of secondary cases avoided, it can be asserted that the cost-benefit ratio is very high and is probably one of the areas with the highest return for money invested.
  - Where states suffer from poor and/or unstable administration, the WHO consultants guarantee stability and quality in RNTCP implementation.
  - In states with good STC management, the consultants are still quite important, because they provide technical assistance, assist the DTOs to function correctly, facilitate training, play an important part in guaranteeing the quality of routine surveillance data, contribute to advanced analysis of those data, and introduce novel strategies (such as 2/2<sup>30</sup>).
  - At the national level, WHO consultants have an important task in helping to develop new strategies and adjusting guidelines to field realities.
- **Exit Strategy:** Providing external support to RNTCP for more than ten years raises questions about its rationale and sustainability. Stationing eighty-seven WHO consultants at state level has to end some day, but the key questions are when, and how? Various withdrawal options are possible:
  1. Sudden withdrawal: Analysis of the field situation in various states has shown that RNTCP is not ready for a sudden and definitive withdrawal of the network; this would negatively affect the performance of

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<sup>29</sup> Khatri, G. R. and T. Frieden. “Controlling Tuberculosis in India,” NEJM, 2002; 347: 1420–1425.

<sup>30</sup> This policy refers to the reduction of the screening duration of cough from three weeks to two weeks, and the reduction of the number of direct sputum examinations for diagnostic purposes from three to two (thus previously the “3/3 policy” was adhered to and presently it is the “2/2 policy”).

RNTCP, given the enormous challenges that are likely to be presented by RNTCP3 conceptualization and implementation.

2. Gradual withdrawal: Any withdrawal has to be gradual; this means that the number of the consultants in each state has to decrease gradually, as the given state prepares to take over the consultants' functions. At present, a gradual withdrawal has already taken place in states, like Kerala,<sup>31</sup> but this withdrawal took place in the context of RNTCP2, which is less complex than RNTCP3. Although this option looks appealing, it implies that the total mass of RNTCP expertise risks a decrease; the timing of such a decrease is very unfortunate, since the launch of RNTCP3 will create more demand for high-level creative thinking and piloting novel schemes.
3. Several other exit strategies could be imaged, such incorporating the WHO consultants into the STC structure, or into the state level administration, or redesigning their location, or keeping a minimal pool of state-level consultants attached to either WHO alone, or to a consortium of donors. Details are given in the footnote.<sup>32</sup>

### *Recommendations*

- **Future directions until 2017:** Although the RNTCP should become rapidly self-sufficient with respect to RNTCP2 implementation of “basic DOTS,” the WHO consultants’ network at state level should continue, at least until the end of the launching of RNTCP3 in 2017.

Additionally, an increase in the number of consultants should be considered in order to:

- Assist RNTCP in solving the problem of the ninety-seven underperforming districts
- Initiate RNTCP3, focusing especially on ensuring universal coverage, contact tracing, decrease of treatment delay, and involvement of private practitioners
- Optimize evidence-based program management
- Reinforce the MDR/DOTS Plus implementation

The evaluation team recommends that USAID continues to support the WHO consultants’ network, and should consider taking over the total cost once DFID has withdrawn its support after Dec 2011.

- **Future directions beyond 2017:** A reduction of the number of consultants might be considered after 2017; however, the withdrawal of the WHO consultants’ network should be gradual and its intensity dictated by the level of RNTCP performance at state level.

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<sup>31</sup> In 2006 there were four WHO consultants In Kerala; today there is only one, but the Basic DOTS implementation indicators remain good.

<sup>32</sup> The option of incorporating the consultants into the TB control program of the state, to which they are presently attached, makes them administratively dependent on the State TB control officer (STO). Their salary will be paid by GoI. This option would maintain the indispensable expertise at state level, but make the consultants subject to the administrative rules and habits that are prevalent in the GoI sphere. Various comparative advantages of the present system risk getting lost.

A second option would relocate the consultants at zonal or even national level, and make them administratively no longer dependent from the State TB program but from the central level TB control program (CTD). Their salary would be paid by GoI. In this scheme, seniority and expertise could be leveled up, producing better career development perspectives. However, some comparative advantages of the present system risk also getting lost.

A third option would keep them at state level, but attach them to the higher-level administration. Their salary would be paid by GoI. This option would maintain the expertise at state level, increase the pool of technical knowledge, and facilitate decentralization of the RNTCP, but make the consultants subject to the administrative rules and habits that are prevalent in the GoI sphere.

A fourth option would maintain a reduced number of state-level consultants attached to either WHO alone, or to a consortium of international donors. Their location could be zonal or national. Their contract should reflect this special dependence and be attractive financially and career development-wise. This alternative suffers from the lack of long-term sustainability, but could give the necessary high-level support to RNTCP3. The latter will create enormous demands for the leadership of RNTCP, and needs very high level expertise, especially because there is no model yet for the conceptualization or implementation of RNTCP3.

In order to increase the sustainability of RNTCP3 after 2017, a concrete plan to institutionalize the transfer of knowledge and skills should be developed by WHO, CTD and the STOs; this plan should contain defined areas, such as data and program management, implementation practices, drug supply, capacity building, etc.,<sup>33</sup> and precise benchmarks for each of the states. Most consultants interviewed are in favor of a gradual handing over of tasks to state-level authorities, after due theoretical and practical training. Once such a cadre has been trained, the consultants should then become engaged in new tasks, in line with the priorities decided by CTD.

The responsibility for the remaining WHO consultants is an important question to be considered by the next Joint Monitoring Mission in 2012.

- **Modalities of WHO consultants' involvement in RNTCP3:**

1. The TA to RNTCP3 implementation will require a very solid level of expertise in disease and program management, which implies that major efforts should be undertaken to retain experienced consultants. Measures such as restoring the WHO umbrella and creating optimal working conditions are very much encouraged.
2. The present diversification of their role in support to districts and thematic support should be maintained.
3. Relocation of the consultants towards the STC headquarters could be considered, as it allows easier exchange of experiences and peer review of personal performance.
4. To optimize these very valuable resources, consider extending coverage area to include adjacent states (or assign consultants “zonal coverage”).
5. The line of command should remain national, but the reporting-information flow towards the STOs should be reinforced.
6. More emphasis should be put on building consultant capacity, especially in financial management, OR, advocacy, PPM, MDR/EDR management and evidence-based program management.
7. Strengthen supportive supervision of the network, accompanied by detailed feedback.
8. Strengthen the M&E of the network.
9. Necessary attention should be given to the career development of the individual consultants. The possibility of moving into CTD-level WHO consultancy positions should be promoted, but this should happen solely on merit.
10. The creation of a mid-level career structure for the WHO consultants could take care of some of these career-development concerns, and also could partially solve the problem of the decreasing age of the newly-selected consultants, as each senior consultant could coach one or more of the junior consultants.

- **Focus of RNTCP3:** For RNTCP3 to be successful, it needs a broader focus than RNTCP2, as one consultant mentioned: “RNTCP has had a very focused and limited approach, but it can only be successful when the primary health care system is fully functional. Unless the focus broadens, limiting activities to only TB, out of the range of services which the PHC would provide, would limit its success.” WHO consultants therefore need to broaden their focus from a purely “vertical disease approach” to a fully integrated and horizontal approach.

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<sup>33</sup> All areas related to the STOP TB Strategy

## CTD-Level Consultants

### *Findings*

At present there are ten WHO consultants working at the Central TB Division (CTD). They are only engaged in thematic domains, such as ACSM, HR, PPM, M&E, etc.

- **Recruitment:** The procedure to recruit and hire consultants remains objective and transparent. There is an initial call for candidates through various means. Those who respond to the selection criteria are short-listed; further short-listing occurs through phone interviews, followed by technical interviews with CTD-WHO staff. No evidence was found to support rumors that recruitment has become less stringent than in the past.
- **Administrative dependence:** Prior to September 2008, WHO consultants, although never serving as actual WHO staff, operated under the umbrella of the WHO and were directly hired by the WHO office. This association with WHO facilitated their performance by providing access to senior decision-making and gave their recommendations in the field both an authority and credibility. Today, only half the CTD consultants are still engaged by WHO, although recently some were selected and are administratively managed through a firm called “Strategic Alliance” This fundamental difference in administrative designation is a source of frustration for the “unlucky ones” who are not employed under the auspices of WHO.
- **ToRs and the daily work:** The ToRs are very succinct. The distribution of daily activities is not driven primarily by the ToRs, but by day-to-day requirements.
- **Focus of the work:** thematic.
- **Job security:** Their contracts are short term (only months instead of years), and some are uncertain that their contract will be extended. This creates extra stress, of course.
- **Work culture:** The consultants feel the pressure to work long hours (sixty to seventy hours per week), remaining on the spot until the boss leaves, and they rarely take their full amount of leave days.
- **Supervision of CTD consultants:** The consultants report to the DDG on a day-to-day basis, and are supervised by the CMO, to whom the CTD consultant is attached. Presently, there is no regular supervision by WHO, due to absence of a NPO.
- **Performance appraisal:** Carried out by the NPO (or his replacement) on a day-to-day basis, but no formal professional assessment occurs, and consequently there is no possibility to obtain reward for excellent professional achievement.
- **Job satisfaction:** is very high, due to the feeling they have of serving a higher-level purpose.
- **Remuneration:** There is a feeling of being underpaid for the level of expertise that is expected from them.
- **Accountability:** All WHO consultants expressed their feeling that they are held accountable for the technical assistance they provide.
- **Career development concerns:** The contract does not contain any capacity-building option. There is no “employer-employee” relationship; no professional growth opportunities are provided, nor is there an opportunity for advanced training in a chosen thematic area. The interviewees gave several practical examples

of situations in which the consultant had to take personal leave to attend a conference at which their accepted paper was to be presented. There is no opportunity for exposure to WHO experience, neither at regional nor global levels. There is also limited opportunity to publish professional experiences.

### *Conclusions*

- **Contribution to RNTCP performance:** This network of CTD consultants significantly contributes to the RNTCP's positive performance. The evaluation team received the impression that CTD consultants are employed more as specialized staff of CTD, and less as consultants. The thin line between employment in routine activities or as technical advisor to the technical staff of CTD seems to have been blurred in more than one instance.
- **Administrative cadre:** The dual administrative cadre creates frustration and could affect the smooth working relationship between the various members of the CTD consultants' network
- **Comparative advantage:** DOTS Plus program conceptualization, planning and monitoring certainly would have been hindered if the consultants had not provided critical support to the CTD.
- **Value for money:** The same comments can be made here as for the state WHO consultants: "The financial investment in this network is very low and the routine expenses are limited. However, the cost-benefits for the program are tremendous." Even without entering into economical return calculations, it can be asserted that the cost-benefit ratio is certainly very high and is probably one of the areas with the highest return for money invested.
- **Exit strategy:** Providing external support to RNTCP for over ten years raises questions about its rationale and sustainability. Stationing ten WHO consultants at CTD level has to end some day, but the key questions are when, and how? Various withdrawal strategies are possible:
  - Sudden withdrawal: In-depth interviews with CTD consultants and with CTD & WHO authorities have revealed that RNTCP is not ready for a sudden and definitive withdrawal of the entire CTD consultants network, for the same reason as the state-level consultants, namely, that such brisk withdrawal will have a huge, negative impact on RNTCP performance, especially given the enormous challenges likely to be presented by RNTCP3 conceptualization and implementation.
  - Another alternative is to incorporate them administratively in the CTD staff, but this implies that the label of "WHO consultant" will disappear, and the attractiveness of the job could seriously decrease.
  - A third alternative would be to create a GoI and donor consortium, in which the GoI bears the financial expenses (basic salary, etc.) of the CTD consultants network, and WHO, and/or eventually other international organizations, retain the technical mentoring of their activities. The consultants should receive career development stimuli, such as a better financial package, increased exposure to international events, and be allowed to bear a title which reflects their special status in the CTD and their affiliation with WHO/other international organizations.

### *Recommendations*

- **Further support until 2017:** It is strongly suggested that USAID/India continue to support the CTD consultants network until 2017. USAID/India should insist that the concerns which have been raised in this report be taken care of and request a phasing-out plan, with concrete benchmarks, for taking over the responsibilities that belongs to the GoI cadre by the CTD staff.



