REPORT OF THE ELEVENTH GLOBAL MEETING ON PUBLIC-PRIVATE MIX FOR TB CARE AND PREVENTION

Working with frontline private providers: innovations in scaling up collaboration and regulation

Mumbai, India
29 February - 2 March 2016
REPORT OF ELEVENTH GLOBAL MEETING ON
PUBLIC-PRIVATE MIX FOR TB CARE AND PREVENTION

“Working with frontline private providers: innovations in scaling up collaboration and regulation”

Mumbai, India
29 February to 2 March 2016
ACKNOWLEDGEMENTS

This report was written by Daisy Lekharu and edited by Mukund Uplekar and Hannah Monica Dias.

We thank all the presenters and participants of the meeting. Please click here to access the meeting presentations.

This meeting was made possible thanks to the generous support of the American people through the United States Agency for International Development (USAID), The Global Fund and the Stop TB Partnership.

© World Health Organization 2016
All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers’ products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

This publication does not necessarily represent the decisions or policies of the World Health Organization.
1. INTRODUCTION

Under the umbrella of the global Subgroup on Public-Private Mix (PPM) or TB Care and Prevention, WHO's Global TB Programme and partners have been assisting countries to enhance collaboration between national TB programmes (NTPs) and diverse public, voluntary, corporate and private health care providers for TB prevention and care in different settings. The PPM Subgroup was established under the erstwhile DOTS Expansion Working Group in 2002. Its members include NTP managers, policy makers, representatives from the private sector, academia, field experts, international technical partners and development agencies. The WHO Global TB Programme provides the Secretariat for the group, organizes periodic global meetings and leads the development and promotion of global policies, strategies and tools related to PPM expansion.

At the first global PPM meeting in November 2002, generic regional and national strategies for PPM were developed and endorsed. The second meeting reviewed the growing PPM evidence base emerging from numerous PPM initiatives, and broadened the scope of PPM to include the involvement of public sector providers not linked to NTPs. The third meeting identified barriers and enablers for scaling up PPM and endorsed the global guidance document on engaging all care providers. The fourth meeting specifically focused on PPM for TB care and control in Africa. It examined how successful PPM approaches within Africa could be scaled up and how approaches in other regions could be adapted to African settings. The fifth meeting reviewed global and regional progress, discussed persisting barriers and identified working approaches that countries applied to address them. While the sixth meeting discussed practical tools that may be used to scale up PPM, the focus of the seventh meeting was on mainstreaming PPM as an important approach to address global deceleration of TB case notifications. The eighth meeting showcased PPM progress in the countries within WHO's Western Pacific region and discussed innovative approaches such as, for example, social franchising. The ninth global PPM meeting deliberated on effective engagement of large hospitals. The tenth meeting, organized jointly with the Global Fund, focussed on countries in Asia with large private sector and assisted them in strengthening the PPM components in the Global Fund Concept Notes from Asian countries with a large private sector.

While all these efforts have indeed yielded results, a great deal still remains to be done. In countries as diverse as Ethiopia, India, Kenya, Malawi, Myanmar, Pakistan and Tanzania, one fifth to a quarter of TB case notifications are contributed by providers engaged under PPM programmes.

This report summarizes the proceedings of the eleventh global PPM meeting. The objectives and expected outcomes are presented in Section 2. Section 3 briefly outlines the presentations and discussions at the meeting, and Section 4 outlines the closing session. The agenda and list of participants are presented in the appendices.
2. OBJECTIVES AND EXPECTED OUTCOMES

Objectives
1. Review global progress and problems in scaling up private sector engagement in TB care and prevention;
2. Discuss innovations in engaging private practitioners and frontline care providers, including laboratories and pharmacies, through collaborative and regulatory approaches;
3. Make field visits to an ongoing innovative project to engage private practitioners practicing in the slums of Mumbai;
4. Discuss strategies to scale up and replicate innovations in collaboration and regulation of private care providers in the context of the new End TB Strategy

Expected Outcomes:
1. A review of global progress on and challenges to PPM expansion
2. A review of innovations in scaling up collaboration with and regulation of private providers including laboratories and pharmacies
3. Field visits for enhanced understanding of innovations in collaboration with and regulation of private providers
4. A review of approaches to costing and sustainable financing to scale up PPM innovations in the context of the new End TB Strategy
3. SUMMARY OF PRESENTATIONS AND DISCUSSIONS

Access the meeting presentations online

DAY 1

Session I: The Global Context, Meeting objectives and Agenda
(Chair: S. Sarkar, W. Wells)

Mario Raviglione, Director of the WHO Global TB Programme welcomed country representatives, partners and delegates from the Indian Ministry of Health. He then presented an overview of the global TB situation and the role of PPM in the context of the WHO End TB Strategy and UN Sustainable Development Goals. He emphasised that the three pillars of the End TB Strategy could not be implemented in a true sense without scaling up PPM. He also highlighted that while there have been several spectacular small and large pilots, is time to now take these to scale. Nationwide scale up may require different approaches and strategies. These may need to include bolder policies, government stewardship, social protection mechanisms and innovative digital solutions. He raised the following questions for the group to discuss in this context such as:

- How could PPM become a non-negotiable core function of national TB Programmes (NTPs)?
- How could governments embark on bold regulations and enforce mandatory TB case notification and rational use of drugs and diagnostics?
- Can digital tools and systems help scale up PPM?

Further, he suggested that the decade old well-functioning PPM subgroup should be a full-fledged Working Group.

Mukund Uplekar, Medical Officer, WHO Global TB Programme traced the evolution of PPM and pointed to the increasing contribution of diverse PPM initiatives to national case notifications. He presented the objectives and the expected outcomes of the meeting and detailed the meeting agenda.

