

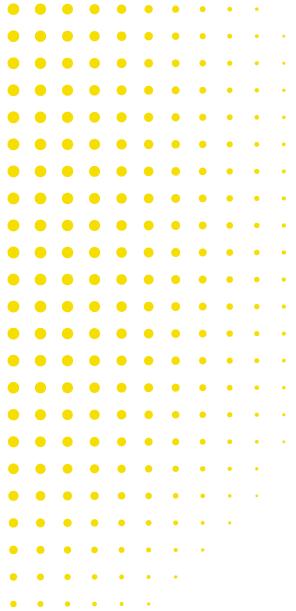
# **The TB Quarterly Update**

**Innovative Approaches to Finding and Treating Missing People with TB** 

APRIL/MAY 2023 - SPECIAL EDITION







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## **World TB Day Special Edition**

## "Yes! We Can End TB"



Yes, we can end TB in India. India is committed to realizing its target to end TB by 2025, five years ahead of the SDG milestones. Backed by strong political commitment, we are working in mission mode towards our goal by deploying evidence-based interventions, scaling up high-end diagnostic solutions and adopting newer drugs—supported by a robust data management system (Ni-Kshay). Active participation by community and civil society is an integral part of India's TB elimination strategy. India's fight against TB is also reinforced by novel initiatives like the community-led patient adoption initiative, the sub-national disease burden estimation exercise, decentralization and multisectoral collaboration. In 2022, India has achieved its highest ever notifications (2.42 million), thereby significantly reducing the number of missing cases. While some districts have already achieved the TB free status in India, others are in different stages of progress towards this goal. With multipronged approaches, we are on the right path to end TB in India.

## Dr. Rajendra P. Joshi,

Deputy Director General,
Central TB Division, Ministry of Health and Family Welfare, India



**Yes, we can end TB** because we now have the tools and knowledge to do so, but we must walk the talk.

Dr. Chukwuma Anyaike,

Director and National Coordinator,
National Tuberculosis, Leprosy and Buruli Ulcer Control Programme, Nigeria



**Yes, we can end TB** because it's preventable, curable and in many countries active case finding has already bounced back from the challenges of COVID-19 to levels that are higher than 2019.

Mark Edington,

Head, Grant Management Division, The Global Fund



**Yes, we can end TB**, not in a century, but in our lifetime. I had first-hand experience in Varanasi, India, during the One World TB Summit held on World TB Day, to see how real political will, technology and professionalism coupled with passion can tremendously change TB response. These are the sort of ambitions and bold targets we, the TB community, expect of all countries to match their commitments with sustained domestic financial resources. So, it is an emphatic yes for me and yes, we can end TB, because we have the tools, the expertise and the right people. But we urgently need that political will backed with sustainable financial resources.

## **Austin Arinze Obiefuna.**

Vice Chair,

**Stop TB Partnership** 



Civil society organizations and TB-affected communities are always ready, self-organized and united. They are great partners to support the country and the national TB program to meet and achieve the national TB targets and find the people who are missing TB services once they are funded, empowered and meaningfully engaged in the national TB response. Thus, **yes**, **we can end TB!** It is time to invest, save lives and contribute to achieving the UN High-level meeting on TB targets.

**Choub Sok Chamreun,** Executive Director, KHANA, Cambodia



**Yes, we can end TB** in Chad because the engagement of the Government of Chad to provide an annual grant to the National TB Program and the efforts of the government and its partners will ensure that the services are available free of charge in all functional hospitals. Also through the strengthening of qualified human resources and the effective involvement of community-based organizations supported by the Global Fund Grant; the use of rapid molecular diagnostics for TB diagnosis in more than fifty sites in the country; the availability of a mobile unit equipped with a 16-module GeneXpert machine and an X-ray with CAD to implement a mobile TB screening strategy for most vulnerable populations—along with international and national technical assistance—we can end TB in Chad.

**Dr. Oumar Abdelhadi,**National TB Program Coordinator,
Chad



**Yes, we can end TB** by taking TB prevention and care services, leading behavior change programs, and tackling stigma in workplaces around the world.

