The U.S. Government and Global Tuberculosis Efforts

Key Facts

- Since the World Health Organization declared tuberculosis (TB) to be a global health emergency in 1993, global efforts to address TB have become more prominent, and worldwide TB incidence and mortality rates have fallen. Still, in 2016, there were an estimated 10.4 million new cases of TB globally, including 1.0 million new cases in people living with HIV.

- In response to the persistent challenges related to TB, including drug-resistant TB, the U.N. General Assembly will hold the first-ever high-level meeting on TB in 2018 to discuss these challenges and examine progress toward global goals, including ending the epidemic by 2030.

- U.S. government (U.S.) involvement in global TB efforts was relatively limited until the late 1990s. Since that time, its efforts to address TB have grown, and now the U.S. is one of the largest donors to global TB control.

- U.S. TB activities reach more than 50 countries (including at least 20 of the 30 high burden countries where most new cases are occurring), and focus on preventing, detecting, and treating TB, including drug-resistant TB, as well as research and development.

- U.S. funding for bilateral TB efforts through USAID was $245 million in FY 2017, up from $64 million in FY 2001. The Administration has proposed significantly reduced TB funding for FY 2018 ($181 million). Additionally, the U.S. is the largest donor to the Global Fund to Fight AIDS, Tuberculosis and Malaria.

Global Situation

Tuberculosis, an infectious disease caused by bacteria, is a leading cause of death worldwide, despite being preventable and often curable. Approximately one-third of the world’s population carries the TB bacteria, about 10.4 million of whom develop “active” TB each year, which can be spread to others (“latent TB” disease cannot be spread, see box below). When a person with active TB coughs, sneezes, or spits, the bacteria spreads into the air where it may be inhaled by and infect others.¹ According to the World Health Organization (WHO), people with active TB can infect up to 10-15 other people through close contact over the course of a year.² TB is found all over the world, though the majority of TB cases are concentrated in developing countries.³

**Tuberculosis (TB):**⁴ A bacterial infection caused by *Mycobacterium tuberculosis*. Not all people who become infected with TB will develop symptoms. Those who do not become ill are referred to as having “latent TB” and cannot spread the infection to others, while those who become ill with “active TB disease” have symptoms like coughing (sometime with sputum or blood), chest pains, weakness, weight loss, fever, and night sweats. The disease usually affects the lungs, but in serious cases, it can affect other parts of the body and, if not treated properly, can be fatal.
In the 1990s and early 2000s, concern about rising incidence in some areas, new outbreaks, TB/HIV co-infection, and the emergence of TB drug resistance prompted key global health actors and governments, including the U.S. government, to make preserving and advancing the progress of global efforts against TB a priority. In 1993, WHO declared TB to be a global health emergency. Since then, global efforts to address TB have become more prominent, and global TB incidence and mortality rates have fallen. More recently, the U.N. General Assembly announced that it would hold the first-ever high-level meeting on TB in 2018, as significant challenges remain and efforts focus on achieving new global TB goals, including ending the epidemic.

**Morbidity and Mortality**

In 2016, there were 10.4 million new cases of people who developed active TB disease (see Table 1). Although active TB is treatable and curable in most cases, an estimated 1.7 million people died from TB in 2016, including an estimated 374,000 who were HIV-positive. Globally, between 2000 and 2016, TB incidence fell, and TB mortality fell by 37%. Still, detecting TB cases — and then linking diagnosed cases to treatment — remains a significant challenge.

### Table 1: Tuberculosis (TB) Cases by Incidence and Mortality, by Region, 2016

<table>
<thead>
<tr>
<th>WHO Region</th>
<th># of High Burden Countries</th>
<th>Incidence&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Mortality&lt;sup&gt;a&lt;/sup&gt; (excluding HIV-related)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number (in thousands, %)</td>
<td>Rate (per 100,000 population)</td>
</tr>
<tr>
<td>Global Total</td>
<td>30</td>
<td>10,400</td>
<td>100%</td>
</tr>
<tr>
<td>Africa</td>
<td>16</td>
<td>2,590</td>
<td>25%</td>
</tr>
<tr>
<td>Americas</td>
<td>1</td>
<td>274</td>
<td>3%</td>
</tr>
<tr>
<td>E. Mediterranean</td>
<td>1</td>
<td>766</td>
<td>7%</td>
</tr>
<tr>
<td>Europe</td>
<td>1</td>
<td>290</td>
<td>3%</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>6</td>
<td>4,670</td>
<td>45%</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>5</td>
<td>1,800</td>
<td>17%</td>
</tr>
</tbody>
</table>

NOTES: * Represents WHO’s “best estimate” for each indicator. Incidence includes HIV-related cases of TB. Global mortality does not include 374,000 deaths due to HIV-related TB.