Swarup Sarkar, Director, Communicable Diseases at WHO Regional Office for South-East Asia (SEARO) stressed the importance of marketing targeted solutions to engage the private sector and the need to adopt an aggressive business approach with real-time
monitoring through innovative digital tools. He also mentioned the importance of enablers for the involvement and mobilization of communities.

Henk Bekedam, Representative of the WHO Country Office for India highlighted the progress that India has achieved through adoption of the daily regimen, expansion of newer diagnostics particularly Xpert,MTB/RIF, introduction of newer drugs like Bedaquiline through the public sector, and web-based surveillance mechanisms like Nikshay and private sector engagement.

Suvanand Sahu, Deputy Secretary of the Stop TB Partnership mentioned that private sector engagement is an opportunity to understand patient perspectives. He stressed on the importance of innovations in the private sector and need for more business models.

Jagdish Prasad, Director-General of Health Services from the Indian Ministry of Health reiterated that it was time to reach the unreached by engaging all private providers, supported by innovative e-systems to link them.

William Wells from USAID, Mohammed Yassin from the Global Fund and Sunita Prasad from Eli Lilly welcomed the opportunity of the meeting to discuss the importance of newer approaches for PPM expansion in their opening remarks.

Session II:
Scaling up private provider engagement in Africa: innovations, results, challenges and solutions
(Co-chairs: M Yassin and B Kumar)

Regional progress
This session reviewed experiences from five high TB-burden countries from Africa including, Ghana, Malawi, Nigeria, Ethiopia and Tanzania. The country presentations included information on the contribution of PPM to case notifications, the approaches and strategies adopted to engage diverse providers and the investments made into PPM implementation.

Country progress
1. Ghana :
   - PPM contribution to case notifications in 2014: 3%
   - The PPM activities are focussed mainly around:
     - community sensitization to reduce stigma
     - screening of TB suspects, diagnosis, providing free medicines, treatment support and contact tracing
     - financing, contracting, provision of logistics, training, free diagnostics & medicines
     - providing an enablers package to private providers for improving TB case notification, engagement and treatment support
2. Malawi
   - PPM contribution to case notifications in 2014: 19.75%
   - The PPM activities include:
     - Memorandum of Understanding (MOU) between government and CHAM (Catholic Health Association of Malawi) & Malawi Business Coalition Against HIV/AIDS (MBCA) for provision of care.
     - Review meetings, trainings, supervision and provision of drugs.

3. Nigeria
   - PPM contribution to case notifications: 14%
   - The PPM activities include:
     - Development of PPM implementation guidelines
     - Creation of PPM unit with a focal person at the national level
     - Establishment of PPM Steering committee.
     - MOU with all the PPM sites
     - Implementation options including referral centres, diagnostic and treatment centres
     - Partnering with NGOs
     - Regular supervision
     - Incentives: capacity building, supply of logistics to PPM sites (microscope, lab consumables, drugs)

4. Ethiopia
   - PPM contribution to case notifications: 14%
   - The PPM activities include:
     - Training
     - Provision of free drugs, reagents, sputum cups, monitoring and evaluation tools, awareness building, job aids, supportive supervision and mentoring
     - Expansion of PPM services: (n=2074 facilities),
     - Engagement of lower clinics, rural drug venders, traditional healers and religious institutions in presumptive TB identification and referral activities (n=1070);
     - Engagement of NGOs and CSOs in community based TB care;
     - Improve quality assurance through quality assurance support and the implementation of HMIS in PPM sites

5. Tanzania
   - PPM contribution to case notifications: 22%
   - The PPM activities include:
     - Logistics support and supplies to private facilities: free microscopy services, capacity building, supervision, medicines
     - Engagement with private pharmacies and their drug dispensers through sensitization, training, supervision and monitoring
Session III:
Scaling up private provider engagement in Asia: innovations, results, challenges and solutions
(Co-chairs: P Hopewell and N Krishnan)

Regional progress
This session reviewed PPM experiences from nine countries in Asia including, Afghanistan, Bangladesh, Indonesia, Myanmar, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam. The session opened with a presentation by Aamir Khan on the social business model being implemented by his organization - Integrated Research and Development. He highlighted the various digital innovations and enablers used in his project including:
- Communication campaigns via local cable TV advertisements and videos
- Mass screening using community screeners, chest X-ray screening, Xpert MTB/RIF, diabetes screening
- Informatics including medical records and mapping
- Performance incentives, patient lottery prizes

Country progress
1. Afghanistan
   - PPM contribution to case notifications: 18%
   - PPM activities include:
     - Baseline assessment of private and public health sectors
     - MoU between NTP and private health care providers,
     - Establishment of a PPM taskforce
     - PPM/ Urban DOTS annual coordination workshops
     - Development of a M&E mechanism for PPM including a recording and reporting system and quarterly review meetings
     - Training for health care staff and supervision and monitoring
     - Provision of information and education materials (IEC)
     - Distribution of TB formats and procurement of medicines, lab reagents
     - Setting up a referral system network and feedback mechanism

2. Bangladesh
   - PPM contribution to case notifications: 32%
   - Bangladesh presented several PPM models/interventions and they are presented below
The PPM activities under these models include:
- DOTS Orientation/Training
- Orientation of drug sellers on TB referral
- Incentives for DOT providers
- Social support (only for patients with drug-resistant TB)