Matt Oliver,
Project Lead,
Ending Workplace TB (EWTB)

## 1. What's New

## **World TB Day**

The theme for this year's World TB Day, "Yes! We Can End TB," is aimed at bringing urgent attention to the collective power to end TB by 2030. It builds on the work carried out by many high TB burden countries in the wake of COVID-19 and reflects the increased engagement of people affected by TB, communities and civil society in the goal of ending the disease. The campaign also provides a key opportunity to raise global TB awareness and additional investments, while strengthening political commitment before the upcoming UN High-level meeting (UNHLM) on TB in September 2023. Find out more about the 2023 World TB campaign on the Stop TB Partnership website.

## **Global Fund Activities on World TB Day**

The Global Fund issued a call urging the global community to act now to end TB-a preventable, treatable and curable disease. In an op-ed published by the Telegraph, Executive Director of the Global Fund, Peter Sands, stated that TB is a hidden pandemic that remains neglected, despite being declared a global public health emergency by WHO in 1993. He added that "investing more in the fight against TB would strengthen our defences against other potential pandemics." Dr. Eliud Wandwalo, Head of TB at the Global Fund, shared a similar message in this article published by Geneva Solutions, stressing that "one of the best ways to prepare for future pandemics is to turbocharge the fight against tuberculosis and stop considering it the "pandemic of the poor."" Efforts to mark the World TB Day also included spotlights on the courageous stories of doctors and community outreach workers supporting people with TB in Ukraine amid the backdrop of war, and the hopeful persistence of a TB advocate fighting to end TB in Indonesia. In addition, the Global Fund organized and supported the following activities:

 Virtual panel: Keeping with this year's theme, the panelists (including TB survivors and government representatives) shared their experience on how innovations can help improve program performance and patient experience.







 TB banner and messaging: A banner was made available in the GHC building, providing an opportunity for anyone to leave a message related to TB. Various messages were written in support of prevention, innovations and global mobilization and are currently on display. TB-related messages were also presented on a screen.

Read more about the Global Fund's World TB Day events on the Global Fund website.

## **One World TB Summit**



From 23-26 March 2023, the Stop TB Partnership (Stop TB) Board held the "One World TB Summit," a high-level event co-branded with the G20 Presidency under the leadership of Prime Minister Mr. Narendra Modi. The summit was centered on the "Yes! We Can End TB" 2023 World TB Day Campaign and served as a platform to highlight several promising initiatives, interventions and innovations to fight TB. Participants included health ministers and senior government officials from 35 countries, technical partners, TB survivors, civil society representatives, donors, private sector manufacturers, private sector health care providers, researchers, academics and innovators. During the proceedings, Prime Minister Modi inaugurated the event by outlining multiple initiatives towards ending TB by 2025 in India and TB Champions and TB survivors from India shared their critical contributions in the fight to end TB, along with gaps and challenges.

## **Innovations in TB from India**

During the Stop TB Board Meeting, a special session on TB innovations explored the key roles played by private sector innovators and partnerships, facilitators and other actors who contributed to the promotion of these innovations. Several innovations demonstrated the potential to influence TB care globally, including new TB vaccines, artificial intelligence (AI) solutions for screening, drug resistant TB (DR-TB) detection using targeted genomics, handheld X-ray machines and drone TB drug delivery.

More information on the Summit is available on the <u>Stop TB website</u>.

## **Update from WHO**

## WHO announces benchmarks to achieve universal access to rapid tuberculosis diagnostics

The WHO standard: Universal access to rapid tuberculosis diagnostics sets benchmarks to achieve universal access to WHO-recommended rapid diagnostics (WRDs), increase bacteriologically confirmed TB and drug resistance detection and reduce the time required for diagnosis (Figure 1). The End TB Strategy calls for WRDs to be used for the initial diagnosis of all notified TB patients by 2025, as compared to the 38% percent of patients tested with WRDs in 2021. Access to diagnosis has been identified as a critical issue, leading to large gaps in detecting resistance to anti-TB drugs. The Global Fund's Program Essentials (specifically numbers 1.1 to 1.4 on screening and diagnosis) are closely aligned with the WHO standard. The standard comprises benchmarks to be computed by countries in the four steps of the diagnostic cascade. Mapping of enablers, solutions and approaches are provided to assist countries in achieving the standard. A baseline assessment could help national TB programs (NTPs), implementers and Global Fund Country Teams to identify gaps, prioritize investments and track progress as the interventions are implemented.

