

# Strengthening Health Systems to Combat Tuberculosis



Tuberculosis (TB) is the **leading cause of death for people living with HIV** worldwide and one of the **top killers of vulnerable women and young children in low- and middle-income countries**. With the emergence and spread of multiple drug-resistant (MDR) strains, TB is even more challenging and expensive to diagnose, treat, and cure in large populations, especially when an estimated three million people with active TB remain undetected and untreated.

## Partnering with High-Burden Countries to Meet Their TB Control Targets

High-burden TB countries and international donors are refocusing on post-2015 sustainable development goals and celebrating the millions of lives saved from improved TB efforts. Abt uses multiple approaches to strengthen health systems and improve TB prevention, detection, diagnosis, treatment, and care by:

- Strengthening the finance and governance capacities of ministries of health to deliver ongoing TB prevention and care services at central and decentralized levels
- Fostering legal and policy environments, allowing the private sector to provide quality TB services
- Expanding the Directly Observed Treatment, Short course (DOTS) model
- Strengthening referral linkages between the public and private sectors for consistent and effective TB care
- Building clinical capacity of public and private providers and laboratories
- Adopting technologies that improve TB data delivery as well as clinical quality monitoring and supervision

## Using Technology to Improve TB Care in Nigeria

Nigeria relies on state-of-the-art GeneXpert MTB/RIF machines to rapidly diagnosis drug-resistant TB in patients who are HIV infected. Slow delivery and poor quality of data received, mean that program management decisions are not timely or focused on priority needs.

Abt supported the Nigerian National TB and Leprosy Control Program (NTBLCP) to pilot GxAlert, a mobile-based solution,



Photo by: USAID Quality Health Care Project, Kazakhstan

in 46 laboratories throughout the country. GxAlert sends GeneXpert diagnostic results in real time to a secure online database, shortening the reporting period from months to seconds and enabling better data quality and faster recruitment of patients into care. Following a successful pilot, HFG supported the program's scale-up to 300 facilities across the country.

By networking all rapid GeneXpert diagnostic machines in Nigeria, the NTBLCP and private health systems can report TB and HIV indicators automatically and send targeted action messages ("alerts") by SMS/text and/or email to health system decision makers. GxAlert can also monitor and prevent GeneXpert cartridge stock-outs and track usage for accurate ordering.

## Transforming TB Treatment in Central Asia and Eastern Europe

The **USAID Quality Health Care Project** (2010–2015), the fourth in a series of five-year USAID projects led by Abt in Central Asia, was designed to improve the health of Central Asians by strengthening health care systems and services, particularly in the areas of HIV/AIDS and TB care and prevention. Between 1998 and 2013, TB mortality decreased from 50% to 10% in Kazakhstan, 25% to 11% in the Kyrgyz Republic, 30% to 7% in Tajikistan, and 17% to 8% in Uzbekistan. In the Kyrgyz Republic, through the USAID Defeat TB Project (2014–2019), Abt is leading a consortium to develop sustainable systems that can contribute to reducing the TB epidemic, including the spread of MDR-TB. To date, the project has: trained more than 3,500 health care workers; increased the number of patients receiving outpatient treatment in pilot

sites by 78%; introduced a new biomaterial transportation system that enables patients to get more accurate test results more quickly and start their treatment sooner; established a Quality Management System in laboratories, which reduced the laboratory turnaround time from seven days to just three; opened the country's first TB shelter for vulnerable patients; reached more than 50,000 households in areas with large migrant populations to raise TB awareness, reduce TB stigma, encourage testing among those with TB symptoms, and support TB patients with treatment; and reached nearly one million people with messages about TB through health-focused sermons delivered at 1,770 mosques across the country.

The **USAID Health Finance and Governance (HFG) project** works to improve government systems to pay for TB care and improve efficiency and clinical outcomes. In Central Asia and Ukraine, HFG supports national partners in designing new hospital payment systems for TB to eliminate unnecessary hospitalizations and provide financial incentives to support the shift to outpatient treatment for most TB patients, as per World Health Organization (WHO) recommendations. In Ukraine, HFG has provided training to over 440 staff working in TB hospitals, clinics, and the Ministry of Health on a new TB payment system based on Diagnosis-Related Groups.

HFG is also working with national TB experts and health finance specialists in select Asian and African countries to identify emerging opportunities for improving TB services by strengthening or adjusting provider payment methods, often as part of major national health financing and system reforms.

### **Fostering Private Sector TB Partnerships in India**

To leverage the enormous potential of the private sector to combat TB in India, Abt and partners implemented the **USAID Strengthening Health Outcomes through the Private Sector (SHOPS) project** (2012–2015). Abt developed an integrated TB Public-Private Mix (PMM) model vis-a-vis a Private Provider Interface Agency Mechanism (PPIA) to effectively engage private health care providers in TB care and mobilize communities to facilitate prompt attention to TB symptoms. Data indicate the model's success in significantly increasing case detection and effectively managing “missing” TB patients among vulnerable urban slum populations in Karnataka.

Over the life of the project, 1,891 clinicians participated in the initiative reaching 450,000 person contacts and diagnosing a total of 2,098 TB patients from intervention sites. Treatment compliance topped 97% among 371 patients who received private treatment followed up by PPIA. The project's training modules and tools have been adopted for standard use by the Revised National TB Control Program.

### **Expanding TB Treatment through the Private Sector in Ethiopia**

Through the **USAID Private Health Sector Project**, Abt is helping the Government of Ethiopia to partner effectively with private health care providers to deliver public health services, including TB DOTS and integrated TB/HIV services. Project activities to support the PPM model build capacity of private providers through training in clinical and business management skills and ongoing quality supervision; expand TB and HIV counseling and testing; improve TB microscopy; and increase private clinic access to financing from local institutions. The number of PPM-DOTS facilities has expanded to 378 nationwide in 2017, and the contribution of PPM-DOTS to the national case detection of TB in Ethiopia was 11% in 2015. Also, more than 350 primary clinics are supported in identifying and referring patients with presumptive TB.

### **Using Smartphones to Improve TB Supportive Supervision in Nigeria**

Through **USAID's HFG Project** in Nigeria, government TB supervisors at the state and local government agency levels are visiting more than 500 health facilities in seven states, using pre-programmed smartphones to oversee the quality of TB service delivery. Beginning in 2010, through the **USAID Health Systems 20/20 Project**, Abt and the NTBLCP piloted an integrated supportive supervision program based on the WHO DOTS model through use of personal digital assistants, which allowed for immediate feedback and corrective action. This improved supportive supervision process is designed to promote data-driven prioritization of facility-level improvements in service delivery. The states using the program report substantial improvements in TB cure rates, uptake of TB/HIV co-infection treatment, and reduced treatment defaulter rates.

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