A United Effort to Make Bangladesh Cities Tuberculosis Free

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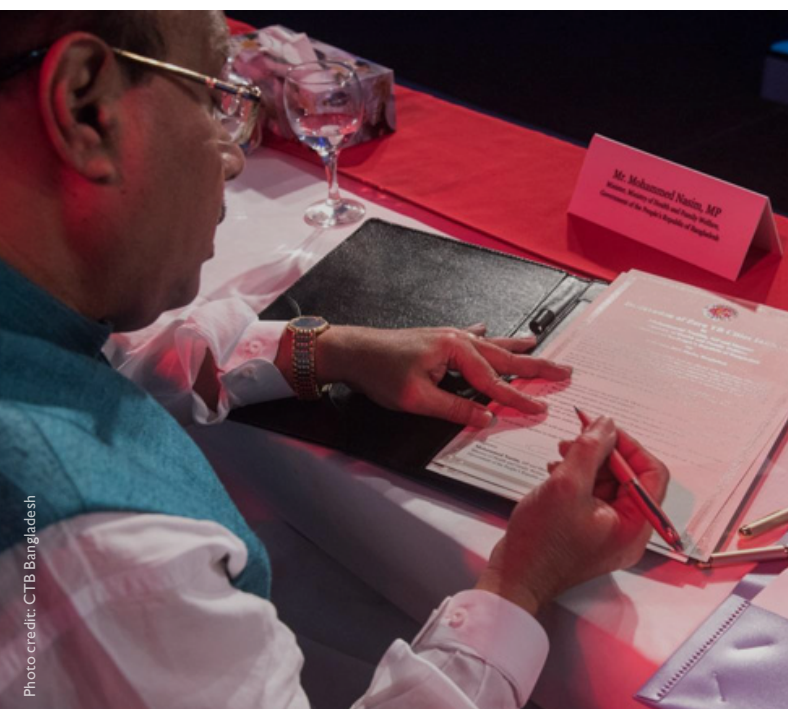
CALL TO ACTION

Focus on ending TB by 2030 and sustaining a TB-free Bangladesh through adequate human, financial, and technological resources.

Strengthen and foster joint action by amplifying multisectoral coordination and collaboration mechanisms across global and local partners.

Leverage new digital health solutions as a game changer in the identification of new TB cases and timely reporting and referral to providers working in private settings.

BACKGROUND | The urban population of Bangladesh was only 6.27 million in 1974 but grew to more than 62 million by 2019. During this period, the percentage of the population living in urban areas increased from 8.78% to 37.2%.[1]

Urbanization often brings positive benefits such as increased access to better infrastructure and services to help combat poverty and infectious diseases, including tuberculosis (TB). However, rapid urbanization can lead to overcrowded slums with poor access to urban health services, which amplifies the burden of TB.[2] Ending the TB epidemic by 2030 is a target of the Sustainable Development Goals (SDGs)[3] and a goal of the World Health Organization's (WHO) "End TB Strategy"—both of which have implications for urban health.

The National TB Control Program (NTP) of Bangladesh and its partners have made significant progress in the fight against TB in Bangladesh—including increased case detection and treatment outcomes. Despite these achievements, significant challenges remain. Every year, an estimated 150,000 active TB cases remain missing and addressing TB infection equitably and comprehensively continue to be a challenge. New perspectives and innovative ways of addressing TB treatment and control in urban areas are needed as the disease continues to persist. Poor, vulnerable, and marginalized communities in urban settings across the country continue to face numerous obstacles to their access to quality diagnostic services and treatment[4]—including the urban health care infrastructure of the private sector, public sector, and nongovernmental organizations (NGOs).

BUILDING POLITICAL WILL AND MULTI-SECTORAL COLLABORATION

At the United Nations High Level Meeting (UNHLM) on Ending TB in September 2018, the Government of Bangladesh (GoB) made high-level political commitments eliminate TB and to achieve health targets for SDGs.

In October 2017, the GoB through the NTP steered the **Zero TB Cities Bangladesh (ZTBCB)** initiative to deliver TB services under the multi-actor urban health structure. The Honorable Minister of Health and Family Welfare (MOHFW), Mohammed Nasim, signed an official declaration with a call to action with the slogan: *Let Us Unite Together to Make Our Cities TB Free.*

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The declaration called for a multisectoral initiative to be led by the MOHFW and NTP with strong coordination and collaboration with the Ministry of Local Government, Rural Development, and Cooperatives; city corporations; NGOs; development partners and their implementing agencies; professional medical associations; public and private health sector facilities and practitioners; civil society members; and urban communities and social groups.