## Community Systems and Responses – Updates from West and Central Africa

A regional meeting on community systems and responses in West and Central Africa was held in Lomé, Togo, from 14-15 December 2022. The objective was to prepare for Grant Cycle 7 (GC7) by sharing learnings on and planning for high-impact community-based and community-led interventions against TB. Seventy National Tuberculosis Programs (NTP) managers and TB community/civil society counterparts attended inperson, while members from 30 Country Coordinating Mechanisms (CCM) joined online. Strengthened relationships between NTPs and civil society, communities and TB survivors, many of whom met and worked together for the first time, was one of the key outcomes of the meeting. Other achievements include:

 Country action plans: A total of 23 joint action plans were developed by NTP managers and community focal points. These plans lay out the community systems and response interventions that they intend

**Figure 1:** The WHO standard: Universal access to rapid TB diagnostics comprising 12 benchmarks in the four steps of the diagnostic cascade

Source: World Health Organization

#### STFP 1

## IDENTIFYING PRESUMPTIVE TB

Increase the number of people with presumptive TB in care

## **BENCHMARK 1**

All household contacts, all In all facilities in all districts, PLHIV, and other locally relevant high-risk groups are screened for TB.

In all facilities in all districts, the TB diagnostic algorithm requires the use of WRD as the initial diagnostic test for

#### **BENCHMARK 2**

In all districts, chest X-ray is used regularly for TB screening.

## STEP 2

## ACCESSING TESTING

Increase access to WRDs

## **BENCHMARK 3**

In all facilities in all districts, the TB diagnostic algorithm requires the use of WRD as the initial diagnostic test for all individuals with presumed TB, including children and PLHIV (combined with lateral flow lipoarabinomannan [LF-LAM]) and extrapulmonary TB.

## **BENCHMARK 4**

All primary health-care facilities have access to WRDs (on site or through sample referral).

## **BENCHMARK 5**

All individuals with TB have access to a WRD as the initial diagnostic test.

## **BENCHMARK 6**

WRD testing capacity meets expected needs, including surge capacity, according to the latest data.

## STEP 3

## BEING TESTED

Increase WRD and drug resistance testing

#### **BENCHMARK 7**

All functional instruments have an error rate ≤ 5%

#### **BENCHMARK 8**

All individuals with presumptive TB are tested with WRD.

## **BENCHMARK 9**

All patients with bacteriologically confirmed TB undergo universal drug susceptibility testing.

#### STEP 4

## RECEIVING A DIAGNOSIS

Increase WRD-based diagnosis

#### **BENCHMARK 10**

All patients with pulmonary TB receive an initial WRD result to inform their diagnosis.

#### **BENCHMARK 11**

All districts monitor the test positivity rate to optimise the impact of screening and testing strategies.

#### **BENCHMARK 12**

All TB testing laboratories achieve a turn-around time of ≤ 48 h for ≥ 80% of samples received for WRD testing.

to include in the GC7 funding requests and in technical assistance requests from partners. Please find a summary of the interventions that were prioritized in English and French.

2. Lomé Declaration: The meeting culminated in the drafting of the Lomé Declaration. Five key messages to improve access to TB services and TB outcomes in the region were outlined, based on participants' recommendations. These messages can help shape advocacy on the importance of strengthening community systems in the TB response for the region, including at forums such as the UNHLM on TB in September 2023. A summary of the key messages and recommendations is available in English and French.

Additional information on the meeting, including the presentations, agenda and participant's list can be found here.

## Five Key Messages of the Lomé Declaration

- Communities, civil society and NTPs are in the same boat, whose course is set by the NTP in each country.
- Tools exist to identify barriers, key populations and levels of stigma and also to identify and remove catastrophic costs. However, they are not yet widely used in the region, which would allow for better prioritization of interventions.
- 3. **TB is not a priority** for governments, donors or the private sector in our region.
- 4. We must decentralize TB control.
- 5. **We must improve treatment and care** for all people with TB.

