

Strategic Planning for Tuberculosis (TB) Elimination in the United States and Prevention and Control of TB Globally



The Centers for Disease Control and Prevention (CDC), Division of Tuberculosis Elimination's (DTBE) strategic plan focuses on the following goals:

- **Domestic:** eliminate TB in the United States (defined as ≤ 1 case/million)
- **Global:** contribute to reductions in global incidence and mortality by 50% each (compared to 1990 baseline, based on the Stop TB Partnership *Global Plan to Stop TB* (2006-2015))

DTBE has been carrying out strategic planning sessions periodically since 1989, using surveillance data and scientific findings to identify new directions. Depending on funding availability, DTBE launches new projects through an internal peer-review process, selecting those with the greatest potential for having an impact on eliminating TB.

In 2011 DTBE staff refined the approach to U.S. TB elimination to reflect the current environment. This includes budget constraints and the lowest TB rates in history (but with a slowing of the rate of decline), greater complexity in the identification and successful treatment of TB cases, continued increases in foreign-born TB cases, excess TB rates in racial and ethnic minorities, concern over HIV-associated TB and drug-resistant TB, and the U. S. Government's (USG) growing role in addressing TB globally.

DTBE Priorities:

1. Prevent new cases of infection and disease with *Mycobacterium tuberculosis*.
 - Find and cure all persons with TB.
2. Reduce TB in foreign-born persons residing in, or traveling to the United States.
3. Reduce TB in U.S. racial/ethnic minority populations and measure/address social determinants of health.
4. Reduce impact of multidrug- and extensively drug-resistant TB in the United States and globe.
5. Reduce HIV-associated TB in the United States and globe.



In addition, twelve core, uniquely federal functions are critical for carrying out these activities and providing national and global leadership.

1. Conduct routine surveillance (including drug susceptibility) and periodic surveys.
2. Provide funding and technical assistance to state and local TB programs for case finding, contact investigation, and completion of treatment, and support care and treatment (with assistance from the Regional Training and Medical Consultation Centers [RTMCCs]).
3. Guide preparedness and outbreak investigation responses.
4. Conduct program evaluation (e.g., National TB Indicators Project [NTIP]).
5. Provide laboratory diagnostic services, research and build and maintain laboratory capacity.
6. Conduct critical, programmatically relevant operational research to develop and evaluate new tools and interventions for diagnosis, treatment, prevention, and control of TB (to help programs work more effectively and more efficiently).
7. Provide data management, statistical, and information technology support.
8. Support intramural infrastructure (salaries, travel, equipment, and supplies) required for maintaining subject matter experts in TB.
9. Obtain external expert consultation and advice (e.g., Advisory Council for the Elimination of TB [ACET], Office of Infectious Diseases Board of Scientific Counselors, ad-hoc consultations) to ensure that research and program activities are responsive to emergent public health concerns.
10. Develop and evaluate evidence-based training and educational materials, policies, and guidelines to ensure competency in TB diagnosis, treatment, laboratory capacity and programmatic prevention and control.
11. Develop education, risk, and media communications (Web- and print-based) to aid in preparedness and public awareness of TB prevention and control issues.
12. Cultivate relevant external partnerships (Stop TB USA, National TB Controllers Association, American Thoracic Society, Infectious Diseases Society of America, American Academy of Pediatrics, the Association of Public Health Laboratories, affected individuals and their families, and others), as well as collaborate within CDC and across other federal agencies.



DTBE's current strategic plan builds on ones that CDC and its partners have published over the years in response to various challenges to TB elimination. These include:

- *Strategic Plan to Eliminate Tuberculosis in the United States*, published in the *Morbidity and Mortality Weekly Report (MMWR)* in 1989

Three steps of this strategic plan are:

Step 1. More effective use of existing prevention and control methods, especially in high-risk populations.

Step 2. The development and evaluation of new technologies for diagnosis, treatment, and prevention.

Step 3. The rapid assessment and transfer of newly developed technologies into clinical and public health practice.

- *The National Action Plan to Combat Multidrug Resistant Tuberculosis*, published in the *MMWR* in 1992.

This updated plan by the Federal Tuberculosis Task Force (originally created by CDC Director, Dr. William Roper, in 1991) responded to the unprecedented resurgence of TB in the United States, along with several outbreaks of HIV-associated multidrug-resistant tuberculosis (MDR TB). It provides a blueprint for action by federal agencies, recognizing the need for cooperation among many sectors of society. Action steps outlined in this plan focus on each of the following nine areas:

1. Surveillance and epidemiology to determine the magnitude and extent of the problem
2. Laboratory diagnosis, to make the laboratory diagnosis of MDR TB more rapid, sensitive, and reliable
3. Patient management, to prevent patients with drug-susceptible TB from developing drug-resistant disease and effectively manage those patients with MDR TB
4. Screening and preventive therapy, to identify persons infected with or at risk of developing MDR TB and prevent them from developing clinically active TB
5. Infection control, to minimize the risk of transmission of MDR TB to patients, workers, and others in institutional settings
6. Outbreak control, to limit transmission of MDR TB
7. Program evaluation, to ensure effective management of patients and preventing the development of MDR TB
8. Information dissemination, training, and education to effectively disseminate information about MDR TB and its prevention and control
9. Research to identify better methods for combating MDR TB

- The Institute of Medicine (IOM) report *Ending Neglect: The Elimination of Tuberculosis in the United States* published in 2000.