3. Indonesia
- PPM contribution to case notifications: 18%
- The 2013 TB prevalence survey in Indonesia revealed that 46% of the TB patients were treated in the private sector
- PPM activities include:
  - Regulatory frameworks (Minimum Service Standard (SPM) for universal coverage, local commitment and funding; National Medical Practice Guideline for TB (PNPK-TB))
  - Mandatory case notification through electronic TB information system for public and private hospitals, new simplified electronic recording and reporting systems for private/stand alone clinics or doctors, linked with national reporting system
  - Accreditation/ Certification for providers (Private practice/ stand alone doctors → IMA certification system, Primary care/clinics → MOH Accreditation, Secondary care/public-private Hospitals → Hospital Accreditation Committee)
  - Training and capacity building: Revised training system for health providers also with long distance web based training
  - PPM coordination mechanisms and community linkages for awareness building and improving treatment adherence
  - Building linkages with social protection schemes
4. **Myanmar**
   - PPM contribution to case notifications: 18%
   - PPM activities include:
     - Private providers: Franchising, Training, free diagnostics and anti-TB drugs, IEC provision, performance-based monetary and non-monetary incentives, monitoring & supervision, and support for poor patients
     - Drug sellers: Training, IEC provision, performance-based monetary and non-monetary incentives, free diagnostics, monitoring & supervision
     - Private hospitals: Training, CME activities, free diagnostics, free anti-TB drugs and IEC provision, performance-based monetary and non-monetary incentives, monitoring & supervision, and human resources support
     - Partners’ own clinics and labs: NTP monitoring & supervision, free diagnostics, free anti-TB drugs, IEC provision and support for poor patients
     - Private labs and Chest X-Ray centers: Contracting, training, performance-based monetary incentives, free laboratory materials (microscope, reagents, cups, slides, etc.) provision, monitoring, supervision, and quality control.

5. **Pakistan**
   - PPM contribution to case notifications: 18%
   - PPM activities include:
     - Facility Branding with NTP logo
     - Demand generation for enhanced facility utilization through media
     - Revised training methodology for private practitioners
     - Accreditation
     - Incentives to practitioners and laboratory technicians
     - Engaging private practitioners in active case finding
     - Social business model implementation
     - Engagement of pharmacies
     - Legislation for mandatory TB case notification

6. **Philippines**
   - PPM contribution to case notifications: 5.8%
   - PPM activities include:
     - Engage professional societies through Philippine Coalition Against TB (PhilCAT)
     - Annual PhilCAT Convention
     - Engage public and private hospitals
     - Establishment of referral linkages
     - Mass screening of inmates in big jails and prisons
     - Provision of services for elderly in institutions
     - Big and medium scale companies are required to have TB programs to disseminate information and refer cases
     - Provision of service for staff and students
7. Sri Lanka

- PPM contribution to case notifications: 1%
- Key Strategies adopted for PPM-TB mainly include:
  - Research to establish baseline figures on TB management in the private sector
  - Strengthened collaborative activities between the national TB programme and private providers
  - Legislation for TB services in the private sector
  - Develop accreditation/certification mechanism for private practitioners providing TB services
  - Recording and reporting for TB cases managed in the private sector
  - Revised training packages for different provider types
  - Collaboration with the Sri Lanka Medical Association and professional medical colleges
  - Involvement of traditional medicine practitioners in case detection
  - Community awareness and referral linkages through Primary Healthcare Workers, other field level government officers, NGOs and volunteers functioning at MOH level
  - Intensified Social Mobilization and Partnership on activities on TB

8. Thailand

- PPM contribution to case notifications: 7.5%
- PPM activities include:
  - TB Screening by private providers
  - Diagnosis and treatment through private providers
  - Training and capacity building of private providers

9. Viet Nam

- PPM contribution to case notifications: 9.1%
- PPM activities include:
  - Engagement with all care providers for MDR-TB diagnosis and treatment
    - Physicians: through training, drug supply, reporting and recording forms
    - Pharmacies: training
    - Laboratories/training, equipment, forms
  - Incentives: in cash or kind (free drugs, diagnostics)
  - Regulations on mandatory TB case notification
  - Rational drug use: Availability / sale of TB drugs in private pharmacies (with prescription)
Panel discussion on India PPM strategy

The day closed with an in depth panel discussion on PPM progress in India and plans moving forward.

The evolution of PPM was chronicled highlighting major milestones. 2012 was profiled as a landmark year in the history of TB and PPM in India as several key policy changes were introduced, highlighted below:

- **TB notification**: TB was made notifiable via a notification order introduced on the 7th of May 2012.
- **E-surveillance for TB: 'Nikshay'** – case based e-notification system was launched. The tool has immensely improved monitoring of patients. The private notification module and mobile apps have more than 100,000 practitioners registered and more than 300,000 patients notified.
- **Ban on serology**: A ban was imposed on importing and using serological tests for the diagnosis of TB on the 7th of June 2012.

The ‘Standards for TB Care in India’ (STCI) were issued in 2014 to ensure universal access to early diagnosis and quality treatment for all TB patients. There is need for both public and private sectors to work towards achieving these standards for care.

The **IMA (Indian Medical Association) story**: The involvement of the Indian Medical Association has been critical for the sensitization and engagement of private practitioners in RNTCP TB control efforts in 16 Indian states. IMA has more than 204,338 members registered in their database and have notified 111,450 TB cases. Key activities undertaken by IMA include, sensitization and training of private doctors on the STCI; facilitation of TB notifications; establishment of Private Sector Peripheral Health institutions; and IEC activities such as newsletters, media outreach and celebrity endorsement. The IMA-lead
Indian Medical Professional Associations Coalition against TB (IMPACT) has also brought together other professional medical associations in efforts to end TB.

**IPAQT initiative with private laboratories:** The national programme has built partnerships with private laboratories, accrediting them after quality assurance. There have also been other private sector engagement models like IPAQT in coordination with Clinton Health Access Initiative (CHAI).