## **Country-level Technical Assistance**

## 1. PERU

Elaborating a situational diagnosis and an intervention plan to strengthen smear and TB molecular tests

In Peru, smear is the main diagnostic test for TB and is used from the first level of care at the national level. The TB molecular test was introduced in the country in 2018 due to the greater sensitivity it provides in diagnosing TB, susceptibility to rifampicin and a shorter wait time for results. However, these diagnostic methods need to be strengthened. Technical assistance will be provided to identify the gaps and limiting factors involved in the use of smear and molecular TB testing, and to develop a work plan to address them.

## 2. ZIMBABWE

Updating TB management guidelines and assessing readiness to operationalize Program Essentials

To ensure that its National Tuberculosis Control Programme continues to offer quality TB care, Zimbabwe seeks technical support to update the current national TB management guidelines (2016). This includes a review of the latest WHO guidelines and research studies for TB prevention, screening, diagnosis and treatment (including TB preventive therapy). The technical assistance will also support the coordination of the national guideline development process, drafting of the updated guidelines and the development of relevant training material for health care workers and stakeholders in line with the new guidelines. Support will also be provided to identify the best country-level engagement for successful operationalization of the Program Essentials.

## 3. SIERRA LEONE

Updating and costing the National Strategic Plan (NSP) Sierra Leone's National Leprosy and TB Control Programme is conducting a mid-term review to inform the revision of the current leprosy and TB prevention and control NSP, and prepare for the next Global Fund application. Technical assistance will be provided to support a comprehensive mid-term review and costing of the NSP, including an assessment of the achievements, challenges, emerging needs, opportunities and best practices and the development of recommendations.

## 4. AZERBAIJAN Rehabilitating the TB reference laboratory

Technical assistance is being provided to Azerbaijan to rehabilitate the TB reference laboratory. This workstream will include strengthening the TB laboratory network and introducing a quality assurance management system.

# 2. Knowledge Sharing and Learning Resources

## **CASE STUDY: Improving Low Case Finding during COVID-19 in Timor-Leste**

## **Background**

Timor-Leste has made considerable progress to rise from its difficult past since its independence in May 2002. However, as a young, lower middle-income country (LMIC), poverty remains high among the population of 1.3 million, 70% of which live in small, rural villages isolated by mountainous terrain and poor road conditions. The country has the second-highest incidence rate of TB in the WHO South-East Asia Region and one of the top 10 highest incidence rates in the world. Approximately 6,400 people are estimated to have fallen ill from TB in 2021, with 50% of them diagnosed and initiated on treatment. Moreover, COVID-19-related service disruptions negatively impacted TB case finding and resulted in a drop in treatment coverage from 64% in 2019 to 52% in 2021.

## Implementation

To address the impact of COVID-19 on TB case finding, the Ministry of Health, with support from WHO, developed the "National Plan for Accelerated Actions for Ending TB by 2025." In October 2021, a high-level political event was held during which HE Prime Minister of Timor-Leste, General Taur Matan Ruak, signed the pledge for comprehensive support and actions to "End TB" in the country and launched the ambitious national plan (more information here). Several municipalities have also signed this pledge in support of the national agenda to end TB in Timor-Leste by 2025. Additional funding from the Global Fund under C19RM and GC6, including from the Korea International Cooperation Agency (KOICA), rapidly bolstered and scaled up national TB response at all levels. Interventions implemented from the action plan to address low TB case finding included:

- Active case finding at high outpatient department (OPD) load health facilities.
- Active case finding among vulnerable populations

for TB and latent TB infection in the community. The country procured a one-stop mobile diagnostic van with funding from the Global Fund that was used for community active case finding. In addition, ultra-portable digital X-ray machines were acquired to support TB screening in the community. Funding from KOICA was also used to support active TB case finding through the International Organization for Migration (IOM) in some municipalities.

- Implementation of the revised national TB diagnostic algorithm to increase use of molecular diagnosis for TB, especially for high risk and vulnerable populations. The C19RM grant was used to procure GeneXpert machines and cartridges, which more than doubled the number of GeneXpert machines available in the country from eight to 21.
- Implementation of advocacy and community-based
   TB awareness responses.
- Strengthening of the specimen collection and transportation mechanism.
- Capacity building of >50% clinical staff and 100% of other staff at each health facility.
- Expansion of the molecular diagnostic network.
- Effective collaboration with partners, enabling execution of local approaches to find and treat missing people with TB.
- Mobilization of the "Programa Nasional Saúde na Família" in hard-to-reach provinces, which bolstered case finding.

