Question 2: *What are effective and sustainable mechanisms or processes to integrate local, community, sub-national, national, and regional voices, priorities, and contributions into health system strengthening efforts?*

Leveraging Fixed Amount Awards: Strengthening Health Systems to Provide Equitable Differentiated TB Care in India

Mr. Venkatesh Roddawar, Dr. Yogesh Patel; Ms. Chandramaulika R, and Dr. Asif Shafie – JSI Research & Training Institute, Inc., TB Implementation Framework Agreement (TIFA)
Dr. Shamim Manan, William J Clinton Foundation, India; Dr. Debadutta Parija, Jhpiego, India; Ms. Prachi Shukla, World Health Partners, India
Dr. Raghuram Rao, Central TB Division, Ministry of Health and Family Welfare; Dr. Bhavin Vadera, USAID India

Context

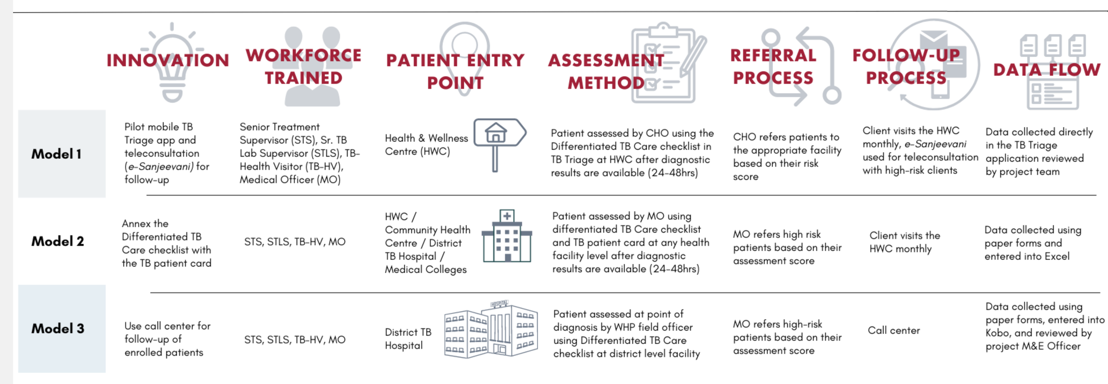
Describe the context in which the activity takes place. What is the health problem that you are trying to solve? What health system challenges contribute to this problem? Which voices were engaged in solving this problem before your activity started? Who was missing from the discussion and what was the impact of that absence?

- Tuberculosis (TB) remains a significant contributor to mortality in India. WHO estimates TB-related mortality in India at 494,000 (2022). A significant proportion (65%) of these deaths occur within the first two months of treatment.
- The health care system often fails to meet the requirements of people who have clinically severe TB and/or comorbidities. The prevailing standardized approach to TB care in India overlooks individual needs and fails to connect them to services for other health and social challenges.
- Recognizing the limitations of the standard ambulatory treatment approach to meet diverse needs, the National TB Elimination Program (NTEP), stewarded by the Central TB Division (CTD), acknowledged the need for a new approach to reduce preventable deaths among people with TB.
- Despite the NTEP's issuance of differentiated TB care guidance in January 2021, implementation by states has been limited by the lack of demonstrated operational models and tools.
- The COVID-19 pandemic revealed health system weaknesses, underscoring the need to strengthen primary health care service delivery. In particular, referral pathways for COVID-19 and TB services were unclear, resulting in inadequate access and loss of clients within the system.
- CTD recognized an opportunity to test differentiated care models through the USAID-funded TB Implementation Framework Agreement (TIFA) project implemented by JSI. CTD and JSI solicited applications and funded 12-month fixed amount awards, known as TB commitment grants. CTD selected three intervention models, tailored to community, primary, and secondary care facilities. Grantees implemented these models in urban and rural contexts across eight states. These models aim to strengthen the screening process, ensuring the identification of people with TB at high-risk for morbidity and mortality and facilitating their referral to appropriate service levels for needs that cannot be met at their point of entry into the health system.

Activity Description

What systems-thinking approach did you take to address the health problem identified above? What government agencies or other stakeholders did you work with, why did you choose them, and how did you engage them? Describe in detail the process or mechanism used to integrate local, community, sub-national, national, or regional voices, priorities, and contributions into this approach. How did you build community, government/stakeholder ownership or buy-in? It may be useful to describe your theory of change.