### Challenges

**Affected Areas**

Nearly all cases and deaths (more than 95%) occur in low- and middle-income countries, particularly in South-East Asia, Africa, and the Western Pacific. Additionally, thirty countries that have been designated by WHO as having high numbers of TB cases, otherwise known as high burden countries (HBCs), collectively account for approximately 87% of new TB cases globally.

**Affected/Vulnerable Populations**

WHO reports that while people of all ages are at risk, TB mostly affects adults during “their most productive years,” posing significant challenges to the livelihoods of individuals as well as to developing economies. Additionally, people who suffer from other conditions that impair the immune system (e.g., HIV) are at a higher risk of developing active TB, as are people who use tobacco. People in resource-poor settings,
especially those living in poverty or in crowded living conditions with poor ventilation (e.g., prisons or mines), are disproportionately affected.16

**TB & HIV**

TB and HIV are frequently referred to as co-epidemics (or dual epidemics) due to their high rate of co-infection. TB is a leading cause of death among people with HIV, especially in developing countries. In 2016, an estimated 1.0 million of the 10.4 million new active TB cases affected people who were also HIV-positive, and of the 1.7 million people who died from TB, an estimated 374,000 were HIV-positive.18

**Drug-Resistant TB**

Drug-resistant TB has emerged as a major challenge to global TB control efforts. 5.8 percent of new TB cases are estimated to be drug-resistant.19 Cases that fail to respond to standard first-line drugs are known as multidrug-resistant TB (MDR-TB), while those that fail to respond to both first- and second-line drugs are known as extensively drug-resistant TB (XDR-TB). In 2016, there were an estimated 490,000 new cases of MDR-TB, and WHO estimates that 6.2% of these cases were XDR-TB.

MDR-TB has been reported in most countries, with 30 countries identified as having a high burden of MDR-TB specifically. XDR-TB has been reported in 123 countries and territories.21

**Interventions**22

The End TB Strategy, the internationally-recognized strategy for ending the TB epidemic, outlines interventions aimed at decreasing TB-related morbidity, death, and transmission. They include:

- early diagnosis of TB via sputum-smear microscopy,
- treatment (usually a six-month course of antibiotics for drug-sensitive TB) and patient support for all people with TB,
- scaled-up diagnosis and management of MDR- and XDR-TB,
- systematic screening for and management of TB among people living with HIV and others in high-risk groups,
- preventive treatment and vaccination23 for high-risk groups, and
- research and development (R&D) of new tools (e.g., new TB diagnostics, drugs, and vaccines) and improved approaches.

Other interventions include the development of policies and systems that support TB activities, such as improved standardized data collection, quality assurance and rational use of drugs, and monitoring and evaluation of outcomes; sustained political and financial commitment to TB efforts; health systems strengthening; and increased health workforce capacity to respond to TB.

**Global Goals**

Since the 1993 declaration of TB as a global health emergency by WHO,24 major global TB goals have most recently been set through:
The U.S. Government and Global Tuberculosis Efforts

**SUSTAINABLE DEVELOPMENT GOALS (SDGs)**

Adopted in 2015, the Sustainable Development goals (SDGs) aim to end the TB epidemic by 2030 under SDG Goal 3, which is to “ensure healthy lives and promote well-being for all at all ages.” The SDGs are the successor to the Millennium Development Goals (MDGs), which included a tuberculosis target under MDG 6: to halt and begin to reverse the incidence of TB by 2015.

**END TB STRATEGY**

Endorsed by governments at the 2014 World Health Assembly, the *End TB Strategy* set an overarching goal of ending the global TB epidemic as well as targets for achieving, by 2035, a 95% reduction in TB deaths and a 90% reduction in TB incidence (compared with 2015 levels). It builds on the earlier 2006 international *Stop TB Strategy*, in which WHO outlined the goal of eliminating TB as a public health problem by 2050. The *Global Plan to End TB* outlines the steps and resources needed to achieve the *End TB Strategy*’s goals and is periodically updated by the Stop TB Partnership (an international network of public and private entities working to eliminate TB).

**U.S. Government Efforts**

U.S. involvement in global TB efforts was relatively limited until the late 1990s. Since that time, its efforts to address TB have grown, and now the U.S. is one of the largest donors to global TB control.