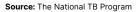
## **Results**

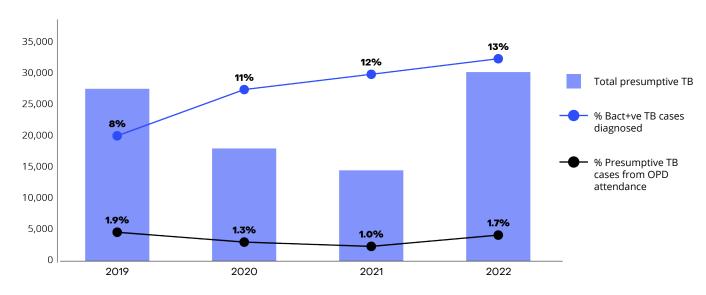
TB case finding efforts in the country have dramatically improved in the last two years. The number of presumptive TB cases in 2022 more than doubled compared with 2021 (see Figure 2). This translates to an increase in the proportion of presumptive TB cases from all OPD attendances from 1.0% to 1.7%. In 2022, 67% (20,165/30,319) of all presumptive TB cases had a laboratory test to confirm TB. In addition, the number of GeneXpert tests conducted in 2022 more than doubled compared with 2021. In total, 1.7% of all presumptive TB cases that had a laboratory test were bacteriologically

confirmed. This is a significant increase from the 1% achieved in 2021. The number of TB cases notified in 2022 was 5,370, 64% higher than what was achieved in 2021 and 27% higher than what was achieved in 2019 (see Figure 3). The number of bacteriologically

confirmed TB cases notified in 2022 was 2,581 (48% of all cases notified), an increase of 64% compared with 2021 and 58% compared with 2019. Furthermore, these interventions strengthened political will and commitment at all levels of the government to end TB by 2025.

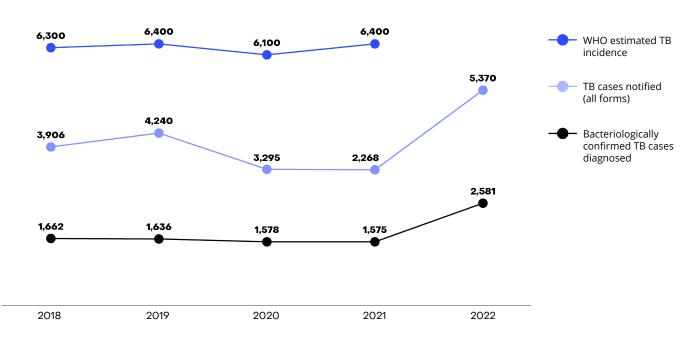
**Figure 2:** Trend in presumptive TB cases and proportion of bacteriologically confirmed in Timor-Leste: 2019 – 2022.





**Figure 3:** Trend in TB incidence and notified cases in Timor-Leste: 2018 – 2022

Source: The National TB Program



## Lessons learned and next steps

Good political will and commitment by all levels of the government are key enablers in the fight against TB. In addition, focused and timely investments, including through Global Fund C19RM funding, contributed to mitigate the knock-on effect of COVID-19 on TB case finding. Interventions also highlighted that a combination of case finding approaches is required to find people with TB and link them to treatment. Given than only two thirds of the presumptive TB cases had access to a laboratory test for bacteriological confirmation, there is a need to increase access to WHO-recommended molecular tests by further expansion of the GeneXpert network and strengthening of specimen transportation. Finally, while the program is still using a paper-based system for recording and reporting, an expeditious transition to electronic case-based reporting using District Health Information Systems 2 (DHIS2) will help to improve data quality.