In June 2018, the NTP drafted the **Strategic Roadmap for Zero TB Cities Bangladesh (2018-2025)** that described a comprehensive, strategic approach to manage TB in urban areas. Bangladesh is the first country in the world to develop a strategic roadmap to end TB in urban areas. ZTBCB offers a comprehensive, empirically based program of care that targets geographic areas of highest TB transmission and populations at greatest TB risk.

In February 2019, the NTP and its implementing partners approved the **Action Plan for Strategic Roadmap for Zero TB Cities Bangladesh**, which identifies key actions to be taken between 2019 and 2020 for the GoB to achieve its target of halving the urban TB incidence rate by 2025. This action plan will pioneer a multisectoral, results-oriented urban health model with support from urban governmental structures, stakeholders and donor agencies; and build referral chains along a continuum of service delivery to reduce the incidence of TB.

Given the important role of open cooperation across diverse actors, a meeting of a multisectoral panel of experts was held in March 2019 that included private sector representatives and prominent media representatives. Private sector providers and facilities recommitted to the principles of patient-centered care, and in many cases to offer free TB services. They also committed to reporting to the NTP all diagnosed TB cases through a Mandatory Notification application. The NTP committed to establishing a system that connects private providers and facilities with DOTS centers and laboratories with GeneXpert machines. Lastly, representatives from the Bangladesh Health Reporters Forum reaffirmed their catalytic role in raising awareness on positive health seeking behavior in the community.
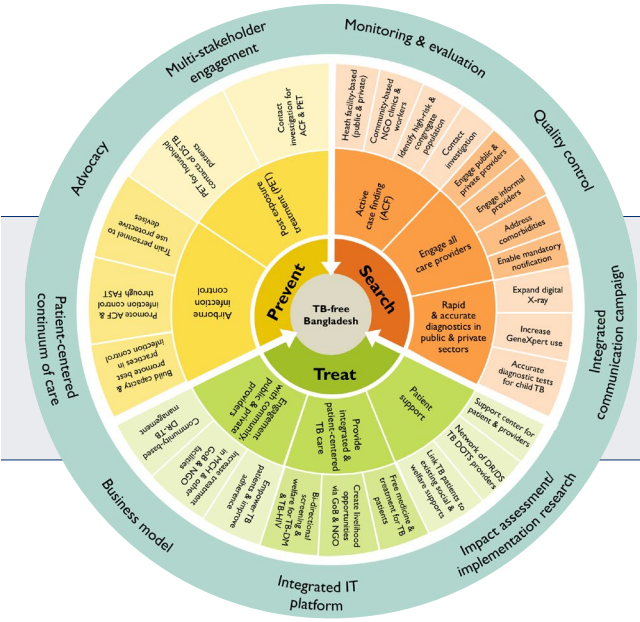
ZERO TB CITIES BANGLADESH: APPROACHES & STRATEGIES

The ZTBCB approach stems from the "Chakra" model (see image). The model follows are "Search, Treat, and Prevent" strategy in which people with TB are actively sought and found at an early stage of the disease, rapidly diagnosed, placed on appropriate treatment regimens, and successfully treated and cured of the disease. The approach expands contact investigation and TB preventive treatment and focuses on high transmission areas and populations at risk.

BUILDING A STRONG FOUNDATION FOR EVIDENCE-BASED ACTION

Baseline assessment and web-based GIS mapping of urban health facilities/providers to understand the alignment between patient care-seeking patterns and TB service availability[5]

Assessment included a GIS mapping of all health facilities and TB services available in selected areas of Dhaka City, followed by a structured questionnaire to assess type, availability, and health facility readiness to provide TB services. Lastly, key informant interviews of randomly selected registered TB patients were conducted using a structured questionnaire to understand the patient TB-specific care-seeking patterns.

TB care pathways for urban Bangladesh[6]
An analysis of assessment results helped to understand the patient trajectory from the moment when TB-like symptoms appear, to seeking TB services, successful treatment, and preventive measures. The assessment highlighted consideration about care-seeking behaviors, patients' preferences, direct and indirect costs, and other themes that will inform future strategies in identifying and referring patients with TB across their journey from care seeking to treatment.