**The PPIA (Private Provider Interface Agency) model**
In 2013, innovative Private Provider Interface Agency (PPIA) models were launched in three Indian cities: Patna, Mehsana, and Mumbai. The PPIA is a pilot intervention to improve TB diagnostics and treatment by targeting referral linkages between various providers. Providers include formal providers such as specialized doctors, chemists, and laboratories as well as informal providers such as AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy) doctors. The PPIA model seeks to improve diagnostics and treatment of TB in urban populations by creating a network of providers that refer patients to obtain free tests (sputum smear microscopy and chest x-rays) and first-line drugs for TB using pre-paid vouchers. Patient support and adherence systems using digital technologies are also extensively used. PATH is implementing the model in Mumbai, Maharashtra, World Health Partners (WHP) in Patna, Bihar and the local government in Mehsana, Gujarat.
DAY 2

Session V (a): Field visits and Debrief on field visits
The participants were taken to PATH PPIA model sites in Mumbai. Participants had a first-hand experience of the various components of the model and operations at the field level. Field visits were conducted to the following private health facilities: Saifee Hospital, Godrej Memorial Hospital, M.H. Saboo Siddique Hospital, Sai Hospital and Vikas Nursing Home. This was followed by a debriefing session with a panel of PPIA collaborators and cured patients.

Session V(b): Discussion on Digital Tools
Co-Chairs: M. Raviglione, SS Lal
The digital revolution has taken over the world and newer gadgets and web applications are being developed almost everyday. The session had presentations on innovative digital health tools that have been developed and implemented for PPM in India by the Ministry of Health in collaboration with the World Health Organisation. They are presented below:

Nikshay and ‘Enhanced Nikshay’
A country-wide cloud-based digital initiative called ‘Nikshay’ was developed and launched across India in 2012.

This portal captures patient-wise information including from the private sector. It can be accessed online or through a mobile application and is used for notification of TB cases by private health facilities. Online training videos to guide use of the tool have been developed in local languages. Mobile messages are sent to programme officers and also to the patients who get registered. This has revolutionised the reporting system and was awarded the National E-Governance award (gold) from the Ministry of Information Technology (IT), Ministry of Administrative reforms, and the Government of India during the 17th National E-Governance Conference. There are plans underway to build an enhanced version of e-Nikshay by 2017, which will enable increased engagement with private health care establishments, and providers, and reduce all systemic delays. It will enable functional (online payments, GIS based epidemiology, treatment adherence, supply chain management) and technical solutions (enhanced IT systems, security, real time data, etc.).
99 DOTS was designed with support from Microsoft to provide 99% of the benefits of DOT at a fraction of the cost with real-time, reliable, actionable adherence information. It’s main features are automatic alerts and reminders to patients and supervisors for non-adherent patients and adherence records available to field staff and other stakeholders in the program.

Patients diagnosed through private practitioners receive free 99DOTS-wrapped medications. Once they take the pills they have to place a free call to a hidden number in the medicine wrapper – this enables monitoring as well as follow-up by healthcare staff and their private practitioners.

**Information Communication Technology (ICT)-based adherence systems**

Innovative ICT based adherence tools have been developed and are being tested with promising results such as high adherence rates (up to 92%). These tools include: mobile-based patient toolkit; DOTS provider toolkit; web-based miniature DOTS MIS; Community supervision toolkit; MIRA-TB screening and awareness mobilisation tools; community learning center; and electronic pill boxes. ICT applications have also been used for quick provider mapping using smart phones.
DAY 3

Session VI: Panel discussion: Engaging private laboratories and pharmacies
Co-chairs: R Swamikan and Qi Cui

The Lilly MDRTB partnership presented their model of engagement with pharmacies. Pharmacies are a primary point of care for patients with longer opening hours, convenient locations, easier access to free treatment and patient-friendly relations. To facilitate the engagement of pharmacists, a MOU was signed in 2012 between The Central TB Division, Directorate General of Health Services and the Indian Pharmaceutical Association (IPA), All India Organization of Chemists and Druggists (AIOCD), Pharmacy Council of India and SEAR Pharm Forum. The following activities were undertaken: awareness/training programs in pharmacy colleges; advocacy campaigns; felicitation of pharmacists and providing IEC material. The project was implemented across 25 districts of the four states of Telangana, Maharashtra, Tamil Nadu and West Bengal and provided new learnings: (i) DOTS though community pharmacies has potential for better TB care and prevention; (ii) involving pharmacists increases human resources for TB care and control; (iii) case finding and adherence increased along with reduced delay in initiation of treatment; (iv) 80% to 90% of the referred reached for testing within three days; (v) Strong support by the State and District TB control program is essential for the success of the initiative; (vi) Follow up and motivation are essential and effective mechanisms to keep pharmacists & associations engaged.

Role of Private labs and Pharmacies in PPM: M Pai shared his perspectives on engaging private laboratories and pharmacies in TB care provision based on evidence gathered through research and implementation. More than 70% of the TB patients in Mumbai and 94% of the TB patients in Patna first sought care in the private sector. Systematic review of literature has shown an average delay of two months for TB diagnosis and shopping around for care by patients to at least three health care providers before diagnosis. In addition, although new diagnostics help in faster diagnosis, the private sector is excluded from pricing agreements making them unaffordable.

IPAQT has brought a large number of private laboratories under its umbrella, and have made newer diagnostics available at lesser prices thereby improving access. Efforts are ongoing to engage pharmacists in diverse areas like: voucher schemes for free TB drugs in the private sector; increased referrals for case finding; improved case notification; provision of supervised treatment; TB drug use surveillance; TB prescription surveillance; antibiotic stewardship and rational use of drugs.
**IPAQT (Initiative for Promoting Affordable and Quality TB Tests, CHAI)**

The IPAQT network of labs has expanded and now includes 115 labs under its umbrella with 5,200 collection centers. It has been able to expand reach through its large network, and has improved accessibility and affordability of WHO-endorsed tests by subsidizing costs. This model also has the potential to contribute further to strengthening notification and surveillance mechanisms through its network. They also run awareness programme and CMEs for private providers to increase the demand and use of quality diagnostics for TB.

