

# TECHNICAL INTERVENTIONS

## **OBJECTIVE I. IMPROVE ACCESS TO HIGH-QUALITY, PATIENT-CENTERED TB, DR-TB, AND TB/HIV SERVICES**

To reach our ultimate goal of a world free of TB, we must work with the global community to achieve universal access to high-quality, patient-centered services for TB, DR-TB, or TB-HIV. Universal access to TB services is defined as the availability of TB prevention, diagnosis, and treatment services to every individual who resides in a country. Access should not result in undue financial hardship for the affected individual or his or her household. Also, affected communities should be involved and engaged in the design and distribution of services.

To achieve this objective, we must identify and address potential challenges to access, including geographic coverage of healthcare facilities offering TB services, hours of operation, cost of TB services, and social stigma. The U.S. Government will help countries supported through our bilateral TB programs to develop national and sub-national approaches that ensure populations at high risk of TB have access to TB services in local facilities.

Improved access to TB services will be achieved through the development and implementation of three interventions:

- Support for an enabling environment including social support packages
- Expansion and strengthening of a comprehensive, high-quality diagnostic network
- Development of a patient-centered care and treatment approach

## **A. ENABLING ENVIRONMENT**

An important component to achieve universal access to TB services is the creation of an enabling environment that promotes and encourages the identification of all individuals with symptoms associated with TB; rapid, accurate evaluation for and diagnosis of TB; and early initiation and successful completion of TB treatment. Specific activities will vary by country, community, and affected populations to address local epidemiology and social structure and be developed in a manner that strengthens healthcare facilities and support services to successfully reach and cure those affected by TB. U.S. Government efforts to create and support enabling environments will focus on improving the attitudes and behaviors of providers, communities, leaders, and individuals to facilitate appropriate TB care and treatment and reduce stigma in all care settings.

The U.S. Government will support a package of activities in each country based on national priorities including:

1. Identification and elimination of barriers to accessing TB services by those most at risk for TB
2. Services provided according to national guidelines by all care providers to all those at risk
3. Integration of patient-centered approaches into existing TB services to improve service quality and accessibility across all care providers
4. Engagement of leaders, representatives of key populations, and both public and private health providers in encouraging and supporting early and active case finding and care to enhance treatment completion

Workers participate in a practical exercise on Xpert data in Kazakhstan. (Photo by KNCV)



## B. COMPREHENSIVE, HIGH-QUALITY DIAGNOSTIC NETWORK

Universal access to TB care is dependent upon the existence of a comprehensive and high-quality TB diagnostic network that includes microscopy, culture, drug susceptibility testing, and the use of molecular and radiological assessments at appropriate, accessible points of care. Strong laboratory networks are needed and must be adaptable and able to incorporate new, efficient, and effective technologies as they become available. Diagnostic services should be easily available and affordable to all individuals and tailored to the needs and characteristics of the

population or community served (e.g., urban slums, mines, workplaces, schools, prisons). A particular focus should be on improving diagnosis for TB in children. Diagnostic networks should integrate all public and private laboratories from the community to the national level into a quality-assured system.

The U.S. Government will intensify support for laboratory accreditation as one means of assuring high-quality TB diagnostic services. Efficient and effective utilization of TB diagnostic tools will be guided by appropriate diagnostic algorithms for TB and DR-TB. These algorithms should be designed to incorporate new tools as they become available.

The systems will ensure that patients in HIV clinics and other healthcare settings are regularly screened for TB and have access to appropriate diagnostic testing and rapid follow-up on test results. Laboratory systems will be strategically linked to treatment sites and facilities to facilitate the rapid initiation of treatment and reporting of results to clinicians to enable timely and effective treatment, minimize patient discomfort, optimize utilization, and prevent attrition. Network logistics and transport systems will function smoothly and seamlessly to maximize the forecasting, procurement, collection, and transport mechanisms.

Through its bilateral and multilateral investments, the U.S. Government will support the development and maintenance of comprehensive, high-quality diagnostic networks. A particular focus of the U.S. Government's Global TB Strategy will be to ensure that private laboratories and services for TB, DR-TB, and TB-HIV screening use the same quality assurance mechanisms as laboratories within the public health system and are linked to a larger, comprehensive laboratory network. The U.S. Government will support country and local efforts to rationalize diagnostic networks and the implementation of new technologies to optimize the identification of TB cases and make the best use of available resources. The U.S. Government will further support strong monitoring and evaluation systems, so countries can identify weaknesses in their systems and provide support where most needed.