- **Further support beyond 2017:** A GOI-donor consortium should be created to discuss modalities for further support.
- **Contract duration:** Given the great challenges to be faced when launching RNTCP3, job security until the end of the launching period in 2017 is highly advisable. If a contract of five years' duration administratively is not feasible, then a renewable, two-year contract should be considered.
- **Supervision and mentoring:** More time should be spent in mentoring and supervising the individual consultants. However, given that the NPO position remains unfilled; this is virtually impossible. In practice, it is urgent that the WHO fills the open NPO position.
- **Performance appraisal:** Appraisals should be structured along the same lines as the classic, HR-management techniques used. A positive evaluation should create opportunities for professional growth.
- **Remuneration:** Has to become competitive in order to retain the most valuable experts for longer periods on the job.
- **Career development opportunities:** WHO should change its attitude in this domain, from one of neglect to a more proactive approach. In practice, WHO should keep a record of its consultants' career development expectations and should match those expectations with upcoming opportunities in the fields of capacity building, international meetings, exchange of experience in international meetings, etc.

### ***A Case Study: WHO consultants' involvement in poorly performing districts***

#### Background

In 2010, CTD made the important policy decision to move from its current program performance objective, to detect at least seventy percent of new smear sputum cases (NSP) to universal access for TB control.<sup>34</sup> The new initiative, known as RNTCP3, intends to provide universal access to timely and quality diagnosis and adequate treatment for all TB patients in the community, including vulnerable and marginalized people. The intermediate target is to detect ninety percent of all TB cases and successfully treat ninety percent of them by 2015. RNTCP3 implementation will begin in 2012. This strategy is based on the global consensus that the prior objectives, of seventy percent case detection and eighty-five percent, treatment success are insufficient to achieve adequate reduction of the disease burden and do not produce an epidemiological impact on TB.<sup>35</sup> In order to achieve these new program objectives, district and sub-district health programs, the front-line service providers for TB care, must provide high-quality services.

#### Study Aims

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<sup>34</sup> The indirect indicator to measure "universal access to care" is the NSP detection target of at least ninety percent.

<sup>35</sup> A TB-control program has an epidemiological impact if the incidence of new cases decreases significantly, and if it is proven that the decrease is attributable to the proper functioning of that-TB control program

To analyze the factors that are associated with the difference in RNTCP2 performance in “high” and “low” performing<sup>36</sup> districts, to determine what role the WHO consultants presently play in those districts, and what role they are might play in both types of districts in the context of RNTCP3.

### Study Area

A case study was conducted in four districts of Eastern Uttar Pradesh. These districts were chosen based upon their previous history of lower RNTCP performance than districts in Western UP. Eastern UP generally is considered to be of a lesser socio-economic status and also less developed. Specifically, two districts with sub-optimal performance (Varanasi and Chandauli districts) and two higher performing districts (Kaushambi and Sant Ravidas Districts) were selected purposively. Chandauli district is adjacent to the state of Bihar, one of the poorest and weakest performing states in India.



Map 1: Districts selected for the review

<sup>36</sup> The distinction is based upon performance in case detection and cure-rate targets: “poorly performing districts” did not hit those targets in the last two years.

Figure 1 shows the very low TB-suspects examination rate in Chandauli district; the rates continued to decrease in recent quarters, while rates were quasi-stable and reached approximately identical levels in the other districts.

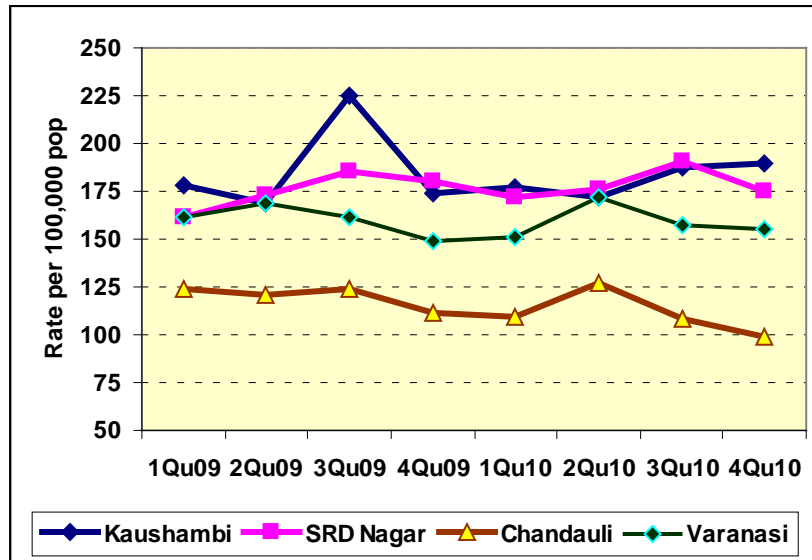


Figure 1: Quarterly TB suspects' examination rate by district, UP, 2009-10

Figure 2 shows a low case-notification rate in Chandauli and Varanasi districts, with a very steep decline in recent quarters. These graphs show a low performance in both districts, with a recent, decreasing trend; the decrease in SRD Nagar district was less pronounced, while there was an increasing trend in Kausambi district.

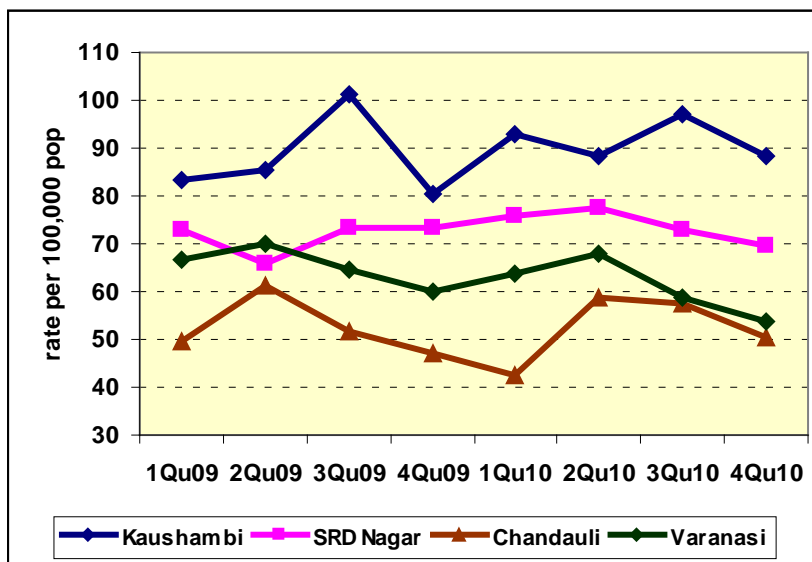


Figure 2: Quarterly Case notification rates of S+ cases by district, UP, 2009-10

## Methodology

*Study Design:* A cross-sectional study.

*Key personnel interviewed:* Health providers (DM, STO, DTO, MOTC, STS, STLS, LT), WHO consultants, TB patients and DOT providers.

*Data collection:* Initial desk review of the program data for the last two years was carried out on key program parameters, such as the number of chest symptomatics examined, number of smear positives detected, proportion of initial defaulters, treatment outcome of registered patients, and number of retreatment cases registered. Field visits were carried out in each of these four districts, and the following issues were verified: contact tracing in place, External Quality Assurance (EQA) in place, initiatives for community DOT, role of contractuels, involvement of private practitioners, involvement of medical colleges, ACSM practices, smear conversion rates, training activities, type of DOT providers used, and the involvement of NGOs.

In-depth interviews of key personnel, including the DTOs, CMOs and district collectors, were carried out in each of these four districts, focusing on issues such as political commitment, utilization of finance, staff positions and vacancies, training and the quality of training, the role of health staff in supportive supervision and feedback, and conducting periodic program reviews.

*Data analysis:* Indicators were compared between poorly-performing and well-performing districts. The contributions made by the WHO consultants was also compared between these two types of districts

## *Results*

The salient findings are detailed in Table 1.

<b>Determining factors</b>	<b>Varanasi</b>	<b>Chandauli</b>	<b>SRD Nagar</b>	<b>Kaushambi</b>
TB suspects examination rate	154	99	174	183
NSP notification rate	13	16	13	14
% of initial defaulters	9	6	0	0
Periodic program reviews	No	No	Yes	Yes
DMCs as per population norms	No	No	Yes	Yes
Staff positions filled	No	No	yes	yes
Staff trained	<no	No	yes	yes
Supportive supervision	Absent	Absent	Present	Present

Table 1: Determining factors of RNTCP performance in four districts of East Uttar Pradesh, 2010

The factors that contributed to poor performance at the district level were: vacancies in staff positions, a low number of designated microscopy centers (DMC) as per population norms, absence of commitment from MO-TCs, absence of refresher/re-training courses, lack of regular, supportive supervision and monitoring. Furthermore, there were fewer referrals from the Non-DMC PHIs, and the big hospitals; their NGOs/PPs were not involved in PPM. In

addition, factors such as lack of streamlining of finance-related issues and nonpayment of honoraria to DOTs providers contributed to low performance.<sup>37</sup>

WHO consultants play a significant role in well-performing and also poorly-performing districts. They are considered technical advisors to STO/DTO and update STOs/DTOs on recent developments of the program. Consultants provide continuity to the program, given the frequent transfers of DTOs. In addition to routine data analysis and monitoring of the program performance, they support routine activities like trainings, sensitizations, workshops and advocacy meetings; and they help DTOs in liaising with higher authorities.

In well-performing districts, the role of consultants was guided by “creative thinking;” in addition to routine activities, they had developed newer strategies for increasing case referrals by introducing referral slip mechanisms through DOTs workers and sensitization of select communities after Friday prayers.

In poorly performing-districts, they ensured the continuity of RNTCP implementation and prevented low performance from deteriorating further.

### Conclusions

Well-performing districts are characterized by stronger political commitment, better utilization of financing and facilities, filled staff positions, well-trained staff, regular practice of supportive supervision, abundance of DOT providers (coming from the public as well as from the private sector) and conducting periodic program reviews involving other government sectors. In contrast, poor performers lacked the above factors and consultants had to assume a part of the routine activities of DTOs.

WHO consultants play a significant role in district performance, especially in poorly performing districts. They serve an important stop-gap function, ensuring continuity of the program and preventing a worsening situation in poor districts. The overall impression after analyzing various district issues is that the consultants are an excellent investment and worth the money. Poorly performing districts are especially affected by vacancies of their DTO and lab technicians. Given the increasing challenge of RNTCP3 implementation, the districts with presently poor performance run the risk of further deterioration if RNTCP implementation is not supported by WHO consultants.

### Recommendations

The state governments should consider filling key staff vacancies, and training the new staff properly, to be of the utmost importance and urgency. DTOs should be provided with the necessary means for carrying out supportive supervision.

The evaluation team feels that USAID support for the WHO consultant network should continue in that area and even be increased, because they play an immense role in addressing the bottlenecks that prevent the smooth running of the program.

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<sup>37</sup> Data not shown, but can be provided if requested.

## V. GENERAL CONCLUSIONS AND RECOMMENDATIONS

The main approach to evaluating WHO support to RNTCP was of a qualitative and descriptive nature, focusing on the following key questions: (1) quality of technical expert support to RNTCP; (2) the level of achievement of the specific objectives of the various support activities, such as PPM, operational research, lab strengthening, and support of RNTCP through the WHO consultants network; and (3) value for money invested.

The evaluation recognizes the crucial role that WHO is playing in the implementation of RNTCP2. It is clearly evident that, without the heavy involvement of WHO, RNTCP would not have been able to reach the targets of universal coverage, seventy percent case detection, and eighty-five percent cure of NSP cases in such a short time and in so many states and districts.

The question of the “*value for money*” invested by USAID/India in WHO support to RNTCP can be asserted positively for all the domains that were reviewed. The role that the WHO consultants play at state level and also at CTD level is recognized by all interviewees as being of capital importance for the good performance of TB control in India. In those states and districts where the RNTCP performance is sub-optimal, the WHO consultant’s involvement prevents that performance from decreasing; and in states and districts where the case detection and cure rate targets are met, the consultants are a guarantee for the processes’ high quality and increased speed, and for creating the opportunity to launch original methods and approaches.