- Testing differentiated care models through TB commitment grants is accelerating India's TB elimination efforts and strengthening the health system.
- As part of USAID's Global Accelerator to End TB, TIFA aims to increase commitment from and strengthen the capacity of governments, civil society, and the private sector to accelerate countries' progress in reaching global and national TB targets.
- In India, TIFA collaborates with USAID and CTD to award grants and contracts to government entities, international and local nongovernment organizations, and private sector partners. These awardees implement catalytic activities, helping the NTEP to test, critically assess, prioritize, and/or scale new interventions to fill program gaps and accelerate progress of its 2025 TB elimination strategy. The TB program in India is well-funded and has strong government support. CTD uses TIFA grants to identify key interventions and generate knowledge and approaches that NTEP can scale using existing resources.
- TIFA issued a request for application to identify organizations to develop and implement the models. TIFA awarded grants to Jhpiego, William J. Clinton Foundation, and World Health Partners, with each grantee implementing a different model targeting a specific level of service delivery. The grantees engaged in a co-design process with TIFA, USAID, and CTD that resulted in detailed activity plans, budgets, and agreed-upon deliverables.
- Grantees implemented their models in 11 districts across eight Indian states. CTD and partners selected the districts to reflect disparities in care seeking, quality, and structures of health service delivery across India on the basis of geography, client load, infrastructure, and facilities.
- Grantees initiated each of the three models in the second quarter of 2022 and completed most activities by May 2023. They assessed intervention facilities to ensure availability of diagnostics, and identify health care provider capacity strengthening needs and referral sites and services. All models began by screening notified people with TB for risk using 16 parameters, including 11 clinical assessments, four blood tests, and chest X-ray. Free diagnostics for the most prevalent health conditions are now widely available at the primary health care level in India. Those who need higher-level care are referred to secondary or tertiary facilities for their conditions, thereby increasing the chances of successful TB treatment.
- The models used different approaches to client follow-up. World Health Partners established a call center, while Jhpiego used the existing teleconsultation facility *e-Sanjeevani*.



DIFFERENTIATED CARE MODELS

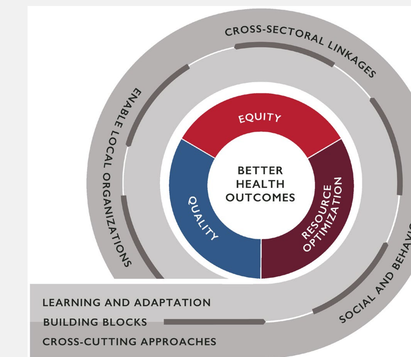
	INNOVATION	WORKFORCE TRAINED	PATIENT ENTRY POINT	ASSESSMENT METHOD	REFERRAL PROCESS	FOLLOW-UP PROCESS	DATA FLOW
Model 1	Pilot mobile TB Triage app and teleconsultation (*e-Sanjeevani*) for follow-up	Senior Treatment Supervisor (STS), Sr. TB Lab Supervisor (STLS), TB-Health Visitor (TB-HV), Medical Officer (MO)	Health & Wellness Centre (HWC)	Patient assessed by CHO using the Differentiated TB Care checklist in TB Triage at HWC after diagnostic results are available (24-48hrs)	CHO refers patients to the appropriate facility based on their risk score	Client visits the HWC monthly, *e-Sanjeevani* used for teleconsultation with high-risk clients	Data collected directly in the TB Triage application reviewed by project team
Model 2	Annex the Differentiated TB Care checklist with the TB patient card	STS, STLS, TB-HV, MO	HWC / Community Health Centre / District TB Hospital / Medical Colleges	Patient assessed by MO using differentiated TB Care checklist and TB patient card at any health facility level after diagnostic results are available (24-48hrs)	MO refers high risk patients based on their assessment score	Client visits the HWC monthly	Data collected using paper forms and entered into Excel
Model 3	Use call center for follow-up of enrolled patients	STS, STLS, TB-HV, MO	District TB Hospital	Patient assessed at point of diagnosis by WHP field officer using Differentiated TB Care checklist at district level facility	MO refers high-risk patients based on their assessment score	Call center	Data collected using paper forms, entered into Kobo, and reviewed by project M&E Officer

Activity Impact

How did this activity strengthen the health system? Which components of the health system did you act on (for example, did you support improvements in financing, cross-sectoral coordination, governance, local ownership, information, human resources, behavior of health system actors, service delivery, or medical products, vaccines, or technologies)? How does this activity contribute to health equity, quality or resource optimization? Be sure to explain the causal pathway by which your engagement of new voices contributed to this impact.