### **C. PATIENT-CENTERED CARE AND TREATMENT**

Every individual deserves high-quality TB, DR-TB, and TB-HIV care and treatment that optimizes his or her chance of success. Patient-centered care and treatment puts the individual at the center of all activities and strives to meet his or her specific needs. It requires an ongoing and in-depth partnership between healthcare providers and the patient and his or her family and community, to

identify and address a full range of individual needs and preferences.

Consistent with the WHO's End TB Strategy, the U.S. Government will support a patient-centered approach to TB services in which individuals with TB and their families participate in the design and implementation of care and treatment services in an attempt to identify, avoid, and remove barriers. The U.S. Government will support the collection, analysis, and use of quality-assured data and technologies, such as mobile devices and geographic information services, to ascertain the best locations for new care and treatment sites and/or existing sites that should be strengthened, so appropriate services are widely and easily accessible. The U.S. Government will also support the integration of TB, DR-TB, and HIV diagnosis and treatment services within all appropriate healthcare settings to maximize efficiency, uptake, and successful outcomes. This will include the integration of TB services within maternal and child health settings, as well as TB screening and TB infection control in the scale-up of lifelong treatment for HIV-infected pregnant women and children. Ideally, the integration of services should extend to the management of other co-morbidities (e.g., malnutrition, diabetes mellitus, smoking, chronic obstructive lung disease) as justified by the local epidemiology, to facilitate a true patient-centered approach to comprehensive care.

TB care and treatment services should also include access and referral to supportive services such as counseling, social services, nutrition, and economic strengthening interventions (e.g., income-generating activities). The U.S. Government will support the provision of TB services tailored to the needs of the population/community served to address the epidemic. Such services should be made widely available in a variety of settings, including urban slums, workplaces, schools, mines, and prisons, and be provided free of charge or at a cost that does not cause unnecessary financial burden to the user. As new tools and evidence become available, the

U.S. Government will assist in their rapid deployment to improve the care, treatment, and support of individuals with TB, DR-TB, and TB-HIV. The U.S. Government will also support the implementation of robust monitoring and evaluation systems that enable countries to monitor and continually improve the quality of TB care and treatment services.

## **OBJECTIVE 2. PREVENT TB TRANSMISSION AND DISEASE PROGRESSION**

Without intensified action to prevent the transmission of TB to uninfected individuals and without efforts to prevent the progression of latent TB infection (LTBI) to active disease, global TB targets will not be met. The U.S. Government recognizes that the best way to prevent TB is through early and accurate diagnosis and effective treatment of active TB. Until a vaccine that prevents infection and/or progression to active disease is available, the U.S. Government will support early and effective TB diagnosis and treatment as the primary focus of TB prevention efforts.

The U.S. Government will support a range of prevention activities, including:

- Strengthening targeted screening for active TB among high-risk individuals and groups
- Improving infection control interventions to prevent transmission in congregate settings
- Screening for and treatment of LTBI to reduce the risk of progression to active TB among individuals with or at greatest risk to develop TB

### **A. TARGETED SCREENING FOR ACTIVE TB**

Innovative strategies are necessary to screen and evaluate individuals who are at high risk for active TB, including contacts of persons with infectious TB and those living in social circumstances in which there is a high prevalence of TB. Systematic

screening of individuals in these groups can improve early detection of active TB, early initiation of TB treatment, and the likelihood of successful treatment, all of which will decrease transmission to others and ultimately lower TB incidence, prevalence, and mortality rates. Systematic screening, when accompanied by prompt diagnosis and treatment, leads to reduced TB transmission by shortening the period during which an individual with TB is infectious – treatment as prevention. Accordingly, the U.S. Government will focus TB prevention efforts to find the missing cases through:

1. Improving contact investigation and follow-up interventions and treatment
2. Screening high-risk individuals and individuals in high-risk congregate settings
3. Identifying individuals with LTBI who have specific risk factors for progression to disease
4. Identifying individual and community-level risk factors and socioeconomic determinants that need to be addressed to prevent TB transmission in a specific population

### **B. INFECTION CONTROL**

The foundation of TB infection control and prevention is early and rapid diagnosis of active TB cases and prompt initiation of treatment, so patients with TB quickly become non-infectious and are cured. As outlined previously, this is a key element of the U.S. Government's Global TB Strategy. The U.S. Government will support the implementation of key infection control activities, including:

1. Administrative and environmental/engineering controls
2. Use of personal protective equipment
3. Healthcare worker surveillance, screening and preventive measures
4. Broader community interventions aimed at interrupting the chain of transmission in high-risk settings or among high-risk populations