While WHO’s management of the USAID-funded TB project has been sufficient to deliver the results desired, it is now entering a new, critical phase. WHO/India’s headquarters are severely understaffed for the current levels of funding; with the initiation of RNTCP3 and the quintupling of the proposed resources, it is difficult to imagine that the office will continue to function efficiently at current staffing levels. Hiring additional well-qualified, senior-level staff with good managerial capabilities is therefore of utmost and urgent importance.

USAID’s support to TB OR through WHO technical assistance can be considered a major success, with significant impact on TB control policies, and has thus indirectly decreased the burden of TB in the country. USAID should explore ways to support the creation of a broader forum of research institutes in India for conducting TB operational research that focuses more on the multi-center and multi-cluster research in the various ecological niches of the country.

Although the question about the relevance of the USAID support to lab strengthening of RNTCP is difficult to answer if one looks at the supported activities in isolation, the broader picture of the total support to lab strengthening, of which USAID support is a component, is certainly very positive. That support therefore should continue; and the support for the expertise hired at SEARO and CTD should be prolonged, as it would allow for the creation of a functional national laboratory task force supporting the accreditation of C&DSTs.

Given that involvement of the private sector in RNTCP3 will have to be much greater than it is at present in RNTCP2, the funding of PPM activities has to continue and moreover should increase, covering all sections of the private care providers, in order to reach the goal of universal access to diagnosis and treatment and to decrease the treatment delay. Full-fledged involvement of the private sector in RNTCP3 is an absolute must, but this can only be reached if the PPs feel that participating in PPM results in a “win-win” situation for them. CTD must define the determining factors of such a “win-win” situation, in order to establish the necessary and acceptable administrative, financial, logistical and operational conditions to support PPM.

There have been relatively few opportunities for the WHO consultants and their counterparts to meet and discuss TB M&E as a discipline in and of itself. This needs to change. M&E at the CTD level has been driven primarily by WHO/India, as there is very limited epidemiological capacity within CTD. A combination of activities,

including WHO hiring sufficient M&E staff for its headquarters and then strengthening the M&E capacity of CTD, along with WHO institution of a more organized and formal M&E training program for both its consultants and their public sector counterparts, should ensure that progress continues in strengthening the TB M&E system.

The support to the WHO consultants network at the state and the CTD level should continue until the end of the RNTCP3 program launch. The evaluation team recommends continuing, and if possible increasing, the level of WHO funding—and especially of assuming full support of the WHO consultants network when DFID ends its financial support in 2011; however, guarantees should be given for the transfer of skills to homologues in the system, and benchmarks should be set up to effectively monitor this transfer.

## APPENDIX I: SCOPE OF WORK

Below is a framework of Evaluation Questions that was used through the course of data collection. This is a revision to the original Scope of Work, and was agreed upon between the Evaluation Team and USAID staff during the Team Planning Meeting in New Delhi in first week of field work.

Following the framework is the original Scope of Work, as was provided to Social Impact by USAID in the original Request for Task Order Proposals.

<b>Framework for Evaluation of USAID-funded TB Programs: WHO and PATH</b>	
<b>Core Evaluation Topics</b>	
<b>1. General administrative and management issues</b>	<b>Methods/ Info Sources</b>
<b>1.1. Rationale of decision-making for support</b> 1.1.1. What was the rationale for PATH to enter India as a technical assistance organization? 1.1.2. What was the rationale for the USAID buy-in of TO2 and TO15? 1.1.3. How were the various fields of assistance selected? 1.1.4. What strengths do PATH and WHO bring to India? 1.1.5. What are their main weaknesses, if any?	Key informant interviews; USAID documents
<b>1.2. Planning and implementation issues</b> 1.2.1. What is WHO's process for designing work plans? What evidence/information is used to plan proposals? 1.2.2. What is PATH's process for designing work plans? What evidence/information is used to plan proposals? 1.2.3. How has the funding mechanism (PATH=contract, WHO=grant) affected your organizations ability to implement the project? 1.2.4. How has USAID's funding on an annual basis impacted the ability of the programs to deliver results in the short-, medium-, and long-term? 1.2.5. How are proposed activities/interventions reviewed and approved by CTD, USAID, and WHO/PATH? 1.2.5.1.1. What is working well with this process? 1.2.5.1.2. What concerns do agencies have about the review process? 1.2.5.1.3. Should the process be improved; and if yes: how? 1.2.6. How does CTD/WHO coordinate planning with PATH? 1.2.7. Has the Mission reviewed or provided feedback on your work plans? 1.2.8. Who at USAID provides technical and administrative oversight? 1.2.8.1. How often does the program interact with this person(s)? 1.2.9. How other agencies are consulted when designing interventions? 1.2.10. How are the needs of states/districts and other organizations identified when developing program plans? 1.2.11. How would you change the annual planning process to ensure coordination between funder and implementing partners? 1.2.12. What recommendations do you have to improve the planning and implementation of PATH activities? 1.2.13. What are the primary bottlenecks for implementing PATH' portfolio in India? 1.2.14. Have these bottlenecks been overcome; if yes: how? 1.2.15. Have there been any USAID administrative delays? If so, what have these delays been and how have they effected implementation? 1.2.16. What role should the Mission play to resolve bottlenecks? 1.2.17. Have the current USAID funding mechanisms provided enough flexibility to respond to changing needs? 1.2.18. What is the absorptive capacity of your organization in India?	Key informant interviews; program reports



<p><b>1.3. Monitoring and evaluation related of supported activities</b></p> <p>1.3.1 How is program progress measured?</p> <p>1.3.3 Who receives data and results from the program? How is this done and how often?</p> <p>1.3.4 How is feedback given on data and information generated by the programs?</p> <p>1.3.5 How does WHO and PATH conduct DQA on their results?</p> <p>1.3.6 Give examples of how project results and data have been used for decision-making.</p> <p>1.3.7 How could the project M&amp;E systems be strengthened?</p> <p>1.3.8 Who on your staff does M&amp;E?</p> <p>1.3.9 Approximately what proportion of your project's budget is dedicated to M&amp;E?</p> <p>1.3.10 What M&amp;E support has been provided to other organizations?</p> <p>1.3.11 Give examples of how that support might eventually have improved the other organizations' capacity to report its results.</p>	<p>Key informant interviews, program reports</p>
<p><b>1.4. Coordination and communication between implementers and USAID Mission</b></p> <p>1.4.1. Describe your communication strategy with the USAID Mission?</p> <p>1.4.1.1. How often do you meet with Mission staff?</p> <p>1.4.1.2. What do you report to the Mission about your activities?</p> <p>1.4.1.3. What support has the Mission provided?</p> <p>1.4.1.4. What suggestions do you have for strengthening this relationship?</p> <p>1.4.1.4.1. Has USAID provided clear direction?</p> <p>1.4.1.4.2. Are there clear channels for reporting?</p> <p>1.4.1.4.3. How often does the project communicate with USAID/W, USAID/India, and their own headquarters?</p> <p>1.4.2. If you think that the communications between your program and the Mission could be improved, what recommendations do you have for improving communications between your program and the Mission?</p>	<p>Key informant interviews; program reports</p>
<p><b>1.5. Coordination and communication between implementers and other organizations</b></p> <p>1.5.1. Describe your communication strategy with the CTD and State govt.</p> <p>1.5.1.1. How often do you meet with these partners?</p> <p>1.5.1.2. What do you report to them about your activities?</p> <p>1.5.1.3. How would you describe the quality of this communication?</p> <p>1.5.2. How are results of interventions shared with primary partners?</p> <p>1.5.2.1.1. Are these methods sufficient?</p> <p>1.5.2.1.2. What changes would partners like to see with the dissemination of results?</p> <p>1.5.3. If you think that the communications between implementing organization and partners should be improved, what practical recommendations do you have?</p>	<p>Key informant interviews; program reports</p>
<p><b>1.6. Program sustainability (Transfer of core program responsibilities)</b></p> <p>1.6.1. Has WHO/PATH considered the issue of sustainability or succession planning?</p> <p>1.6.2. What plans does WHO/PATH have to transfer responsibility for core programmatic activities to RNTCP counterparts?</p> <p>1.6.3. Which activities, processes, or products developed by PATH will continue beyond current funding?</p> <p>1.6.4. How will this happen?</p> <p>1.6.5. What tools have been developed to support this?</p> <p>1.6.6. Is there any evidence that this has occurred?</p> <p>1.6.7. What are PATH's long-term plans for working on TB in India?</p>	<p>Key informant interviews; program work plans/ Reports</p>
<p><b>1.7. Principles for continuation of USAID funding</b></p> <p>1.7.1. If USAID funding ended now, how would the partners carry on their activities in-country?</p> <p>1.7.2. What alternative funding sources might replace existing resources?</p> <p>1.7.3. What would be your strategy if USAID funding ended?</p> <p>1.7.4. What principles should USAID Mission follow to guide continuation of funding?</p>	<p>Key informant interviews</p>
<p><b>2. Support to WHO</b></p>	
<p><b>2.1. Laboratory strengthening and involvement of other sectors</b></p>	<p>Key informant</p>

<p>2.1.1. What TA was provided for LAB EQA?  2.1.2. What TA and capacity-building is being provided for implementation and analysis of DRS surveys?  2.1.3. What support is provided for capacity building culture and DST?  2.1.4. What TA is provided for strengthening of IRLs?  2.1.5. What is your role in the “RNTCP Laboratory Task Force” for short-term intensive technical support for new laboratory establishment?  2.1.6. Through “Expand TB initiative” setting up of labs for rapid diagnosis was planned. Under this support how many labs were strengthening?  2.1.7. How many BSL3 labs for TB were set up under your initiatives?  2.1.8. What TA for new diagnostic technology was provided by whom and was it evaluated?  2.1.9. Was there a training program for the lab personnel and by whom was it done?  2.1.9.1. Was the quality of training assessed; if yes: how, and what was the outcome?  2.1.10. What support, if any, was provided for state level IRL staff?  2.1.11. What are the functions of lab task force?  2.1.11.1. Will they be involved in monitoring lab activities?  2.1.11.2. What is their role in introducing newer technologies?  2.1.12. What is the mechanism of coordination of the task force with CTD and WHO?  2.1.13. Is there a TA for establishing DST for 2<sup>nd</sup> line drugs and detection of XDR TB?  2.1.14. The proposed NAAT validation study will be guided and supervised by whom?  2.1.15. What is the plan of WHO in RNTCP 3 to support lab related activity?  2.1.16. What were the measures taken to reduce the delay in establishing IRLs?</p>	<p>interviews,  program reports</p>
<p><b>2.2. Collaboration with Partners/PPM</b>  <b>2.2.1. Strengthen relationship NTF</b>  2.2.1.1. How are strategies developed? Are strategies developed collaboratively?  2.2.1.2. How many RNTCP zonal centers were established using this mechanism?  2.2.1.3. Are these zonal centers the best way to reach private sector clients?  2.2.1.4. What are the results of this activity?  2.2.1.5. How are results monitored?  <b>2.2.2. Relationship and engagement of Medical College Task Force</b>  2.2.2.1. What is the contribution of the Medical College Task mechanism in enforcement of standard and establishing DOTS center?  2.2.2.2. Has the quality of TB care in the private sector improved because of this activity?  2.2.2.3. What funds were allocated/used for this activity? Was the result commensurate with the funds spent?  <b>2.2.3. Achievements of PPM activities supported with USAID funding</b>  2.2.3.1. What contribution did WHO make in expanding PPM activities?  2.2.3.2. Is there an increase in involvement of private sector as a result of WHO initiatives?  2.2.3.3. Is there an increase in the quality of private sector services as a result of these activities?  2.2.3.4. If USAID withdraws funding, could the government continue supporting PPM activities?  <b>2.2.4. Documentation and dissemination of PPM activities</b>  2.2.4.1. Has WHO documented the performance of its strategies?  2.2.4.2. Is the result disseminated to a wider audience?</p>	<p>Key informant interviews,  program reports, field observations</p>
<p><b>2.3. Operational Research</b>  2.3.1. What OR has been done with USAID support?  2.3.2. What was the process for choosing topics for the USAID-funded OR?  2.3.3. How was it linked to the RNTCP OR agenda?  2.3.4. Were any of the WHO consultants involved in the design and/or implementation of the OR?</p>	<p>Key informant interviews,  program reports</p>