Qualitative study of contextual factors affecting preventive treatment in urban settings
A qualitative study was conducted on post exposure treatment for susceptible TB patients in Dhaka City and among household contacts of index TB patients. The study highlighted the importance of mobilizing the community, creating awareness, early detection and initiation of treatment, household contact tracing, and an effective mechanism for initiating appropriate PT are crucially important in accelerating progress toward comprehensive TB service delivery in urban settings.

Mathematical modeling to identify TB hot spots
In collaboration with Johns Hopkins University—and using TB notification data from all TB reporting centers in Dhaka South City Corporation (DSCC) and Dhaka North City Corporation (DNCC), census data on population denominators, and patient-level data on location of residence in selected reporting centers—Challenge TB (CTB) generated maps showing the estimated TB notification rates in each DSCC and DNCC ward. Using these maps, areas with high TB notification rates—or TB hotspots—in both DSCC and DNCC were identified. Epidemiological models of TB transmission were calibrated to show ward-level TB incidence. These models were used to estimate the epidemiological impact of two potential large-scale TB interventions: active case finding (ACF) and mass PT.

BUILDING POLITICAL WILL AND MULTI-SECTORAL COLLABORATION

OCTOBER 2017
The Honorable Minister of Health and Family Welfare, Mohammed Nasim, signed an official declaration for the ZTBCB initiative with a call to action under the slogan: Let Us Unite Together to Make Our Cities TB Free.

JUNE 2018
NTP drafts the Strategic Roadmap for Zero TB Cities Bangladesh (2018-2025) that described a comprehensive, strategic approach to manage TB in urban areas.

FEBRUARY 2019
Action Plan for Strategic Roadmap for Zero TB Cities Bangladesh is approved by NTP and its implementing partners identifying key actions for the GoB to achieve its target of halving the urban TB incidence rate by 2025.

MARCH 2019
Multisectoral panel of experts was held including private sector representatives and prominent media representatives underscoring the important role of open cooperation across diverse actors.

2016 • • • • • 2017 • • • • • 2018 • • • • • 2019 • • • • • •

BUILDING A STRONG FOUNDATION FOR EVIDENCE-BASED ACTION

Baseline assessment and web-based GIS mapping of urban health facilities & providers

Analysis of TB care pathways for urban Bangladesh

Qualitative study of contextual factors affecting preventive treatment in urban settings

Mathematical modeling to identify TB hot spots

BANGLADESH TB SITUATION

- Bangladesh is one of 30 high TB burden countries.
- Annual estimated incidence TB cases: 360,000.
- More than 66,000 people lose their lives every year to TB.
- 39% of TB cases remain undetected, and the vast majority live in urban cities.
- Estimated 5,300 MDR-TB cases per year; 80% of which are missing.

Photo credit: Tristan Bayly

RECOMMENDATIONS

Remain focused on sustainable change — The GoB has adopted ambitious targets in alignment with global health goals. It is critical that sufficient human, financial, and technological resources are channeled toward ending TB by 2030. The partnership between local and global actors helps to build capacity at multiple levels of the health system to address TB. Collaboration and capacity development efforts with local research institutions and NGOs has demonstrated that improvements in human resources, financial, and administrative systems is a critical input for high-quality and impactful health programs.

Strengthen and foster joint action — The partnership between the CTB and the NTP helped to amplify a call to action for additional resources showing practical interventions that can help the country to achieve its ambitious targets to end TB by 2030. Strengthen multisectoral coordination and collaboration mechanisms across USAID missions and programs, as well as across different offices within local ministries.

Leverage innovations and game changers — New digital health solutions introduced—such as active case finding applications and private sector mandatory notification app Janao—can improve the identification of new TB cases and timely reporting and referral to providers working in private settings. Private sector engagement in TB prevention and control initiatives will be key to the effort to end TB across the country's urban centers.

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[5] Report on Baseline Assessment and Web-Based GIS Mapping of Urban Health Facilities/Providers to Understand the Alignment between Patient Care-Seeking Patterns and Tuberculosis Service Availability, Challenge TB Bangladesh, September 2018.

[6] Tuberculosis Care Pathways for Urban Bangladesh, Final Report, Challenge TB Bangladesh, June 2018.