This initiative has enhanced capacity, improved infrastructure, streamlined referral pathways, promoted innovation, facilitated knowledge exchange, and guided policy development and scale-up efforts. The use of TB commitment grants to test a variety of models is demonstrating potential to strengthen health system ability to improve TB care delivery.

- **Equity:** Differentiated TB care prioritizes equity by addressing individuals' needs and ensuring they receive necessary services. This approach facilitates referrals between levels of care based on individual risk and service needs and the availability of services and diagnostics.
- **Quality:** The systematic screening of all clients for high-risk factors facilitates early detection and treatment of comorbidities, meeting individual needs, and reducing TB-related morbidity and deaths. This emphasis on high-quality care strengthens the overall health system by promoting tailored and comprehensive TB management.
- **Resource optimization:** This activity used existing resources within the health system to strengthen service delivery. Each grantee conducted a comprehensive baseline assessment to evaluate the availability of essential diagnostics and therapeutics required for differentiated care. Based on these assessments, the grantees developed referral maps and established pathways to guide clients to appropriate services. When facilities had resource constraints, such as a shortage of required blood tests, X-rays, or pulse oximeters, grantees leveraged the public-private mix scheme under the National Health Mission and referred clients to private sector providers. The models demonstrated effective use of existing resources, including staff, to meet diverse needs.



Evidence

What evidence do you have that the integration of local, community, sub-national, national, and regional voices, priorities, and contributions in this approach was successful? What evidence do you have that this approach led to health or health system impacts? How can you best show what your activity accomplished? How do you know that you met your goals? Is the evidence able to be measured? Graphs or charts may be useful here to show this evidence.

States, development partners, and the national program have had a crucial role in adapting and scaling approaches to achieve outcome goals. Among the **2,452** people with TB served in the three models, **81%** were found to have at least one abnormal clinical parameter; **62%** were identified as high-risk with more than three abnormal parameters; and **7%** were referred to other services such as diabetes and hypertension care and treatment.

The three demonstration models have yielded valuable tools and outcomes:

- **Learning resource package:** Grantees developed and harmonized a comprehensive learning resource package to train health care providers. This ready-to-use package can help states scale up the intervention, promoting widespread adoption and implementation.
- **Facility assessment:** A total of **442** intervention facilities (419 primary health and wellness centers and 23 secondary health facilities) were assessed for availability of essential diagnostics and therapeutics.
- **Health care provider training:** Grantees trained **383** people, including community health and medical officers and NTEP staff (senior treatment and laboratory supervisors and TB health visitors) in the differentiated care approach. Additionally, they provided standardized tools and checklists to identify clients' needs and establish referral pathways.
- **Integration of assessment parameters:** Grantees incorporated assessment parameters into existing patient cards. This allows health care providers to assess client risk as part of the routine screening process, improving the quality of care and data collection.
- **TB Triage mobile application:** One model piloted the use of TB Triage, a mobile-based application for assessing high-risk individuals. The pilot will guide the national program in integrating this tool into India's *Ni-Kshay* portal, the national electronic TB database. This will streamline recording of client data, including comorbidities, and enhance the efficiency and effectiveness of the overall TB management system.
- **Client follow up:** One grantee tested a call-center approach to follow up with clients and verify their ability to access referral sites and receive services. High-risk people with TB were followed up after 15 days, at end of intensive phase, and at end of treatment.
- **National consultative workshop:** In May 2023, TIFA supported CTD to hold a workshop on differentiated TB. The workshop convened representatives from 22 state TB programs, the three TIFA grantees, and partners such as WHO and the National Institute of Epidemiology. The workshop facilitated knowledge exchange by showcasing experiences from different models implemented by states and development partners.
- **Action planning and scale-up:** During the workshop, participants presented macro-plans containing timelines to complete the resource mapping activities, training, and implementation. Each state also outlined how it is planning to overcome state-specific challenges while scaling differentiated care. The workshop outcomes, along with the updated standard operating procedures, will guide states in developing action plans for the rollout of differentiated care.
- **Leadership and governance:** From the start, CTD led this initiative, selecting the topic, reviewing and approving the request for application, selecting the awardees, engaging state TB programs, and providing feedback during implementation. The May 2023 workshop enabled CTD to orient more state TB leaders to differentiated care and garner their commitment to implementing it. TIFA recognized and supported NTEP's leadership by responding to CTD's request, providing grants to help the government test models, and helping grantees coordinate with state TB programs.