**Sessions VII. PPM for MDR-TB**

*Co-Chairs: R Sarin, N Mistry*

This session provided in depth information on the WHO Global framework on PPM for drug-resistant TB, best practices from across the world and PPM experiences from three countries - Indonesia, Philippines and Vietnam.

**WHO Global framework on PPM for drug resistant TB (PPM DR-TB):**

L Nguyen from WHO presented an overview of the global framework on PPM for drug-resistant TB which includes strategies for (i) engaging all relevant health-care providers (individual health-care providers, laboratories, health institutions, NGOs/professional associations/affected groups) (ii)selecting suitable tasks and functions (clinical, public health, patient-centered care, advocacy/regulation/funding mobilisation/social protection). WHO has also developed a PPM DR-TB Assessment Tool and a collection of best practices from 9 countries across six WHO regions.

**Country progress**

**Indonesia**

Only 30 -50 % of private hospitals are certified as DOTS providers; and providers working in private hospitals usually refer presumptive DR-TB cases to public facilities. Also data from Persahabatan Hospital the biggest MDR Treatment Center in Indonesia showed that 10% to 25% of presumptive DR cases were referred from private hospitals/ private providers. The rationale behind PPM in Indonesia is that specialists are often better equipped to provide care for patients with TB; and the potential role of universal health insurance in shifting patients to the private sector.

**Indonesian Society of Respirology (PDPI) with support from the American Thoracic Society and the Global Fund is implementing** a PPM project which utilizes the ISTC as a framework for standards of diagnosis, treatment and care. It also aims to empower and involve professional organizations, using its branches and members to support TB services in private hospitals through the introduction of linkages of the NTP at district or sub-district level with private hospital/private providers & providing framework for professional organizations for interaction with NTP as a recipient of donor funding and also provide a model for DR TB care. It is concluded that PDPI-PPM approach is successful for drug susceptible TB and can serve as a model for addressing DR TB.
However, there are pending issues that also need to be addressed and they are:

- Delays in initiation (There are private hospitals that are trained for DRTB but not yet functioning);
- Lack of public (Ministry of Health) supervision and support and lack of resources;
- Lack of commitment from private hospitals (as opposed to private providers);
- Poor infrastructure (lab, infection control, inpatient facilities);
- Better understanding of the impact of universal health insurance on treatment of DR TB.

**Philippines**

Programmatic management of drug-resistant TB (PMDT) has been implemented in the Philippines in a phased manner from the pilot phase (2000-2003); expansion phase (2003-2006); mainstreaming phase (2006-2008) and scale-up phase (2009-2016). It now has nationwide coverage with more than 19,500 patients under PMDT services. A significant proportion of the PMDT diagnostic facilities are located in private sector facilities: 15% of the microscopy centers, 4% of the Xpert MTB/RIF centers, 38% of TB culture centers and 25% of the DST centers. 20 treatment centers at the regional level (30% private), are linked through 108 Satellite Treatment Centers (2% private) at city level with the 284 village level iDOTS facilities (Integrated DOTS public facilities) to provide care for MDR-TB patients.

**Viet Nam**

A significant number of the MDR-TB patients were treated outside the public sector and had very poor treatment outcomes in Viet Nam. Several issues were found: treatment regimens were not always aligned with the NTP recommendations; lack of treatment follow-up resulting in high lost to follow up rate; absence of mechanisms to refer patients from non-PMDT providers; no quality assurance of second-line drugs treated by non-PMDT providers. To address these challenges, quasi-private providers are encouraged to refer MDR-TB patients to the public sector for treatment and are being trained to improve TB case management, follow NTP treatment guidelines, and notify cases. Future activities planned include, training for non-PMDT providers on MDR-TB treatment; establishment of referral systems between PMDT and non PMDT providers for treatment continuation; setting up of quality control systems and pharmacovigilance for drugs used by non PMDT providers. In addition, there are plans to include MDR-TB in health insurance schemes in Vietnam.

**Sessions VIII. Strategies for Costing and Sustainable Financing for PPM Scale-up**

*Co-Chairs: D Weil and JM Chakaya*

The last session of the meeting focussed on sustainable financing and costing patterns of various PPM pilots/models that have been implemented worldwide.

M Yassin from the Global Fund presented an analysis of PPM activities and costs in Global Fund country concept notes.
Following this, the USAID strategy for private sector engagement was presented along with experiences from country PPM implementers:

- Myanmar Medical Association
- Population Services International (PSI), Myanmar (Social Franchising)
- Greenstar Pakistan (Social Franchising)
- IRD, Pakistan (Social business)
- Gates PPIA models, India

The costing patterns as seen from the presentation of different models highlighted that PM is not cost intensive and can be scaled up in order to reach the unreached and ‘leave no one behind’.

- The cost /patient is in the range of 80- 175 USD and is well within the budget allocated per patient by the NTPs
- The recurring costs include commodity costs and programmatic costs such as staff costs (field and office staff, incentives), diagnostics and ICT costs. This could be variable across locations.
- The urban pilot models incurred higher costs in comparison to the rural models.
- On scale up, it was observed that with increase in volumes or coverage, the costs reduce significantly. This has been demonstrated via the implementation of the Gates supported PPIA models in Patna, Mumbai and Mehsana. The IRD PPM model in Pakistan is being scaled up in co ordination of the Ministry of Health.