In terms of next steps, the country seeks to continue strengthening TB case finding efforts using funding available from the Global Fund in GC7 and C19RM Portfolio Optimization. The country is also currently conducting an external program review and an epidemiological review of the TB program to identify areas that need further improvements to meet the ambitious target of ending TB by 2025. During GC7, Timor-Leste plans to:

- Increase access to TB preventing therapy.
- Intensify targeted active case finding for high-risk populations.
- Expand capacity and utilization of molecular tests.
- Decentralize DR-TB services.
- Strengthen the health management information system (HMIS) and disease surveillance.
- Expand and strengthen laboratory systems for pandemic preparedness and response.



TOP LEFT:
Cough triaging area at a high-volume community health center in Timor-Leste.

BOTTOM LEFT: One-stop mobile diagnostic van used for community TB active case finding in Timor-Leste.

BOTTOM RIGHT:
The Prime Minister of
Timor-Leste innaugrating
the Line Probe Asssay
Laboratory established
with the support from the
Global Fund and WHO
Timor-leste.





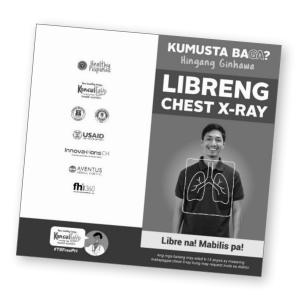
# CASE STUDY: Bidirectional Screening of TB and COVID-19 in Nigeria and the Philippines

## **Background**

The COVID-19 pandemic negatively impacted TB care worldwide, resulting in an 18% reduction in TB case notification between 2019-2020. One of the key strategies to mitigate the impact of the pandemic and ensure post-COVID-19 recovery of TB services was bidirectional screening of TB and COVID-19. After implementation of these various mitigation strategies, partial recovery in global TB notification was recorded in 2021. Between May and July 2022, WHO's Global TB Programme (GTB) and Special Programme for Research and Training in Tropical Diseases (TDR) conducted a rapid global survey to assess best practices on TB/ COVID-19 bidirectional screening. Based on preliminary results, Nigeria and the Philippines were selected as case studies. This summary highlights two successful examples of bidirectional screening, using mobile Wellness on Wheels (WoW) trucks among hard-toreach communities in Kaduna state, Nigeria and in three health facilities in the city of Manila.

## **Implementation**

Initially designed for TB case finding, the WoW truck in **Nigeria** is a mobile diagnostic unit with Xpert MTB/RIF. When the COVID-19 pandemic emerged, SARS-Cov-2 cartridges were procured and utilized on the GeneXpert machines to provide integrated testing for both diseases. The strategy for bidirectional screening included training and capacity building, along with the active contribution of all key stakeholders—from



government to communities. Screening and testing for malaria, hepatitis and respiratory syncytial virus was also included in the algorithm to avoid the stigma associated with being identified as person with presumptive TB or COVID-19.

In the **Philippines**, a COVID-19 testing initiative was launched alongside TB screening and sputum collection among market vendors in Manila in 2020. In 2021, Manila became the local government unit (LGU) partner of the USAID's TB Innovations for Health Systems Strengthening project, which set up the bidirectional screening initiative. Three health care facilities in Manila were selected to participate, two of which were COVID-19 swabbing and isolation facilities: Delpan Evacuation Center and Santa Ana Hospital. The third facility was the COVID-19 isolation wards of the Manila COVID-19 field hospital. The process included developing algorithms and two patient flow roadmaps, along with capacity building for facility staff and on-site and remote mentoring.

## **Two Key Innovations**

- The WoW truck, which included the benefits of reduced stigma, the convenience of a onestop-shop and the ability to bring services to hard-to-reach populations.
- SARS-CoV-2 cartridges that could be used in GeneXpert machines, which reduced the turnaround time compared to PCR testing (the gold standard).



#### Results

From May to July 2020, a total of 1,931 people were enrolled in the intervention in Nigeria. Almost all of them (99.8%) were screened for TB with chest X-ray (900 males and 1,028 females). A total of 83 (42 males and 41 females) TB presumptive persons were identified and tested, three of which were diagnosed with and treated for TB. Of the total 1,931 people, 64.9% (665 males and 587 females) were tested for COVID-19 and 183 (14.6%) were found to be positive. Twelve people tested were found to be HIV positive and one of them was co-infected with HIV and COVID-19. The total cost of the intervention was \$26,160 USD, which included daily subsistence allowances for field staff, fuel for the truck and generator and other logistics such as accommodation. In the Philippines, a total of 9,203 people were invited to enroll in the bidirectional screening initiative, of which 56% gave consent for TB screening (69% in COVID-19 testing centers and 37% among COVID-19 hospitalized patients). Of the 1,388 hospitalized COVID-19 patients that consented, nearly all were tested with GeneXpert, and 38 (2.8%) tested positive, yielding a number needed to test (NNT) of 36. In the COVID-19 testing centers, the yield was 1.0%, with the number needed to screen (NNS) and NNT, 101 and 13 respectively.