<p>2.3.5. Do any of the WHO consultants serve on the expert panels?</p> <p>2.3.6. What kind of support does WHO provide to the national and state-level OR committees?</p> <p>2.3.7. Does WHO provide a mentoring process for junior-level researchers?</p> <p>2.3.8. How were the USAID-funded OR results disseminated?</p> <p>2.3.9. Give examples of how the findings and recommendations of OR were used by the national or state level programs to influence policies, programs, and practices.</p> <p>2.3.10. What areas of OR could use future support?</p> <p>2.3.11. How were the TB disease prevalence surveys developed?</p> <p>2.3.12. Is the OR being done still within the framework of Model DOTS?</p> <p>2.3.13. Are there examples of data from other organizations being used for OR?</p> <p>2.3.14. What is the status of other field-OR?</p>	
<p><b>2.4. WHO TA to RNTCP</b></p> <p>2.4.1. Selection criteria; preparation for the job. Is there a shift over time?</p> <p>2.4.2. ToRs: is there a change over time?</p> <p>2.4.3. Role and impact of WHO Consultants at State/National Level</p> <p>2.4.3.1. What were the areas covered under TA by the consultants employed by WHO?</p> <p>2.4.3.2. Is technical support provided to the STO, DTO or lab personnel?</p> <p>2.4.3.3. Their role in TA to OR?</p> <p>2.4.3.4. How are TA activities supervised &amp; monitored?</p> <p>2.4.3.5. Was the impact of TA measurable, in low &amp; high performing states, and at CTD level?</p> <p>2.4.3.6. What changes in RNTCP implementation have occurred due to the TA?</p> <p>2.4.3.7. What is the role of WHO consultants in poor performing and well performing districts/states?</p> <p>2.4.3.8. Measures adopted to build the capacity of consultants in the field?</p> <p>2.4.4. Adaptation of their role to the changing environment (well trained STOs &amp; DTOs, RNTCP3 plans)</p> <p>2.4.5. Transfer of knowledge &amp; skills to RNTCP staff (to whom, benchmarks?). How could this transfer be affected by instability of the senior government health staff?</p> <p>2.4.6. Supervision, M &amp; E practices</p> <p>2.4.7. Accountability(for processes vs. outcome)</p> <p>2.4.8. Their own capacity development. What were the past practices? What are the current practices?</p> <p>2.4.9. Career development perspectives</p> <p>2.4.10. Future directions</p>	<p>Interviews</p> <p>FGD</p> <p>Field Observations</p>
<p><b>2.5. Model DOTS Project</b></p> <p>2.5.1. Completion of prevalence studies</p> <p>2.5.2. Documentation of declining TB prevalence and contributing factors</p>	<p>Key informant interviews, program reports</p>
<p><b>3. Support to PATH</b></p>	
<p><b>3.1. PATH staffing and technical assistance capacity</b></p> <p>3.1.1. How has PATH determined staffing needs for the Task Order implementation?</p> <p>3.1.2. Who approves staffing decisions within your organization?</p> <p>3.1.3. What role, if any, has the funder had over personnel decisions?</p> <p>3.1.4. How are technical needs of staff positions determined?</p> <p>3.1.5. How are new staff screened or evaluated to ensure a match with your program's technical activities and deliverables?</p> <p>3.1.6. How is staff recruited in-country?</p> <p>3.1.7. What oversight of staff hiring and performance is provided by your HQ?</p> <p>3.1.8. What challenges have you encountered to recruit/retain staff?</p> <p>3.1.9. How do you plan to address these challenges?</p> <p>3.1.10. What strengths (technical and others) does your organization bring to India?</p> <p>3.1.11. Does your organization currently require additional capacity: if yes: which type?</p>	<p>Key informant interviews, program reports</p>
<p><b>3.2. Strengthening IRL</b></p>	<p>Key informant</p>

<p>3.2.1. Status of infrastructure upgrades for IRLs</p> <p>3.2.2. Does your lab have the capacity to carry out EQA checking?</p> <p>3.2.3. What is the role of PATH and WHO in developing lab infrastructure, drug supply and Technical assistance?</p> <p>3.2.4. Does the lab follow the Q.C for media (LJ) preparation?</p> <p>3.2.5. Does the lab have NRL trained microbiologist?</p> <p>3.2.6. Does the Lab have NRL trained LTs?</p> <p>3.2.7. <b>Safety issue</b> – Does the lab have proper Fire safety measures?</p> <p>3.2.8. Does the lab have proper waste management system?</p> <p>3.2.9. <b>Program issues:</b> Do you have a cross-referral system?</p> <p>3.2.10. Do you have proper specimen transport system?</p> <p>3.2.11. Sustainability of infrastructural investment?</p> <p>3.2.12. Sustainability of the staff in the lab?</p> <p>3.2.13. What are the main successes and lessons learnt?</p> <p>3.2.14. Provide recommendations for improvement in the future?</p> <p>3.2.15. Utilization of policy and programmatic resources?</p> <p>3.2.16. Plans to address bottlenecks affecting implementation</p> <p>3.2.17. What were the procedures adopted for AMC?</p> <p>3.2.18. Does the lab have SOP for Stain, media preparation?</p> <p>3.2.19. Does the lab have N95 mask for liquid culture?</p> <p>3.2.20. Does the lab have research activities in relation to the Program?</p> <p>3.2.21. Does the lab have shower facilities?</p> <p>3.2.22. Does the lab have emergency evacuation plan?</p> <p>3.2.23. If PATH or WHO would withdraw its support, what would be the sustainability of the IRL activities?</p>	<p>interviews, program reports, field observations</p>
<p><b>3.3. Airborne control &amp; AIC scale-up</b></p> <p>3.3.1. Status to document best practices</p> <p>3.3.2. Development of AIC materials</p> <p>3.3.3. Introduction AIC in high-risk congregate settings</p> <p>3.3.4. Establishment AIC engineering training program in India</p> <p>3.3.5. Utilization of programmatic materials</p> <p>3.3.6. Plans to acquire technical capacity and personnel for program implementation</p> <p>3.3.6.1. Plans for addressing bottleneck affecting implementation</p> <p>3.3.7. Status for scaling up AIC activities in AP</p> <p>3.3.8. How much support was given by PATH and what is the current status with regard to accreditation?</p> <p>3.3.9. AIC activity done in AP: How was the quality of training given on AIC assessed and by whom?</p> <p>3.3.10. Were the materials developed for dissemination of AIC messages validated in the field?</p> <p>3.3.11. What are the barriers in introducing concepts of AIC under field conditions and was it documented?</p> <p>3.3.12. What are the barriers in scaling up of AIC activity?</p> <p>3.3.13. What was the quality of the training and how and who validated the modules on AIC?</p> <p>3.3.14. In the context of DOTS plus, what were the measures taken to scale up AIC at the level of community?</p>	<p>Key informant interviews, program reports, field observations</p>
<p><b>3.4. ACSM</b></p> <p>3.4.1. What information does PATH use for planning its ACSM interventions?</p> <p>3.4.2. How many PATH staff are dedicated full-time/part-time to ACSM?</p> <p>3.4.2.1.1. What is their experience and expertise related to ACSM?</p> <p>3.4.2.1.2. What are the recruitment and selection processes?</p> <p>3.4.2.1.3. How does PATH develop staff ACSM capacity?</p> <p>3.4.2.1.4. Are there concerns or barriers to achieve this?</p> <p>3.4.3. What resources does PATH have for implementing ACSM?</p> <p>3.4.3.1. What was the budget for ACSM activities for FY '08, FY '09 and FY '10?</p>	<p>Key informant interviews, observations, document review</p>

<p>3.4.4. Describe the role of PATH HQ to support ACSM activities?</p> <p>3.4.5. What are PATH primary technical skills for ACSM in-country?</p> <p><b>3.4.6. Coordination with NGO networks and contributions to GFATM implementation</b></p> <p>3.4.6.1. How does PATH assist CTD and the NGO networks?</p> <p>3.4.6.2. How many requests have members of the NGO Consortium made?</p> <p>3.4.6.3. What agreements does PATH have with its partners?</p> <p>3.4.6.4. What type of support did PATH provide in response?</p> <p>3.4.6.5. How many workshops for ACSM has PATH conducted?</p> <p>    3.4.6.5.1. Where were these held and who attended them?</p> <p>    3.4.6.5.2. What follow-up, if any, did PATH provide following the workshops?</p> <p>3.4.6.6. How many ACSM projects has PATH evaluated?</p> <p>    3.4.6.6.1. What were the results of these evaluations?</p> <p>3.4.6.7. What follow-up activities were required or supported by PATH?</p> <p><b>3.4.7. Linkage with national and state strategies</b></p> <p>3.4.7.1. How has PATH integrated the RNTCP's communication strategy into its curriculum?</p> <p>3.4.7.2. How has PATH linked ACSM strategies and activities with TB control priorities? What was the result of this linkage?</p> <p>3.4.7.3. What were the results of the training of trainer (TOT) workshops?</p> <p>3.4.7.4. How many of those trained provided training in the home districts?</p> <p>3.4.7.5. How does PATH collaborate with the RNTCP? Which staff does PATH interface with?</p> <p>3.4.7.6. How has PATH provided supportive supervision and TA to develop or adapt site-specific ACSM materials? What were the outcomes of these activities?</p> <p>3.4.7.7. How has PATH contributed to IEC staff at the State and District level ability to analyze TB program data, develop appropriate ACSM interventions, and implement and evaluate the impact of those interventions? What methods has PATH used? Which staff is involved in these activities?</p> <p><b>3.4.8. Technical Assistance Project for States/Districts</b></p> <p>3.4.8.1. What is the status with PATH's placement of ACSM Advisors in five states to provide ongoing technical support to build the capacity of State IEC Officers, Communication Facilitators, and civil society organizations in ACSM?</p> <p>3.4.8.2. What assistance has PATH provided to develop capacity-building in supervision, monitoring, data collection and analysis, and intervention planning?</p> <p>3.4.8.3. What have been the main achievements of the expansion?</p> <p>3.4.8.4. How has PATH developed ACSM capacity at the State/District level? What evidence is there that this has occurred? What changes have resulted due to PATH's work?</p> <p>3.4.8.5. For the scale up project, has PATH developed a plan for modifications? Has PATH evaluated the pilot?</p> <p>3.4.8.6. How is the status with documenting best practices and lessons learned documented, to inform recommendations for ACSM implementation through NGOs? How was this document used?</p> <p>3.4.8.7. Did PATH develop a comprehensive supportive supervision and M&amp;E plan, based on a framework designed to measure progress and outcomes of ACSM initiatives implemented by civil society agencies? How will the plan enable continuity and sustainability of ACSM efforts in India?</p> <p>3.4.9. Has PATH provided training in interpersonal communications and counseling at district or TU level, and facilitation of meetings and workshops where TUs can share progress, successes, and challenges? What were the outcomes of these activities?</p>	
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<p><b>3.4.10. General Questions</b></p> <p>3.4.10.1. Some of the activities in FY '10 plan were previously proposed in '09, such as develop standardized supportive supervision guidance, training materials, and tools? How do these activities differ over time? What happened to the development of these materials and tools?</p> <p>3.4.10.2. What challenges did PATH identify and how did it support problem-solving to ensure their activities are effective and timely?</p> <p><b>Partners/Beneficiaries</b></p> <p>3.5. Has your organization participated in any PATH ACSM training?</p> <p>3.5.1.1. Was the training relevant for your work?</p> <p>3.5.1.2. What changes to your ACSM planning or activities, if any, occurred following this?</p> <p>3.6. What materials and information has PATH provided to your organization?</p> <p>3.6.1.1. Have you used these materials, and if yes: how and how frequently?</p> <p>3.7. Has your involvement with PATH changed your knowledge and insight about ACSM theories and practices; if yes: how?</p> <p>3.8. Has your organization made any requests for TA?</p> <p>3.8.1.1. What was the response?</p> <p>3.8.1.2. How was the TA used?</p> <p>3.8.1.3. Has PATH/WHO conducted any field visits with your organization to review ACSM activities?</p> <p>3.8.1.4. If no assistance, why have you not made any request?</p> <p>3.9. How has the work of PATH changed or strengthened your program?</p> <p>3.10. What else would you like to see PATH accomplish?</p> <p>3.11. What are PATH's technical strengths for ACSM?</p> <p>3.12. Where do you think they have weaknesses, if any, for ACSM?</p> <p>3.13. How do you access materials for ACSM? Do you use materials provided by RNTCP? If yes, which ones? How do you adapt or review these materials?</p> <p>3.14. Do you have an evaluation plan for your ACSM activities? How are the results of this evaluation used?</p> <p>3.15. Does PATH inform you about implementation of its ACSM program (For States/CTD/Districts); if yes: how?</p>	
<p><b>4. Expansion of MDR activities</b></p> <p>4.1. Status of NGOs community support</p> <p>4.2. Assessments of health facility readiness</p> <p>4.3. Strengthen communications between all levels</p> <p>4.4. Organize experience-sharing workshops</p> <p>4.5. Innovative strategies for case detection and treatment completion in hard-to-reach areas and in populations with poor access to services</p> <p>4.6. Development of community level counseling messages and development of training materials</p> <p>4.7. Measures taken to reduce initial defaulters?</p> <p>4.8. Measures taken to reduce mortality?</p>	<p>Key informant interviews, program reports, field observations</p>
<p><b>5. PPM</b></p> <p><b>5.1. Achievements of partnerships with pharmacies and pharmacies associations.</b></p> <p>5.1.1. How many pharmacies and pharmacy organization joined the program at the district level and city level?</p> <p>5.1.2. What incentives were provided to pharmacies to join the program?</p> <p>5.1.3. What activities were implemented to attract their participation?</p> <p>5.1.4. What mechanisms were used to bind pharmacies to the program?</p> <p>5.1.5. Were pharmacies involved in developing strategies for their involvement?</p> <p>5.1.6. Was there any consultation with USAID/RNTCP in the development of pharmacy strategies?</p> <p><b>5.2. Achievements related to OTC sales of TB drugs.</b></p> <p>5.2.1. How many pharmacies/pharmacies organizations refrained from selling OTC TB drugs to suspect/patients at the district and city level?</p>	<p>Key informant interviews, program reports, field observation</p>