Costs per case – PPIA models
CLOSING SESSION
The closing session was led by Mario Raviglione who summarized the rich discussions and valuable insights drawn from the global meeting. Participants expressed their appreciation for the meeting and committed to strengthen efforts to engage all care providers. Mukund Uplekar gave the final vote of thanks.
# Annex 1. Agenda

## 29 February 2016
Eleventh Global Meeting on Public-Private Mix for TB Care and Prevention

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:00</td>
<td>Registration</td>
<td></td>
</tr>
</tbody>
</table>

### Inauguration Ceremony and Opening

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 – 10:00</td>
<td>Welcome: World Health Organization (WHO)</td>
<td>M Raviglione, S Sarkar, H Bekedam</td>
</tr>
<tr>
<td></td>
<td>Welcome: Partners and Co-Chairs of the PPM Subgroup</td>
<td>SS Lal, W Wells, S Prasad, M Yassin, S Sahu</td>
</tr>
<tr>
<td></td>
<td>Inaugural remarks: Director General, Indian Council of Medical Research (ICMR) &amp; Secretary, Department of Health Research</td>
<td>S Swaminathan</td>
</tr>
<tr>
<td></td>
<td><strong>Inaugural address:</strong> Director General of Health Services, Ministry of Health and Family Welfare, Government of India</td>
<td>J Prasad</td>
</tr>
<tr>
<td></td>
<td>Lamp lighting ceremony</td>
<td>Dignitaries and global and national partners</td>
</tr>
</tbody>
</table>

### Session I: Global Context, Meeting Objectives and Agenda

**Co-Chairs: S Sarkar and W Wells**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 – 10:10</td>
<td>Global perspective: The role of PPM in the context of the End TB Strategy and Sustainable Development Goals</td>
<td>M Raviglione</td>
</tr>
<tr>
<td>10:10 – 10:20</td>
<td>Global overview of PPM for TB care, meeting objectives and agenda</td>
<td>M Uplekar</td>
</tr>
<tr>
<td>10:20– 10:30</td>
<td>Discussion</td>
<td></td>
</tr>
</tbody>
</table>

**COFFEE 10:30 – 11:00**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Co-Chairs</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 - 11:10</td>
<td>Scaling up private provider engagement in Africa</td>
<td></td>
<td>JM Chakaya</td>
</tr>
<tr>
<td>11:10 – 12:10</td>
<td>Strategic country approaches to PPM scale up:</td>
<td>E Getachew</td>
<td>A Woldegeorgis</td>
</tr>
<tr>
<td></td>
<td>Ethiopia</td>
<td></td>
<td>N Nortey</td>
</tr>
<tr>
<td></td>
<td>Ghana</td>
<td></td>
<td>J Masini</td>
</tr>
<tr>
<td></td>
<td>Kenya</td>
<td></td>
<td>J Mpunga</td>
</tr>
<tr>
<td></td>
<td>Malawi</td>
<td></td>
<td>G Akang</td>
</tr>
<tr>
<td></td>
<td>Nigeria</td>
<td></td>
<td>A Tarimo</td>
</tr>
<tr>
<td></td>
<td>Tanzania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:10 – 12:30</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LUNCH 12:30 – 13:30**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Co-Chairs</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30 – 13:50</td>
<td>Scaling up private practitioner engagement in Asia</td>
<td></td>
<td>A Khan</td>
</tr>
<tr>
<td>13:50 – 14:40</td>
<td>Strategic country approaches to PPM scale up:</td>
<td>K Sediq</td>
<td>M Sarkar</td>
</tr>
<tr>
<td></td>
<td>Afghanistan</td>
<td></td>
<td>S Laksono</td>
</tr>
<tr>
<td></td>
<td>Bangladesh</td>
<td></td>
<td>S Aung</td>
</tr>
<tr>
<td></td>
<td>Indonesia</td>
<td></td>
<td>E Qadeer</td>
</tr>
<tr>
<td></td>
<td>Myanmar</td>
<td></td>
<td>N Pallewatte</td>
</tr>
<tr>
<td></td>
<td>Pakistan</td>
<td></td>
<td>B Kladphuang</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td></td>
<td>H Thuy</td>
</tr>
<tr>
<td></td>
<td>Thailand</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vietnam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:40 – 15:00</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COFFEE 15:00 – 15:30**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Co-Chairs</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30 - 17:30</td>
<td>In-depth review of India’s PPM strategy and progress in scaling up implementation</td>
<td>Panel: RNTCP and partners</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead: S Khaparde</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D Gupta</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D Behera</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S K Utture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P Nimavat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P Shukla</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D Shah</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V Oswal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anil S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sreenivas A</td>
<td></td>
</tr>
</tbody>
</table>
### 1 March 2016

**Field Visits**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 – 14:00</td>
<td>Field visits to project sites in Mumbai preceded by an explanatory video</td>
</tr>
</tbody>
</table>

**Session V: Debrief on Field Visits and Discussion on Digital Tools**  
**Co-Chairs: M Raviglione and SS Lal**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00 – 15:30</td>
<td>Working lunch and probing interactive session with a panel of project stakeholders</td>
</tr>
</tbody>
</table>

**Lead:** S Vijayan  
**Panel:**  
- T Shah: Chest Physician  
- D Chaubey: GP  
- S Gangurde: Hosp CEO  
- Richa: X-ray facility  
- A Phadke: Laboratory  
- Shambaji: Pharmacy

**Coffee 15:30 – 16:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
</table>
| 16:00 – 17:30 | Exploiting the digital revolution for PPM expansion  
|            | Digital tools demonstrations                   |