These outcomes highlight the approaches and results achieved through the demonstration models that were implemented through TB commitment grants. They will facilitate equitable health care delivery and enhanced data management in the fight against TB in India.

Facilitators

What aspects of the health system, context, or external partner support helped make this successful? For example, were there existing working groups in place that enabled efficient coordination between stakeholders on this activity? Did you use a tool or knowledge resource from a global partner like WHO or UNICEF to help inform your activity?

- **Political commitment and support**: The NTEP in India, with the technical support of WHO, led the testing and adaptation of differentiated care models through TB commitment grants. State administrations provided administrative support and initiated plans to sustain and expand the approach.
- **Grantee technical assistance:** Jhpiego, William J. Clinton Foundation, and World Health Partners provided essential technical assistance, strategic thinking, and solutions. Their tools for risk assessment, identification of high-risk people with TB, and referral guidance including the TB Triage app will support NTEP to overcome health system constraints to delivering differentiated care.
- **Coordination and information sharing**: Grantees facilitated effective coordination among partners at the district and state levels, establishing channels for disseminating information and best practices.
- **Use of telemedicine:** Grantees used *e-Sanjeevani* to follow up with high-risk people with TB and provide teleconsultation services. This streamlined the follow-up process, particularly at primary health care facilities.
- **Integrated service delivery:** The differentiated care models fostered the integration of services across primary, secondary, and tertiary facilities, establishing a comprehensive cascade of assessment and referrals.
- **State readiness:** States' willingness to conduct differentiated care activities in selected districts catalyzed the identification of implementation sites and laid the foundation for future scale-up.

Challenges

What were some problems or challenges that you faced during your activity implementation? Did you expect these challenges or were they unanticipated? How did you respond to these challenges?

- **Resource availability:** Meeting client needs under a differentiated care model is challenged by gaps in the availability of diagnostic equipment and staff shortages in facilities.
- **High health center attendance:** Although the Indian health system aims to have one primary health center for every 20,000–30,000 people and one community health center for every 80,000–120,000, these centers often have higher-than-expected attendance and struggle to meet the comprehensive care needs of all clients.
- **Bed availability:** Limited bed availability in referral facilities is an obstacle for people who require in-patient services for complications related to TB treatment or comorbid conditions.
- **Referral leakages:** It is difficult to document the outcomes of referrals because there is no dedicated referral tracking and feedback system.
- **Lack of adult malnutrition management:** The health system has a capacity gap for treating adult undernutrition, a prevalent condition among people with TB.
- **Scoring calculation acceptance:** Inconsistencies in risk identification occur across facilities and geographic locations due to variations in medical practitioners' understanding of "high risk" and interpretation or acceptance of risk scoring calculations.

Lessons Learned

What lessons have you learned while you implemented this activity? How will this impact future activities or approaches? What advice would you give to other implementers and health systems actors in other countries that might want to adapt your approach?

- **National stewardship:** The National TB Elimination Program led the testing of differentiated TB care models. It conducted preparatory activities, guided the co-creation of models, and initiated crucial communications with grantees and stakeholders.
- **Facilitation of catalytic change through TB commitment grants:** The three 12-month TB commitment grants allowed the CTD to gather evidence of strategies that can be scaled up and to identify areas needing improvement. Nine-month follow-on grants will enable grantees to overcome challenges faced during the initial implementation phase.
- **Resource optimization:** Sustainable implementation of interventions relies on the optimal use of available resources. Providing temporary human resource support to high-burden centers during the integration of differentiated care facilitates effective implementation.
- **Local contextualization:** Adapting interventions to the local context promotes acceptance and efficiency. It is essential for the health system to align project activities according to local needs and resources. Coordination with, and openness to, suggestions from states and partners are key to integration.
- **Infrastructure strengthening:** Improving diagnostic infrastructure is crucial for reducing turn-around time in assessing people with TB for morbidity and mortality risks.
- **Referral matrix and follow-up:** A matrix to facilitate appropriate referrals is needed. Identifying high-risk people with TB and referring them for treatment should be the starting point of the differentiated care cascade, followed by follow-up, preferably at the primary health care facility level.
- **Interim results:** While grantee models are still in the preliminary phase, interim results suggest progress toward the initiative's goal of integrating differentiated TB care. Follow-on grants will allow grantees to close identified gaps, test improvements, and collaborate with states to plan scale-up.