<p>5.2.2. How was the sale OTC TB drugs monitored?</p> <p>5.2.3. What strategies were implemented to discourage sale of OTC TB drugs?</p> <p>5.2.4. Was there any consultation with other agencies in the development of these strategies?</p> <p>5.2.5. What skills does PATH bring towards the development of these strategies?</p> <p>5.2.6. What materials were developed to discourage sale of TB drugs? Which once were found effective?</p> <p><b>5.3. Methods used to engage and train pharmacists and pharmacist associations.</b></p> <p>5.3.1. What training did the pharmacies get for their involvement in the program?</p> <p>5.3.2. Were pharmacies trained in preparing and submitting reports?</p> <p>5.3.3. Is PATH able to provide this training?</p> <p>5.3.4. Does PATH staff involved in this possess the requisite skills in training?</p> <p><b>5.4. Achievements for identification and referrals of TB suspects/patients</b></p> <p>5.4.1. How many pharmacies are involved in referring TB suspects/patients?</p> <p>5.4.2. How many patients were referred to public sector for treatment?</p> <p>5.4.3. Of those referred by private sector, how many stayed until completion of treatment?</p> <p>5.4.4. Did PATH use any mechanism to monitor patients who do not return for treatment?</p> <p>5.4.5. How did PATH monitor referrals among TB suspect/clients using the private sector?</p> <p>5.4.6. What is pharmacy project component contribution to CDR? How is this monitored?</p> <p><b>5.5. Engagement of traditional healers for referrals of TB suspects/patients</b></p> <p>5.5.1. How many traditional healers joined the program?</p> <p>5.5.2. How many suspects/patients were referred by traditional healers?</p> <p>5.5.3. What activities were undertaken to promote participation of traditional healers?</p> <p>5.5.4. What materials were produced to support this activity? Which of these materials were found to be effective?</p> <p><b>5.6. Achievements for monitoring suspect/patients using private sector?</b></p> <p>5.6.1. How is the performance of the private sector monitored?</p> <p>5.6.2. Is the performance evaluation done on the private sector done on a regular basis?</p> <p>5.6.3. Did the private sector partner assist in the monitoring of patient?</p> <p>5.6.4. Did the private provider follow up patients who did not return for medication?</p> <p>5.6.5. Was there any consultation with USAID/RNTCP on the development of strategies to monitor suspect/patients in the private sector?</p> <p><b>5.7. Achievements of worksite interventions</b></p> <p>5.7.1. What companies are involved the work based program? On what basis are these companies selected?</p> <p>5.7.2. What TB services are performed by these companies? Do they conform to ISTC standard?</p> <p>5.7.3. Are these companies able to complete the treatment of their patients?</p> <p>5.7.4. What are the barriers to the work-based programs?</p> <p>5.7.5. How does the project minimize these barriers?</p> <p>5.7.6. Are the lessons learned from work-based program?</p> <p>5.7.7. Are best practices documented? What strategies were used to improve TB care in the work place?</p> <p>5.7.8. Are these strategies effective?</p> <p>5.7.9. Did PATH develop these strategies collaboratively with other agencies involved in the program?</p> <p>5.7.10. Did the quality of TB care improve in the workplace because of these strategies?</p> <p>5.7.11. Did the facility mapping help in improving services in the work place?</p> <p><b>5.8. Analysis of program data</b></p> <p>5.8.1. Did PATH get any assistance in the analysis of program data? Who helped?</p> <p>5.8.2. Were partner pharmacies involved in the analysis?</p>	
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- 5.8.3. Were results of program data disseminated to partners?
- 5.8.4. Are results used for program planning and developing onward strategies?
- 5.8.5. Was there any consultation with USAID/RNTCP and other agencies on the achievement of results?

**5.9. Plans for scaling up activities (geographic and program) PPM**

- 5.9.1. What activities were implemented to scale up PPM in more geographic locations?
- 5.9.2. What is the result of these activities?
- 5.9.3. Were more i) pharmacies; ii) private doctors; iii); work based program involved as a result of scaling up of PPM? How many?
- 5.9.4. What materials were produced and used for scaling up PPM? Which ones? Were they effective?
- 5.9.5. Were PATH objectives in scaling up PPM achieved?

**5.9.6.** If USAID would consider withdrawing its support for these activities, will the government on its own be able to continue the necessary support?

**5.10. Achievement on Referrals from Private Doctors**

- 5.10.1. How many private doctors are involved in the program in: Chennai, Pune, and Lucknow?
- 5.10.2. What strategies are used to attract private doctors to participate in the program?
- 5.10.3. Who were involved in developing strategies for doctors' participation?
- 5.10.4. How many referrals have private doctors made in Tamil Nadu, Maharashtra, and Uttar Pradesh, since the start of the PPM program?
- 5.11. What districts were involved in the pilot? What proportion of DMC sputum smears are coming from private doctors?
- 5.12. What are the challenges faced by private providers in referring TB suspects/patients?
- 5.13. How does the project minimize these challenges or at least their impact?
- 5.14. What is the quality of TB services provided by private doctors? Do they conform to ISTC standard?
- 5.15. Are the strategies involved in promotion of private doctors within the institutions' core competencies?
- 5.16. Are private practitioners able to follow-up patients who do not return for medication?
- 5.17. Do they routinely undertake contact tracing of their patients?
- 5.18. **What baseline data was used to assess private doctors' performance?**
- 5.18.1. Has KAP study been done on private doctors? If yes, when and how was it done?
- 5.18.2. Who did the KAP study? What was the level of Knowledge, Attitudes and Practices prior to the pilot?
- 5.18.3. What districts were involved in the pilot? Was the selection of those districts justified?
- 5.18.4. Has there been any performance evaluation done on private doctors?

**5.19. Achievements on NGO participation**

- 5.19.1. How many NGOs are involved in the provision of TB services?
- 5.19.2. How are they funded?
- 5.19.3. What is their contribution to early case detection and referrals?
- 5.19.4. What strategies are used to attract their participation?
- 5.19.5. Who monitors their performance?
- 5.19.6. Are they preparing and submitting reports about their program?

**5.20. Achievements of Government Facilities Outside Health Department ( e. Railway, Prisons, State Insurance, Central Gov Health Services)**

- 5.20.1. Who are involved in the provision of TB services?
- 5.20.2. How are these institutions invited to be involved?
- 5.20.3. Who monitors their performance?
- 5.20.4. What is quality of their TB services?
- 5.20.5. Do they comply with ISTC standards?



**APPENDIX II: USAID/INDIA**  
**Office of Population Health and Nutrition**

**EVALUATION OF TUBERCULOSIS PROGRAM IN INDIA**  
**STATEMENT OF WORK**

**I. Identification of the Task:**

USAID/India seeks to evaluate the performance, impact, and lessons learned of tuberculosis (TB)-related programs implemented through its partners, the World Health Organization (WHO) and Program for Appropriate Technologies in Health (PATH).

**I. BACKGROUND**

TB is the leading cause of death among curable infectious diseases worldwide. A disease caused by Mycobacterium Tuberculosis, TB has affected mankind for over 5000 years, and still continues to be a leading cause of morbidity and mortality. Though the bacilli was discovered in 1882 by Sir Robert Koch and effective drugs for treatment have been available for more than half a century, more than 1.3 million people die of the disease every year.

In 2008, there were an estimated 9.4 million new TB cases, which is equivalent to 139 cases per 100,000 people. Provisional estimates indicate that women account for about 3.6 million cases. Though globally the incidence of TB is decreasing, the absolute number of TB cases is still on the rise due to population growth. Most of the estimated cases in 2008 occurred in Asia (fifty-five percent) and Africa (thirty percent). The twenty-two high-burden countries account for eighty percent of all estimated cases worldwide, and India and China alone account for an estimated thirty-five of TB cases worldwide.<sup>1</sup>

TB-HIV co-infection and drug resistant tuberculosis aggravate the TB situation globally. TB is a leading cause of death in HIV infected persons and HIV infection is the most potent risk factor for developing active TB disease from a latent TB infection. Of the 9.4 million incident cases in 2008, an estimated 1.4 million (fifteen percent) were HIV positive.<sup>2</sup> Globally, multi drug resistant (MDR) TB is emerging as a major health challenge. Multi drug resistance occurring primarily as a consequence of poor treatment services could lead to the emergence of Extensively Drug Resistant (XDR) TB if MDR TB is not managed properly. There were an estimated 0.5 million cases of MDR-TB in 2007. The countries that ranked first to fifth in terms of total numbers of MDR-TB cases in 2007 were India (131,000), China (112,000), the Russian Federation (43,000), South Africa (16,000) and Bangladesh (15,000).<sup>3</sup>

**TB Burden in India**

On an annual basis, India reports more new TB cases than any other country in the world. In 2008, out of the estimated global annual incidence of 9.4 million TB cases, 1.98 million were estimated to have occurred in India, of which 0.87 million were infectious cases, thus catering to a fifth of the global burden of TB. About forty percent of the Indian population is infected with TB bacillus.<sup>4</sup> The incidence of TB in India is estimated based on findings of the nationwide Annual Risk of Tuberculosis Infection (ARTI) study conducted in 2000-2003. In 2000, an expert group of government of India (GOI) estimated that

the prevalence of TB at 3.8 million, while the more recent World Health Organization's (WHO) estimate gives a prevalence of 2.186 million.

### **Strategy for Tuberculosis Control**

Global TB control is guided by the Stop TB Partnership's Second Global Plan and the WHO Stop TB Strategy. In line with the Millennium Development Goals, the Second Global Plan aims to halve TB prevalence and deaths by 2015 relative to 1990 levels. The Stop TB Strategy identifies the six main components required to achieve these targets, including the provision of high-quality DOTS expansion and enhancement; address TB/HIV, MDR-TB, and other challenges; contribute to health system strengthening; engage all care providers; empower people with TB and communities; and enable and promote research. DOTS is at the heart of the Stop TB Strategy. For countries to successfully implement Directly Observed Treatment Short-course (DOTS) they must demonstrate political commitment to fund and implement an effective national TB control program. DOTS also requires an integrated network of capable laboratories, surveillance through a standardized recording and reporting system, and a robust logistics system that ensures a secure supply of drugs. In addition, implementation of DOTS requires improved access to primary care services that are affordable, equitable, committed, and well-organized. Education and training are essential elements to ensure the availability of human resources. The WHO established the Green Light Committee to help control and prevent MDR-TB through access to quality-assured second-line anti-TB drugs and prevention of the development of resistance to anti-TB drugs by assuring the appropriate use of these drugs.