**Discussant:** A Khan

### 2 March 2016

**Session VI: Panel Discussion: Engaging Private Laboratories and Pharmacies**  
**Co-Chairs: R Swamickan and Qi Cui**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:30</td>
<td>Engaging private laboratories and pharmacies in TB care provision</td>
</tr>
</tbody>
</table>

**IPAQT**  
**Pharmacy engagement in India**  
**Pharmacy scale up plan of Pakistan**

**M Pai**  
**H Dabas**  
**S Prasad**  
**H Hadi**
### Session VII: Round Table: PPM for MDR-TB
**Co-Chairs: R Sarin and N Mistry**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30 – 09:35</td>
<td>Overview of the global framework on PPM for MDR-TB</td>
<td>L Nguyen</td>
</tr>
<tr>
<td></td>
<td>Working Models:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indonesia</td>
<td>E Burhan</td>
</tr>
<tr>
<td></td>
<td>Kenya</td>
<td>E Masini</td>
</tr>
<tr>
<td></td>
<td>Philippines</td>
<td>A Medina</td>
</tr>
<tr>
<td></td>
<td>Vietnam</td>
<td>H Thuy</td>
</tr>
</tbody>
</table>

**COFFEE 10:30 – 11:00**

### Session VIII: Strategies for Costing and Sustainable Financing for PPM Scale-up
**Co-Chairs: D Weil and WWells**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 – 13:00</td>
<td>An analysis of PPM components in the Global Fund country Concept Notes</td>
<td>M Yassin</td>
</tr>
<tr>
<td></td>
<td>USAID’s support for private sector engagement in TB care provision</td>
<td>W Wells</td>
</tr>
<tr>
<td></td>
<td>Costing and financing of PPM scale up with a focus on PPIA models in India</td>
<td>P Dewan and S Deo</td>
</tr>
<tr>
<td></td>
<td>Myanmar Medical Association model</td>
<td>T N Maung</td>
</tr>
<tr>
<td></td>
<td>PSI model in Myanmar</td>
<td>P P Swe</td>
</tr>
<tr>
<td></td>
<td>Green Star model in Pakistan</td>
<td>K Farough</td>
</tr>
<tr>
<td></td>
<td>IRD model in Pakistan</td>
<td>A Khan</td>
</tr>
</tbody>
</table>

### Closing session

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00 – 13:10</td>
<td>Closing remarks</td>
<td>M Raviglione</td>
</tr>
<tr>
<td>13:10 – 13:15</td>
<td>Vote of Thanks</td>
<td>M Uplekar</td>
</tr>
</tbody>
</table>
Annex 2. List of participants

COUNTRY REPRESENTATIVES

AFRICAN REGION

ETHIOPIA
Etsegenet Getachew
National TB Programme, Ethiopia

GHANA
Nii Nortey Hanson Nortey
National TB Programme, Ghana

KENYA
Enos Masini
National TB Programme, Kenya

MALAWI
Hassan Abdullah
Private Practitioner, Malawi

James Mpunga
National TB Programme, Malawi

NIGERIA
Emperor Ubochioma
National TB Programme, Nigeria

TANZANIA
Allan N Tarimo
National TB Programme, Tanzania

Liberate Mleoh
National TB Programme, Tanzania

Samwel Okinyi Ogillo
Association of Private Health Facilities in Tanzania

EASTERN MEDITERRANEAN REGION

AFGHANISTAN
Lutfullah Manzoor
National TB Programme, Afghanistan

Namatullah Ahmadzada
National TB Programme, Afghanistan

PAKISTAN
Jaffar Ilyas
Merci Corps Pakistan

Ejaz Qadeer
National TB Programme, Pakistan

SOUTH-EAST ASIAN REGION

BANGLADESH
Chhewang
National TB Programme, Bangladesh

Hamid Salim
National TB Programme, Bangladesh

Mohammad Mojibur Rahman
National TB Programme, Bangladesh

Mohammad Sayadul Basher
National TB Programme, Bangladesh

INDIA
Jagdish Prasad
Ministry of Health & Family Welfare, India

Sunil Khaparde
Ministry of Health & Family Welfare, India
Devesh Gupta
Ministry of Health & Family Welfare, India