These recommendations formed the basis for updated strategic planning for the elimination of TB in the United States by the Federal Tuberculosis Task Force, with the resultant *Federal Tuberculosis Task Force Plan in Response to the Institute of Medicine Report, Ending Neglect: the Elimination of Tuberculosis in the United States*, produced in 2003. Additional strategic planning at CDC yielded the companion plan *CDC's Response to Ending Neglect: The Elimination of Tuberculosis in the United States*, with specific goals, objectives, and action steps.

- The *TB Elimination: The Federal Funding Gap* report by the National Coalition for the Elimination of TB (NCET) (now STOP TB USA) published in 2002.

NCET estimated that \$528 million annually was needed to fully implement the recommendations of the IOM. Given the slowing trend in the rate of decline in cases of TB in 2001, NCET recommended doubling of project funding to \$265 million for CDC's Division of Tuberculosis Elimination in FY 03. This funding should then be doubled once again in FY 04 to reach the estimates needed to progress toward TB elimination. In FY 03 the funds would be used to:

- Intensify efforts to prevent and control TBs in high incidence areas.
- Implement initiatives for preventing TB is among foreign-born people in the U.S.
- Intensify TB control activities along the U.S.-Mexico border.
- Support applied research conducted by the Tuberculosis Epidemiologic Studies Consortium (TBESC) to refine the approach to TB control and prevention, including the elimination of TB in children.
- Support clinical trials of new drug regimens by the Tuberculosis Trials Consortium (TBTC).
- Develop regional capacity to respond to TB outbreaks.
- Develop and implement strategies for erasing ethnic and racial disparities in TB, particularly in the southeastern United States where these disparities are most marked.

NCET published a follow-up report, *Tuberculosis Elimination: The Federal Funding Gap*, in 2004.

- The Federal Tuberculosis Task Force conducted updated strategic planning in 2007, in response to the global description and occurrence of persons with virtually untreatable extensively drug-resistant TB. This coordinated response, *Plan to Combat Extensively Drug-Resistant Tuberculosis: Recommendations of the Federal Tuberculosis Task Force*, covers the nine most critical components of an action plan:

1. Diagnostic Laboratory
2. Surveillance, Epidemiology, and Outbreak Investigations
3. Infection Control
4. Clinical and Programmatic Interventions
5. Ethical and Legal Issues
6. Communication and Education
7. Biomedical Research
8. Partnerships
9. Cost Analysis

This plan is organized around six goals framed in the context of IOM's recommendations:

- Goal I.** Maintain control of TB through timely diagnosis and management of TB patients and their contacts.
- Goal II.** Accelerate the decline of TB through targeted testing and treatment of persons with latent TB infection.
- Goal III.** Develop new tools for the diagnosis, treatment, and prevention of TB.
- Goal IV.** Reduce the global burden of TB by increasing the United States involvement in global TB control activities.
- Goal V.** Mobilize and sustain support for TB elimination by engaging policy and opinion leaders, healthcare providers, affected communities, and the public.
- Goal VI.** Track progress toward the goal of TB elimination.

- In response to the urgent need to control the spread of TB, the U.S. Congress passed the *Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, TB, and Malaria Reauthorization Act of 2008*. This law supports funding, development of a U.S. Government (USG) Global TB Strategy, and USG involvement in implementing the objectives of the Stop TB Partnership *Global Plan to STOP TB*. The Global Plan objectives are:
 - Reduce by half the TB death and disease burden from the 1990 baseline;
 - Sustain or exceed the detection of at least 70 percent of sputum smear-positive cases of TB and the successful treatment of at least 85 percent of cases detected in countries with established U.S. Agency for International Development (USAID) TB programs; and
 - The successful treatment of 4.5 million new sputum smear-positive TB patients under Directly Observed Treatment, Short-course (DOTS).

CDC, USAID, and the National Institutes of Health (NIH) released the *Lantos-Hyde USG TB Strategy* in 2010. This Strategy outlines USG efforts to help achieve the STOP TB goals through the following key interventions:

- Accelerated detection and treatment of TB in up to 25 countries;
- Scaled up prevention and treatment of MDR TB;
- Expanded coverage of interventions for TB-HIV co-infection in coordination with USG HIV efforts under the President's Emergency Plan for AIDS Relief (PEPFAR); and
- Improvements in Health Systems.

- STOP TB USA (formerly the National Coalition for the Elimination of TB) *Call for Action on TB Elimination Plan for the United States* released in 2010.

STOP TB USA calls for increased stakeholder involvement, and engagement of policy makers, the public health sector, medical practitioners, professional societies, community-based organizations, and voluntary organizations in the effort to eliminate TB in the United States. The Call to Action also outlines specific action steps to eliminate TB in the United States given current challenges such as need for new tools, declines in TB infrastructure and expertise, and persistent problems stemming from poverty and health disparities.

Congressional Authorities:

- The Comprehensive TB Elimination Act of 2008 P.L. 110-392 authorizes CDC to carry out TB Elimination activities.
- The Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, TB, and Malaria Reauthorization Act of 2008 states that it is a major objective of the foreign assistance program of the United States to control TB, and that the United States should support the objectives of the Global Plan to Stop TB.

Congressional Appropriation:

- In FY 2011, the (post rescission) appropriation for TB Elimination is \$141,100,234.

For more Information:

- CDC TB Website - www.cdc.gov/tb
– About Us - <http://www.cdc.gov/tb/about/mission.htm>