### **Revised National TB Control Program (RNTCP)**

Recognizing that the previous national TB control program was ill-equipped to achieve its mandate, the GOI initiated the RNTCP in 1998. Thus began the most rapid scale-up of any DOTS-based TB control program in the world. Nationwide implementation of DOTS was achieved in March 2006, and the RNTCP is now treating over 1.5 million persons annually. Enormous barriers remain, however, for the RNTCP to implement all components of the STOP TB Strategy, and now the rise of disease-resistant strains TB and TB-HIV co-infection threaten to turn back tremendous gains made in the past ten years if these challenges are not addressed effectively.

The RNTCP's targets are aligned with the global STOP TB Partnership's targets of seventy percent case detection rate and eighty-five percent cure rate by 2005 and halving prevalence and deaths by 2015. Case detection and cure rate targets have been achieved on a national scale, however the quality of DOTS implementation remains quite poor in many areas. In order to achieve these targets and sustain performance, the RNTCP must increase the reach and quality of DOTS while addressing rising challenges in drug resistance and TB-HIV co-infection. Since a well-managed DOTS program remains the best line of defense against drug resistance, improving the quality of DOTS remains a top priority.

## **II. OVERVIEW OF USAID ACTIVITY**

USAID/India has been supporting the RNTCP for over a decade. The major areas of support include enhancing DOTS services, improving lab capacity to diagnose drug-resistant TB, operations research, TB- HIV collaboration and health systems strengthening. The RNTCP, one of the best managed disease control programs in the country, has now entered a crucial phase of implementation. There are changes in the global Stop TB Strategy<sup>5</sup> that now advocate for universal access to care as opposed to the earlier objective

of seventy percent case detection. The country has also set in motion its ambitious plan to provide Programmatic Management of Drug Resistant TB (PMDT) which involves setting up a chain of laboratories for undertaking Culture and Drug Sensitivity Testing (C&DST), and initiating treatment services for Multi-Drug Resistant TB (MDR TB) patients. There are other new initiatives which include civil society mobilization for TB awareness under the Global Fund Round 9 grant, and introduction of new diagnostics.

Traditionally, USAID has always focused more on TA, and covers the entire spectrum of TB services, from ensuring quality and access to monitoring and evaluation. USAID funded operations research (OR) has led to many significant policy changes in the program. USAID/India had earlier supported RNTCP implementation in the state of Haryana till the year 2008. The other projects supported by the country mission include a civil-society mobilization project through World Vision, a CDC-USAID inter-agency project to provide TA in the areas of TB-HIV and MDR-TB, and an innovative private sector engagement project through Abt Associates.

### **The WHO TB Technical Assistance Project**

The USAID partnership with WHO started in the year 1999, with support of research activities undertaken by Tuberculosis Research Centre (TRC) in Chennai, which is a WHO collaborating center and a Supra-National Reference Laboratory. In 2003 USAID started supporting WHO TA through a field network of consultants, along with other donors like DFID and SIDA. The objectives were to provide TA to TB control efforts in India via the following:

- Strengthening of the laboratory network for mycobacterial culture (solid and liquid) and drug susceptibility testing (for first and second line drugs), and introduction of line probe assay;
- Large scale demonstration study of nucleic-acid amplification testing (NAAT) for early and improved TB case detection;
- Strengthening of the involvement in RNTCP of health care providers of other sectors, focussing on medical colleges and professional medical societies;
- Technical support to all RNTCP activities, via the RNTCP consultant network; and
- Collaborative activities with TB Research Centre, Chennai, on epidemiological impact assessment, drug resistant TB and HIV-associated TB.

While the geographic focus is the entire country, however for the consultant network the RNTCP have identified the states which would be supported by USAID. Though the objectives have remained the same for the past three years, the activities have differed slightly each year.

The specific activities include:

- To speed up the accreditation process, and to enable much wider availability of quality-assured culture and Drug Sensitivity Testing (DST) services for the rapid expansion of RNTCP Category IV services for MDR-TB cases through the placement of laboratory expert staff at strategic positions within the country, including (1) an international laboratory focal point based at the WHO South-East Asian Regional Office in Delhi, with seventy percent of work-time allocated for India-related activities, and (2) a national laboratory specialist based in the Central TB Division (CTD), Ministry of Health and Family Welfare in Delhi.
- Establishing a “RNTCP Laboratory Task Force” for comprehensive TA needed to successfully utilize the expanded international support provided to RNTCP for laboratory scale-up, and successfully deliver TB diagnostic services nationwide by 2012.

- Hire an international laboratory expert from a WHO Supra-National Reference Laboratory to strengthen diagnostic capacity for XDR-TB through second-line DST and build capacity of India labs
- Strengthening involvement of Medical Colleges and medical professional bodies through the ‘task-force’ mechanism and also creating forums like the IMPACT (Indian Medical Professional Associations Coalition against TB)
- WHO direct TA to the program through field network of consultants and Central TB Division based experts. There are 49 field consultants based in the states of Haryana, Maharashtra, Tamil Nadu, North-Eastern States, Chhattisgarh, Delhi, Gujarat, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Punjab, Rajasthan and Uttar Pradesh.
- Operations Research and clinical research through Tuberculosis Research Centre, Chennai.

### **The PATH India TB Project**

Since 2008, PATH has been a major partner of USAID/India in the area of TB Care and Control. The main objectives of the partnership are to provide TA to TB control efforts in India by strengthening the laboratory network’s capacity to diagnose TB and to identify drug-resistant strains of TB; facilitating the introduction of improved infection control practices (focused on reducing nosocomial infections in health care settings, especially with regards MDR-TB and TB-HIV), and assist the RNTCP in strengthening its approaches and methodologies related to advocacy, communication, and social mobilization (ACSM) to improve ACSM’s contribution to improved TB control program performance

The mandate was to work in any part of the country, based on the requests made by Central TB Division regarding laboratory strengthening. Though the objectives have remained unchanged over the years, certain elements like piloting or field trials of new diagnostics and piloting novel approaches in engagement with the private sector has been added to the original scope of work.

The specific activities include:

1. Strengthen the intermediate reference laboratory network through strategic provision of technical assistance, training, equipment, and upgrading facilities etc.
2. Accelerate accreditation of Intermediate Reference Laboratory network, and ensure the maintenance of accreditation through periodic site visits and mentoring.
3. Establish pilot studies to test improved infection control practices, participate in the National Airborne Infection control committee meetings, pilot test the National Airborne Infection Control Guidelines in Andhra Pradesh.
4. Support RNTCP health communication efforts by translating existing comprehensive ACSM strategy into results-oriented field activities; develop the capacity of the different stakeholders to design, implement and monitor needs based ACSM activities.
5. Design and implement community level activities to engage private sector providers, both formal and informal, in RNTCP activities

USAID/India intends to examine these projects in-depth, and undertake a thorough evaluation of the PATH activities.

## **III EVALUATION SCOPE**

### **Purpose and Objective**

USAID/India intends to carry out an in-depth and thorough evaluation of the tuberculosis prevention and control activities implemented by WHO and PATH.

The objectives of the review are to:

- Determine the impact of the WHO and PATH projects relative to stated objectives and achievements.
- Make suitable recommendations for the future direction and priorities of the projects.

## **ii) Statement of Work**

This statement of work (SOW) is for a comprehensive evaluation of the WHO and PATH projects, the appropriateness of the project activities in achieving the objectives, the level of impact, cost-effectiveness and future directions. Critical stakeholders will be involved during various stages of the review process as appropriate. The team will gather both qualitative and quantitative data based on the following specific objectives.

Overarching issues:

- Determine the impact of activities.
- The extent to which the projects have achieved the objectives and met targets in the Performance Monitoring Plan (PMP)
- Discuss contributing factors and barriers to achievement for objectives that were not fully met
- Determine how the project is filling the gaps and collaborating with the Revised National TB control program (RNTCP)
- Describe the main successes and lessons learned from this project
- Provide recommendations for improvement in the future

Technical:

- Evaluate the quality of the technical expertise being provided to RNTCP by the project
- Evaluate to what extent the project has met the technical and programmatic objectives
- Evaluate whether the project-funded research strategy was developed in conjunction with the country program. To what extent were the results of such research utilized by the program (eg. informing policy formulation)?
- Evaluate to what extent the project contributed to the overall capacity building of the RNTCP

Management:

- Determine the cost-effectiveness and efficiency of the management and administration of the project; what has been the return on USAID's investment to date in this assistance to the RNTCP?
- Evaluate the sustainability of the projects:
  - o Whether the project is effectively transferring organizational development and technical skills at international standards to the local partners/RNTCP
  - o Would the GOI be able to support the activities undertaken by the project by itself in the future – in terms of funds, human resources? What recommendations could be made regarding an

exit strategy for USAID's extensive support to human resources under RNTCP (e.g., the consultants' network)?

Coordination:

- Determine how effectively the project has collaborated with other partners working in the field of TB control, including USAID-funded projects
- Determine how effectively the projects have advanced recommendations on RNTCP delivered through other evaluations and assessments, e.g., from the Joint Management Missions with the World Bank and the Green Light Committee?
- Determine whether and how effectively the projects have coordinated and collaborated with the host government at all levels

### iii) Methodology

The evaluators should consider a range of possible methods and approaches for collecting and analyzing the information required to assess the evaluation objectives. Data collection methodologies will be discussed with, and approved by the USAID/India TB team prior to the start of the assignment.

#### *Desk review of documents*

USAID/India will provide the team with all relevant country and project specific documents such as proposals, reports, etc. The evaluation team is expected to collect and collate relevant international documents, reports, and data, and all team members are expected to review these documents in preparation for the team planning meeting. This desk review will help to organize the materials for external evaluation team analysis and review of progress to date. It will allow the team to quickly digest a wealth of information, maximizing their time. The Mission point of contact will provide the evaluation team with project reports, analyzed information and summaries as well as all other documents needed for conducting this desk review.

#### *Team Planning Meeting (TPM)*

A two-day team planning meeting will be held by the team at an offsite location before the evaluation begins. This will be facilitated by the team leader, and provide the Mission with an opportunity to present the purpose, expectations and agenda of the assignment. The evaluators shall come prepared with a draft set of tools and guidelines and preliminary itinerary for the proposed evaluations. In addition, the TPM will also:

- Clarify team members' roles and responsibilities
- Establish the timeline, share experiences and thoughts on the evaluation methodology
- Finalize the data collection tools and guidelines

#### *Site Visits and Interviews*

- Conduct a thorough review of the project through site visits and interviews
- Interviewees will include key members from all stakeholder groups, including RNTCP, WHO, PATH, other donors, partners in TB control, and beneficiaries
- Interview questionnaire to be prepared in advance and finalized during the TPM
- Site visits will be planned taking into consideration factors like geographical diversity, representation of various beneficiary groups, and scale of interventions

The Team will evaluate the state and district level periodic reports to take stock of the indicators

**iv) Timeline**

USAID/India anticipates that the period of performance of this review will be from November 2010 to January 2011 for about six weeks.