Digamber Behera
National Task Force for Medical Colleges

Rohit Sarin
National Institute of TB and Respiratory Disease

Rajendra Prasad
National Task Force for Medical Colleges

Abhay Gajbhiye
State Government of Maharashtra, India

Amar Shah
Central TB Division, India

Anil S
State Government of Karnataka, India

Arun Bamne
Municipal Corporation of Greater Mumbai, India

Bavin Vadera
Central TB Division India

Camilla Rodrigues
Hinduja Hospital, India

Daksha Shah
Municipal Corporation of Greater Mumbai, India

Kamlesh Shende
Food and Drugs Administration, India

Manjiri Gharat
Indian Pharmaceutical Association

Mohan Kohli
RNTCP India

Nadeem Khan
State Government of Maharashtra, India

Pankaj Nimavat
State Government of Gujarat, India

Sanjeev Kamble
State Government of Maharashtra, India

Sarang Deo
Indian School of Business

Shivkumar Utture
Indian Medical Association

Sudhir U Meshram
North Maharashtra University, Jalgoan

Sunil Kapoor
Harrow Medical Center, India

Sunil Kumar
State Government of Kerala, India

Vikas Oswal
Sai Hospital, India

SRI LANKA
Kanthi Ariyarathe
National TB Programme, Sri Lanka

Nirupa Pallewatte
National TB Programme, Sri Lanka

MYANMAR
Phyu Phyu SWE
PSI, Myanmar

Thet Naing Maung
Myanmar Medical Association

Si Thu Aung
National TB Programme, Myanmar
<table>
<thead>
<tr>
<th>Country</th>
<th>Organization</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHILIPPINES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Amelia de la Cruz Medina</strong></td>
<td>Department of Health, Philippines</td>
</tr>
<tr>
<td><strong>THAILAND</strong></td>
<td><strong>Somsri Charoenpichitnon</strong></td>
<td>Bangkok Metropolitan Administration, Thailand</td>
</tr>
<tr>
<td></td>
<td><strong>Usanee Ungcharoen</strong></td>
<td>Ministry of Public Health, Thailand</td>
</tr>
<tr>
<td></td>
<td><strong>Booncherd Kladphuang</strong></td>
<td>Ministry of Public Health, Thailand</td>
</tr>
<tr>
<td><strong>VIETNAM</strong></td>
<td><strong>Nguyen Dinh Liem</strong></td>
<td>Pham Ngoc Thach Hospital, Vietnam</td>
</tr>
<tr>
<td></td>
<td><strong>Hoang Thi Thanh Thuy</strong></td>
<td>National TB Programme, Vietnam</td>
</tr>
<tr>
<td><strong>PATIENTS AND COMMUNITY REPRESENTATIVE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Blessina Kumar</strong></td>
<td>Global Coalition of TB Activists</td>
</tr>
<tr>
<td><strong>PARTNER REPRESENTATIVES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ACCESS HEALTH INTERNATIONAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Nishant Chavan</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AMERICAN THORACIC SOCIETY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Philip Hopewell</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Fran Du Melle</strong></td>
<td></td>
</tr>
<tr>
<td><strong>BRAC</strong></td>
<td><strong>Md Akramul Islam</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Shayla Islam</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CLINTON HEALTH ACCESS INITIATIVE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Harkesh Dabas</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Rigveda Kadam</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ELI LILLY</strong></td>
<td><strong>Sunita Prasad</strong></td>
<td></td>
</tr>
<tr>
<td><strong>GATES FOUNDATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Puneet Dewan</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Sameer Kumta</strong></td>
<td></td>
</tr>
<tr>
<td><strong>GLOBAL HEALTH STRATEGIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Indira Behara</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ICDDR,B</strong></td>
<td><strong>Sayera Banu</strong></td>
<td></td>
</tr>
<tr>
<td><strong>INDONESIA SOCIETY OF RESPIROLOGY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Erlina Burhan</strong></td>
<td></td>
</tr>
<tr>
<td><strong>INTERACTIVE RESEARCH &amp; DEVELOPMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Aamir Khan</strong></td>
<td></td>
</tr>
<tr>
<td><strong>INSTITUTE OF TROPICAL MEDICINE BELGIUM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Vijayashree HY</strong></td>
<td></td>
</tr>
<tr>
<td><strong>KHPT</strong></td>
<td><strong>Gururaj Patil</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Oommen George</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Aditi Krishnamurthy</strong></td>
<td></td>
</tr>
<tr>
<td><strong>KNCV</strong></td>
<td><strong>Bey Sonata</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Mustapha Gidado</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>D'Arcy Richardson</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MANAGEMENT SCIENCES FOR HEALTH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Mohammad Hossain</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MCGILL UNIVERSITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Madhukar Pai</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Srinath Satyanarayana</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Amrita Daftary</strong></td>
<td></td>
</tr>
</tbody>
</table>
OFFICE OF THE UN SPECIAL ENVOY FOR TB
Jane Coyne

PATH
Lal Sadasivan
Shibu Vijayan
Evan Simpsons
Intekhab Alam Shaikh
Jasvinder Singh
Jesslin Marie Grude
Kateryna Gamazina
Muktai Panchal
Pratyaya Mitra
Praveen Kandasamy
Radha Taralekar
Ravdeep Gandhi
Rishabh Chopra
Sushil Kumar Pandey
Tran Thi Huong Lien
Vaishnavi Jondhale
Varsha Nagwekar

REACH, INDIA
Nalini Krishnan
Ramya Ananthakrishnan

STOP TB PARTNERSHIP
Sahu Suvanand

THE FOUNDATION FOR MEDICAL RESEARCH
Nerges Mistry
Eunice Lobo

THE GLOBAL FUND
Mohammed Yassin
Lalla Haidara
Anindita Roy
Qi Cui
Meixun Jin
Richard Cunliffe
Kouadjani Koffi Plaikessi
John Ochero

Shukrat Aripov
Agnes Dzokoto
Perry Mwangala
Wilson Lo
Sai Kumar Pothapregada
Di Wu
Mohamed Farag

THE UNION
Jamhoih Tonsing
Kavita Ayyagari

USAID
William Wells
Kyaw Myo Lwin
Lisa Stevens
Reuben Swamickan
Asfawesen GebreYohannes
Edgardo M Gonzaga

WORLD HEALTH PARTNERS
Prachi Shukla

WORLD VISION INDIA
Sushma Cornelius
Chintana Thamsuwan

INDEPENDANT CONSULTANTS
Daisy Lekharu
Chapal Mehra

WHO SECRETARIAT

WHO AFRO
Daniel Karimi Kibuga

WHO Ethiopia
Kassa Hailu

WHO Malawi
Nyasulu Ishmael
WHO Kenya
Karimi Joel Kangangi

WHO Tanzania
Neema Simkoko

WHO SEARO
Swarup Kumar Sarkar
Khurshid Alam Hyder

WHO India
Hendrik Bekedam
Sreenivas Achuthan Nair
Malik Parmar
Ranjani Ramachandran

WHO Bangladesh
Vikarunnessa Begum

WHO Thailand
Mukta Sharma

WHO HQ
Mario Raviglione
Diana Weil
Mukund Uplekar
Hannah Monica Dias
Linh Nguyen
Soleil Labelle