## Lessons learned and next steps

The bidirectional TB and COVID-19 screening in the Kaduna state of Nigeria was a successful model of integration that should be scaled-up to similar settings. The exemplary level of commitment shown by the local leadership, as demonstrated by the acquisition of additional trucks, should be augmented with additional funding support to better harness the results of the partnership. Stigma and fear continue to be formidable challenges to TB and COVID-19 responses, warranting the need for clear strategies to address them within the context of the integrated screening approach. In the Philippines, several enablers were identified at different levels of the health care system including the multistakeholder partnership model, development of a government-led TB Adaptive Plan, availability of financial resources, existing facilities for TB screening, leadership commitment at local level and the presence of effective communication tools. In addition, local

solutions were available to overcome several barriers that were encountered during the course of implementation, including low participation, delayed treatment initiation, shortage of human resources, initial communication challenges and difficulties with sputum collection. With the evolution of COVID-19 toward a more endemic condition, stakeholders have suggested longer-term strategies that extend beyond just TB/COVID-19 screening.



# **Key recommendations from Nigeria**

- 1. Bidirectional screening for COVID-19 and TB in hard to reach and high burden communities is a high yield strategy that should be considered for further scale-up.
- 2. The experience of including other diseases such as malaria should be utilized as a strategy to enhance community acceptance of the interventions.
- 3. Expanding integration to include other prevalent diseases such as non-communicable diseases and broader pandemic preparedness activities should be considered.
- 4. Larger scale evaluations are needed to determine the effectiveness, including cost-effectiveness, of the intervention in improving TB case finding, treatment outcomes and subsequent reduction in TB burden.



## **Key recommendations from the Philippines**

- Design longer-term strategies with country leadership. This high yield TB/COVID-19 screening
  model should be incorporated as part of the longer-term strategies of improving TB prevention,
  diagnosis and treatment in the city of Manila and beyond. The strategies should include
  components of broader airborne infection control activities for other pandemic prone infectious
  diseases.
- 2. **Tap into unique strengths of each partner.** The multistakeholder partnership model should be further developed to make the health system more responsive for future pandemic preparedness needs.
- 3. **Install multi-disease strategies beyond TB and COVID-19.** Future strategies should include multi-disease screening (e.g., HIV, malaria, neglected tropical diseases) and multipurpose transportation systems (e.g., transportation of both supplies and specimen) to make it more efficient.
- 4. **Anticipate and act on barriers.** Barriers such as low response rates, shortage of human resources, communication issues and challenges with sputum collection should be anticipated well ahead of time to avoid delays in service delivery.
- 5. **Have effective communication strategies.** Effective communication strategies should be developed and used at all levels.
  - a. Conduct further studies. Priorities topics for further exploration include but not limited to understanding the relationship between TB and "Long COVID," which has symptoms that resemble that of TB.
  - b. Cost-effectiveness studies to better understand the feasibility of implementing such models at wider scale in different geopolitical settings.



## **About the TB Strategic Initiative**

The **TB Strategic Initiative**, funded by the Global Fund and implemented by the Stop TB Partnership (Stop TB) and the World Health Organization (WHO), has been working with national TB programs and partners since 2018 to stop the spread of TB and reach the global goal adopted by world leaders to end TB by 2030. This ambitious joint effort, initially launched in 13 countries, aims to address specific barriers to finding missing people with TB, especially among key vulnerable populations, through a combination of innovative approaches, knowledge-sharing and best practices. Now in its second phase (2021-2023), the TB Strategic Initiative will catalyze further efforts to find and successfully treat people with TB facing barriers and that are currently missed at different points in the TB care cascade in 20 priority countries.