**v) Team Composition and Technical Qualifications and Experience Requirements of the Evaluation Team**

USAID seeks a six-member assessment team composed of a Senior Technical (TB) Expert, Senior Public Health Specialist, Evaluation Specialist, Senior Laboratory Expert and two Public Health Specialists. Since two different projects will be evaluated in multiple states, it is envisioned that the teams will separate to conduct field analyses. All team members must have relevant prior experience in India, familiarity with USAID's objectives, approaches, and operations, and prior evaluation/assessment experience. In addition, individual team members should have the technical qualifications and required experience identified for their position below:

- 1. Senior Technical Advisor:** This *Senior Technical (TB) Expert* in the field of international tuberculosis control has an excellent understanding of the global strategy and its implementation. S/he should have significant experience monitoring and evaluating various TB programs throughout the world. The expert should not be directly affiliated with WHO or PATH. A minimum of 12 years of experience in the design and management of tuberculosis control programs, particularly with regard to DOTS services, lab systems, TB-HIV collaboration, and health systems strengthening. *(LOE up to 50 days)*
- 2. Health and HIV/AIDS Analyst:** This *Senior Public Health Specialist* has extensive experience with USAID project design, implementation, and evaluation. The person should have an excellent understanding of USAID operational, management, and technical approaches. Knowledge and experience of tuberculosis control activities would be an added advantage. A minimum of 12 years of experience in the design and management of tuberculosis control programs, particularly with regard to DOTS services, lab systems, TB-HIV collaboration, and health systems strengthening. *(LOE up to 50 days)*
- 3. Evaluation Methods Specialist:** This expert will have deep knowledge of evaluation methodologies and their practical applications. A minimum of 7 years of experience in strategic planning, surveillance, operations research, monitoring and evaluation of global and national tuberculosis programs. *(LOE up to 45 days)*
- 4. Health and HIV/AIDS Analyst:** This Health Analyst /Senior Laboratory Expert is a medical microbiologist, with a minimum of 7 years experience in Mycobacteriology. S/he should have extensive experience in setting up laboratories for culture and sensitivity testing for TB, and should be well-versed with the modern developments in the field of TB Diagnostics and techniques. If a local expert is not available, an international expert could be considered. *(LOE up to 45 days)*
- 5. Health and HIV/AIDS Analysts:** Two experts in international public health with expertise in program management and strategic planning. They should have experience with the Stop TB

Strategy and its approaches. A good understanding of human resource and institutional development is desired. A minimum of 7 years of experience in the design and management of tuberculosis control programs, particularly with regard to DOTS services, lab systems, TB-HIV collaboration, and health systems strengthening. (LOE up to 45 days)

**Summary Table: Labor**

<b>Labor Category</b>	<b>Level</b>	<b>Illustrative LOE</b>
Senior Technical Advisor - <i>Senior Technical (TB) Expert, Team Leader</i>	1	50
Health and HIV/AIDS Analyst- <i>Senior Public Health Specialist, Co-Team Leader</i>	1	50
Evaluation Methods Specialist	1	45
Health and HIV/AIDS Analyst- <i>Senior Laboratory Expert</i>	1	45
Health and HIV/AIDS Analyst	2	45
Health and HIV/AIDS Analyst	2	45

In addition, each team member should have, at minimum, the following skills and experience:

1. An understanding of the country context
2. An advanced degree in Public Health, Social Sciences, Business Administration, or other relevant course of study
3. Demonstrated skill in written and oral communication
4. Demonstrated knowledge of USAID policies and procedures
5. Ability to work effectively in, and communicate with, a diverse set of professionals

The Senior Technical (TB) Expert and Senior Public Health Specialist will serve as Team Leader and Co-Team Leader, respectively, and will be responsible for coordinating evaluation activities and ensuring the production and completion of quality reports, in conformance with this scope of work, which may become a public document for distribution among the program's key stakeholders, including high-level U.S. government policy makers and officials, host country government officials, private sector and NGO leaders, and other audiences. In addition to proven ability to provide this leadership role, involving a technically and logistically complex program, he/she should have substantial and demonstrated expertise in evaluation techniques involving projects with technical assistance, training, advocacy, and partnership components.

The Team Leader and the Co-Team Leader will be a senior expatriate with extensive experience in tuberculosis control programs and must have excellent English language skills (both written and verbal) as they will have the overall responsibility for pulling together the different elements of the assessment for the two separate final reports. They will agree to fulfill their responsibilities in approximately six weeks, spending up to four weeks in-country, and will play a central role in guiding the evaluation process. The Team Leader may hold a conference call with core team members and USAID/India representatives before and after the visit to India, if needed.

**vii) Relationships and Responsibilities**



**Overall Guidance:** The Health Evaluation Specialist in conjunction with the USAID/India Activity Manager and other key TB team members and CO will provide overall direction to the assessment team.

**Responsibilities:**

- Contractor will be responsible for obtaining visas and country clearances for travel for consultants.
- Contractor will be responsible for coordinating and facilitating assessment-related field trips, interviews, and meetings in conjunction with the USAID, WHO and PATH Project officials.
- Contractor will be responsible for submitting a budget for all estimated costs incurred in carrying out this review. The proposed cost may include, but not be limited to: (1) international and in-country travel; (2) lodging; (3) M&IE; (4) in-country transportation; and (5) other office supplies and logistical support services (i.e., laptop, communication costs, etc.) if needed.
- In-country logistics to include transportation, accommodations, communications, office support, etc.

**viii) Reports and Deliverables**

**The Team will provide separate sets of the deliverables mentioned below, for each of the Projects (WHO and PATH).**

- 1. Draft Work Plan and Pre-Departure Briefings.** The evaluation team will develop a draft work plan prior to departure from Washington, DC. The team will meet with USAID and other contractor staff for at least three working days prior to departure for the field.
- 2. Oral Presentation.** The evaluation team will provide an oral briefing of its findings and recommendations to relevant staff in the field as well as to the respective country coordinators, GOI officials and other USAID staff at the conclusion of the visits to the various implementing partners.
- 3. Draft Report.** The evaluation team will present a draft report of its findings and recommendations to the TB POC/Activity Manager before return to the United States.
- 4. Final Report.** Ten paper copies of the final report as well as an electronic version in Word X version shall be submitted within five working days following receipt of comments from USAID and its implementing partners. Ten copies of each report will be provided to the USAID/India TB POC and two copies will be provided to PPC/CDIE/DI. The final report should include an executive summary of no more than three pages, a main report with conclusions and recommendations not to exceed 20 pages, a copy of this scope of work, evaluation questionnaires used to collect information on each of the program components, and lists of persons and organizations contacted. The final report, with executive summary and electronic files, must be received by the USAID/India TB POC within the seven working days after receiving the final comments on the draft evaluation report from USAID/India team.

## **APPENDIX 3: PERSONS CONTACTED**

### **ANDHRA PRADESH**

#### **Lepra**

Aparna S- Microbiologist  
J. Subbanna, Director BPHRC

#### **Ongle TB Unit**

Sailaja, Medical Officer  
T. Ramesh, DTO  
Kresna Veri, Lab Technician

#### **Ongle Chemist and Druggist Association**

K Rama Murthy, Secretary  
Y, Sri Rama Murthy, Secretary  
Narasimha Rao, President

#### **Ongle Pharmacies**

Ganish Medicals  
PPS Medicals  
Ravi Medical  
Rekha Medicals  
Sai Ankita Medical  
Saidurga Medicals  
Sri Venkata Ramana Medicals  
Sudheer Medicals  
Suresh Medicals

### **PATH**

Pravakar Adhikaree Consultant (LABS)  
Naveena Ambatipudi, Administrator  
Shanta Ghatak, MDR-TB Officer  
Mayank Ghedia, AICO  
Satish Kaipilyawar , Project Director  
Dyson Misguitta, AICPA  
Uma Shankar  
Shiva Shrestha, ACSM and M&E Officer  
Sidhartha Srikar, PPM Officer

### **STC**

Kishore Reddy -Microbiologist  
P.H.Vishnu S.T.D.C  
Sai Babu, Former STO  
Sreenivas S.T.O  
State TB IEC Officer

### **TB Alert**

Ramya Anantkrishnan. Project Officer  
Arun Kumar, Program Manager  
Sunith Mathew, District. Coordinator  
Khasim Sayyad, District. Coordinator  
Mr. Vikas, Program Manager

**Warangal District**

S. Murali Krishna, CF

**Additional Persons Met**

Sai Babu, former STO

Santosha, former WHO consult

**DELHI****ABT Associates**

George Oommen, Deputy Chief of Party

Avinosh, Consultant

Avik Bhansal, Consultant

Deepanjali Bhas, Consultant

Kamaldeep Kaur, Consultant

Ajay Kumar, Consultant

Malik Parmar, Consultant

K S Sachdeva, Medical Officer

M Sangata, Consultant

Shanti Sehgal, Consultant

Sharad, Consultant

**Department for International Development**

Ms Sabina Barnes, DFID, Delhi

**eNVisions**

Varsha Chanda

**Initiatives, Inc**

Rebecca Furth

**International Union Against Tuberculosis and Lung Disease**

Sreenivas A, M&E Coordinator

Subrat Mohanty, Project Coordinator, PMU, GF R9

**RK Swamy BBDO**

Manisha Singh Development Strategy Director

Nemdeikem KS, Development Strategy Manager

**Strategic Alliance, Delhi**

Gautam Nath, Country Director

**USAID**

Elizabeth Callender, Program Officer

K. Hemachandran, Advisor for TB Care and Control

Sanjay Kapur, Division Head, HIV/AIDS

Charushila Lal, Program Development Specialist

**World Bank**

Patrick Mullen, Senior Health Specialist

**World Health Organization**

Puneet Dewan, Medical Officer for Tuberculosis

M Hyder, RA

Ranjani Ramachandran, Consultant

**World Vision, India**

Amit Gordon, M&E Officer  
Subodh Kumar, Program Manager  
Rajdeep Srivastava

**Additional Persons Met**

Meena Som, former WHO consultant

**GUJARAT****Apollo Hospital**

Aruna Gautam, Consultant for Microbiology  
Sujata Naidu, Deputy General Manager of Operations  
Premila Robert, Chief Coordinator for Infection Control  
Abhijat Sheth, Director of Medical Services

**BJ Medical College**

Rajesh Solanicz, Professor of Pulmonary Medicine  
Bharat Shah, Dean  
M.M. Phrabhakar, Medical Superintendent

**CBCI**

Father Thomas

**Indian Medical Association**

Kanodia Ashok, Coordinator

**State Office**

K.R. Pujara, Chief Medical Officer

**STDC**

Vijya Amin, Medical Officer  
Divit Kapadiya, TB-HIV Coordinator  
Mitesh Nayak, Medical Officer  
Purvi, Nayak, Medical Officer  
Pankaj Nimavat, Medical Officer  
Nikunj Patel, Statistical Assistant  
Pradip Patel, Director  
Rajesh Solandi, Professor, TB & Chest Department

**World Health Organization**

Kiran Rade, Consultant

**MAHARASHTRA****CHAI**

D.R. Shinole, District Coordinator

**IMA**

Suhas Shingte, Shree Clinic, Sandeep Nagar Thergaon, Pune

**Nagpur District Staff**

RM Ciri, MO Medical College

Motiram Kamble, Chief Medical Officer  
RN Warjuker, Medical Officer, DTL, Nagpur

**Population Services International**

Rari Bhetnafer  
Arizuddhai Pathak

**RNTCP**

K. Subhakar, Chairman State Task Force

**SAI Pathology Lab (Private Lab)**

Charusheela Gore, OM

**State Office**

Ashish Doddamai, IEC Officer  
Khilare, City TB Officer for Pune  
S.B. Rajyoe, DTO

**STDC**

B.D. Bhalekar  
Narendrakumaz Birare, Medical Officer  
(Major) Pradeep Gaikwad  
Uddhav Gavande  
V.S. Ingale, Superintendent of the Chest Hospital  
Kanchan Jagtop, Chief Medical Officer  
Shri V.D. Kathale, Administrative Officer  
S.R. Khezat, Medical Officer  
Balgani Shilva, Consultant Microbiologist  
Y.G. Yeole, A.P.O.

**World Health Organization**

Rajesh Deshmukh, Consultant  
Avinash Jadhav, Consultant  
Jyoti Salve, Consultant  
Sanjay Suryawanshi, Consultant  
Manoj Toshniwal, Consultant  
Amol Wankhede, Consultant

**ORISSA (PPM CONFERENCE)**

**IMA**

Shruti Seghal, IMA-GFATM, Bhubaneswar  
Kajal Krishna, Editor, IMA Journal  
Sai Prasad, IMA, Hony Sec. Gen,  
Suresh Gupta, Medical Coordinator , IMA  
Davendra Shirole, State Coordinator, IMA

**World Health Organization**

Chetair, WHO Consultant, Hyderabad  
Syer Imran, WHO Consultant, Harkhand  
Durha Paul, WHO Consultant, W. Bengal  
Suchendo Roy, WHO Consultant, Uttar Pradesh  
Soumya Samkap, WHO Consultant, Orissa  
Sudhi, WHO Consultant, Haryana  
R.D. Yeale, WHO Consultant, Uttarakhand

## **RAJASTHAN**

### **Bundi District**

DK Mathur, DTO

### **Jaipur I District**

Vinod Garg, DTC

Bharti Malhotra, IRL

Sarthak Maklav Kushtashram, Medical director (NGO)

BK Meghwal, DTO

### **State Office**

Gupta, STO

### **World Health Organization**

Sanjay Kumar, Consultant

Pankaj Dhinga, Consultant

Lalit Mehandroo, Consultant

Vivek Mishra, Consultant

## **TAMIL NADU**

### **Chennai DTC**

Dharani Latha, DTO, Chennai

### **IMA**

Kailaash, President

### **Pharmacies**

Guru Medicals

Moorthy Medicals

### **Pondicherry sites**

Muthuraj – Microbiologist

S.Prabhu Medical superintendent (Government Hospital)

K.V.Raman STO

### **STC**

Madhu Mathi, IRL Microbiologist

C Udayasankar, STO

### **TB REACH**

M. Terence Aldrin, Program Manager

Ramya Ananthakrishnan

Ms. M. Chitra

Sheila, PPM Officer

### **Tuberculosis Research Centre**

R Balambal, Specialist

V. Chandrasekaran, Scientist

Nirupa Charles

Gomathi NS, TO

Gopi, Head statistical department

C Kolappan, Scientist

AK Hemanth Kumar, TO  
MM K Jaggagarajam, TO  
Vanaja Kumar, Scientist  
M Muniyandi, Health Economist  
G. Navendran, Scientist  
Padmaprya, Physician  
Banu Reka, Physician  
N.Selvakumar Scientist F, (Bacteriology)  
Selva Kumar, Head MDR TB lab  
S. Sivakumar, Research Assistant  
Mohane Suhadi, Technical Officer (TO)  
Aleyamma Thomas, Director In-charge  
Beena Thomas, Director  
World Health Organization  
Rajan Sreenivas, Consultant

**Additional Persons Met**

Dr Santha, ex-WHO consultant, Chennai

**UTTAR PRADESH**

**Chandauli District**

P Tiwari, DTO

**Ferozabad District (via telephone)**

A.K. Mithal

**Janpur District (via telephone)**

Ashok Kumar, Deputy DTO

Rastogi, BCG Technician, Jaunpur

**Kaushambi District**

Atul Kumar, District Magistrate

Krishna Kumar, CMO

S Mishra, DTO

D R Verma, CMO

**Nagar District**

V K Dubey, CMO

Rahul Singh, DTO

**RTCP Technical Assistance Project**

D K Gupta

Bharati Kalottee, Medical Consultant

Ashu Pandey, Medical Consultant

Y N Prabhakar

Sukhendu Roy

Sanat Jh

Kovid Sharma

**STC**

Prof. Amitha Jain, Director, Microbiology Lab

V K Koyal, STO

Sonali Malashuwari, TB IEC Officer

Urmila, Microbiologist

Tambaram Sanatorium  
R Krishna Rajasekar, Associate Professor

**Varanasi District**

Swami Hridayanand, Medical Officer  
B N Singh, DT G N Srivastava, Associate Professor  
Swami Varishthanand Ji,  
In-Charge officer



## **APPENDIX 4: LIST OF REFERENCES**

### **Government of India Documents**

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- How can Private Medical Practitioners and TB Program work together to help control TB
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- Advocacy, communication and social mobilization (ACSM) for tuberculosis control: a handbook for country programmes. WHO, 2007
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## Scientific Articles

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## Other Organizations

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- Training of Trainer Manual on Soft Skills. World Vision India. August, 2010. New Delhi.
- Training Manual for Rural Health Care Providers. World Vision India. August, 2010. New Delhi.

## APPENDIX 5: TEAM MEMBERS

<b>Members of the team</b>	<b>Domain of expertise</b>
Prof Dr Aime De Muynck, MD, PhD, MPH	Epidemiologist and team leader of the review mission WHO consultants' network
Mr David Berger, MPH, MA	ACSM, Planning and Coordination
Dr Gani Perla	PPM
Dr Tim A. Clary, M.A., EMBA, M.S., PhD	OR, M&E, management
Dr Rajeswari Ramachandran, MD, DM, PhD	AIC, basic DOTS, MDR
Dr. B.N. Selva Kumar, PhD., Microbiologist	Lab strengthening

## **APPENDIX 6: PPM PARTICIPANTS IN THE VARIOUS STATES**

### **OTHER PPM ACTIVITIES**

PPM activities in other states has wider network of participants. This is supported by a number of donors and RNTCP. This includes GFATM and WHO/USAID. Private provider partnerships have been developed with IMA/GFATM leading the activity.

### **ANDHRA PRADESH**

#### *INDIAN MEDICAL ASSOCIATION (IMA)– GFATM IN ANDRA PRADESH*

UNIT I of Andhra Pradesh covering seven districts reports fifty-four IMA chapters involved in the program. This includes a total of 5,876 private provider members. They have opened 471 DOTS centers and eight DMC centers since start of the program. No available data on the number of referrals made to DMC.

Unit II, covering nine districts and fifty-one IMA chapters, includes 8,173 private provider members. Unit II reports 204 referrals made to DMC. There were sixty-two MOU signed and four DOTS center and one DMC center opened since the start of the project.

Unit III, covering seven districts and fifty-four IMA chapters, include 2,939 private providers involved in the program. Except for Unit II, there are no reports on total referrals made to the program.

Referral of patients is big issue. There is reluctance on the part of PP to refer patients to the government DMC. They would rather refer patients to private labs except there are not too many private labs and private labs are still to be accredited by RNTCP.

### **TAMIL NADU**

*INDIAN MEDICAL ASSOCIATION (IMA) – GFATM IN TAMIL NADU.* This project started in 2007 under the funding of GFATM, mobilizing members of the Indian Medical Association (IMA) to participate in the activities of the RNTCP. In Tamil Nadu, Unit I covers nine districts and sixty IMA branches and includes 7,702 private providers. Out of this number, 1,032 private providers are participating with RNTCP program. Ninety-five MOU's have been signed and ninety-five private DOTS centers have been opened. Most of the PPs are desensitized through the CME program sponsored by IMA. These doctors were responsible for thirty-four referrals to the program. Tamil Nadu Unit II, covering eleven districts and thirty-nine IMA branches, includes 7,352 private doctor members. Five-hundred ninety-seven are involved in the program and responsible for only seven referrals to DMC.

*NGO INVOLVEMENT IN TAMIL NADU.* There are many NGOs/COBs involved in the PPM program. Their level of involvement is difficult to assess, in the absence of any reports. Verbal discussion with officers of these organizations revealed the observations that follow. Organizations involved in PPM are (i) TB Reach; (ii) IMA; (iii) CBCI; (iv) CHAI; (v) IMPACT; Women Self help Group; (vi) Cremates

According to the report of WHO Consultant, a total of 224 NGO are involved in the TAMIL NADU area. This includes a total of 122 private providers. The Catholic Bishop Conference Inc. (CBCI) and nine CME training workshop were held and thirteen sensitization workshops conducted. Work based program has been started with the opening of TB DOTS Center/DMC to serve TB Patients in Neyveli Signite Mine, Bhel Tricky and Velore companies.

*TB REACH CHENNAI.* In Chennai TB Reach is a quite active NGO supporting the PPM program. It acts as intermediary NGO between RNTCP and the private provider. This organization

is supported under the GFATM Round 9. TB Reach operates seven hospital-based DOTS centers, providing counseling and treatment to about 200 patients. Its pharmacy referral project has 100 participating pharmacies; fifty are active in referring patients to TB reach. Collaborating with IMA, they have a total of 200 PPs actively referring an average of 700 patients a year.

TB Reach is set up covering three zones in Chennai (Zone 10,1,3). There is one assigned PPM Officer (Sheila) and ten field coordinators. Currently, no IEC materials are provided to the PPM partner. Private providers and pharmacies call the field coordinators by cell phone and refer patients. Everything is personalized.

## **MAHARASHTRA STATE**

The PPM project in Pune was started in 2003. Pune is part of the fourteen surveillance sites where PPM expansion is happening. A total of 4,144 private providers are involved in the project. The performance of the PP included in the project has yet to be reflected in the STO quarterly reports. A total of 268 NGO are involved in PPM. The IMA-GFATM-RNTCP project is an important component of their PPM intervention.

***INDIAN MEDICAL ASSOCIATION (IMA)—GFATM in Maharashtra state.*** Unit II of IMA-GFATM, covering twenty-four districts and sixty-nine IMA branches reports 481 private providers who participated in the CME training program. Unit III covering seven districts and thirty-seven IMA branches, reports 1,548 private providers participating in CME training. Unit I covers sixteen districts and fifty-nine IMA branches, and reports 4,459 having participated in the CME training program. Only Unit III reports seventeen MOU's signed and seventeen DOTS centers opened. There are no data on the number of TB-symptomatic referrals to the DMC.

***THE CATHOLIC HEALTH ASSOCIATION OF INDIA (CHAI).*** This organization is mostly involved with capacity building of CBO, a training of community volunteers in TB HIV/AIDs. They also develop TB forums with TB patients. Their community meeting is intended to raise awareness in the community regarding TB and RNTCP, and to increase case identification referral and adherence to treatment. Most of the activities have yet to start. There are no reports available on the project. ***PATH*** (project in the two districts of Nagur and Yawatmal) projects, which had been initiated and on-going, are not fully reflected in the reports.

***NIMA (National Integrated Medical Association)*** another association of traditional private providers (allopathic, ayurvedic, homeopathic and yunani) are involved through the National Integrated Medical Association Group (NIMA). The state has passed a resolution involving the NIMA for the involvement of their members in the program.

***CII (Confederation of Indian Industries).*** Involvement of the Confederation of Indian Industries (CII), an association of large industries with facilities in Maharashtra State. Contact has been made, and follow-up discussions on the level of their involvement is under review.

***ESI (Employment State Insurance)*** the state has also started work with Employment State Insurance (ESI). Forty-five ESI Chapters have joined the program.

***Railway Stations.*** Twenty seven railway Stations had joined the RNTC program. They started pre-screening their staff and TB suspects are sent to the closest DMC.

***CGHS Government Insurance System*** and nineteen Central Government Insurance System (CGHS) health facilities have also joined the program.

***Medical College.*** There are forty-one medical colleges involved in the program through the Medical College Task Force. The hospitals are active partners of RNTCP. A WHO consultant assists this activity.

## ORISSA STATE

***INDIAN MEDICAL ASSOCIATION (IMA) – GFATM IN ORISSA.*** Unit 1 includes thirty districts and thirty-eight local IMA chapters with 3,000 PPs membership. Close to 700 private doctors are involved in the program. These doctors are responsible for ten referrals to DMC. There are twenty-four MOUs signed and twenty-two DOTS Centers opened. Eight hundred forty doctors participated in the CME training.

### **UTTAR PRADESH (Lucknow)**

Uttar Pradesh is part of the fourteen intensified states for PPM. PPM started in 2003 and slowly evolved to involve a number of sectors. The NGOs have been very strong in supporting PPM. They include the following:

***Medical College.*** There are eighteen Medical Colleges involved in Uttar Pradesh. An average of ten to twelve patients are referred to government DMC. They had been strong advocates of RNTCP.

***IMA-GFATM.*** Unit 2 covers ten districts and twenty IMA branches with 2700 members. There are currently 594 PPs involved in the program. They have signed 100 MOUs and opened four DOTS centers and four DMCs.

***CBCI/CHAI.*** They operate thirty-two hospitals in Uttar Pradesh. The PPs in the hospitals are referring their patients to the DMC for testing.

***RK Mission.*** Operates four hospitals in the state and supports the RNTCP. ***Railways.*** There are five divisions operating clinics. TB DOTS is used. ***ESI.*** This group operates thirteen hospitals