**HISTORY AND GOALS**

In 1998, the U.S. Agency for International Development (USAID) began a global TB control program, and over the following decade, the U.S. assigned a heightened priority to and provided greater funding for bilateral and multilateral TB efforts.

The passage of the legislation that launched the President’s Emergency Plan for AIDS Relief (PEPFAR) in 2003 placed a heightened priority on U.S. global TB efforts that continues to this day. The *U.S. Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003* (the legislation that created PEPFAR) included TB under its umbrella, authorizing five years of funding for bilateral TB efforts and the Global Fund to Fight AIDS, Tuberculosis and Malaria (an independent, international financing institution created in 2001 that provides grants to countries to address TB, HIV, and malaria). The *Lantos-Hyde U.S. Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008*, which reauthorized PEPFAR, set targets for U.S. bilateral TB efforts and authorized another five years of funding. See the KFF fact sheet on PEPFAR and the KFF fact sheet on the Global Fund.

More recently, in 2015, the U.S. released its five-year *U.S. Government TB Strategy 2015-2019*, which outlines current U.S. TB goals. These goals include, by 2019, to contribute to:

- treatment of 13 million new sputum-smear positive TB cases,
- maintaining treatment success rates of 90% for individuals with drug-susceptible TB,
- diagnosing and initiating treatment of 360,000 new MDR cases of TB,
- providing antiretroviral therapy to 100% of the people diagnosed with HIV and active TB, and
• a 25% reduction in TB incidence relative to a 2015 baseline.

The U.S. has also placed a heightened emphasis on addressing antimicrobial resistance (i.e., drug resistance). 35 In 2015, the U.S. released its National Action Plan for Combating Multidrug-Resistant Tuberculosis, which identifies interventions and articulates a strategy to respond to the domestic and global challenges of MDR-TB. 36

**Organization**

The U.S. Agency for International Development (USAID) serves as the lead implementing agency for U.S. global TB efforts, with other agencies also carrying out TB activities. Collectively, these efforts reach more than 50 countries, including at least 20 of the 30 high burden countries (HBCs). 37 All U.S. global TB efforts are coordinated under the international working group of the Federal Tuberculosis Task Force (a coalition of federal agencies involved in U.S. global and domestic TB efforts). 38

**USAID TB Program**

USAID’s bilateral TB program aims to support specific country needs 39 in 22 priority countries where it currently carries out TB efforts, which are mainly in sub-Saharan Africa, South Asia, and Southeast Asia, and to focus on key interventions, including:

• accelerated detection and treatment of TB for all patients,

• scaled up prevention and treatment of MDR-TB,

• expanded coverage of interventions for TB-HIV co-infection (in coordination with U.S. HIV efforts under PEPFAR),

• improvements in the TB service delivery platforms and overall health system, and

• support for accelerated research and innovation.

The agency reports that in USAID-supported countries, TB incidence and TB-related mortality have decreased by 19% and over 30%, respectively, since 2000. 40

**Other U.S. TB Efforts** 41

The U.S. also supports TB activities through several other agencies, including:

• CDC, which provides technical support on epidemiology and surveillance, laboratory strengthening, and clinical and program operations, and also supports clinical and operational research;

• NIH, which, as the leading funder of TB research and development (R&D), 42 supports basic, applied, and clinical R&D of new drugs, vaccines, and diagnostics;

• OGAC, which leads U.S. efforts to address TB-HIV co-infection; and

• DoD, whose overseas laboratories help to monitor the quality of TB diagnostic services and conduct operational research.
MULTILATERAL EFFORTS

The U.S. partners with international institutions and supports global TB funding mechanisms. Key partners include WHO and the Stop TB Partnership. Additionally, the U.S. government is:

- the largest donor to the Global Fund, which has committed approximately $5.9 billion in funding for TB programs worldwide, and
- one of the largest donors to the Global Drug Facility (a mechanism of the Stop TB Partnership that provides grants to countries for TB drugs). 43

FUNDING 44

Most U.S. funding for TB is provided through the Global Health Programs account at USAID with additional funding provided through the Economic Support Fund and Assistance for Europe, Eurasia and Central Asia accounts. 45, 46

Total Congressional appropriations to USAID for TB have increased from $64 million in FY 2001 to a high of $256 million in FY 2012; since then, funding for TB has declined but remained relatively flat (see Figure 1). In FY 2017, TB funding totaled approximately $245 million. 47

The Administration has proposed significantly reduced TB funding for FY 2018 ($181 million).

All TB funding is counted as part of PEPFAR, which also includes funding for U.S. global HIV/AIDS efforts and contributions to the Global Fund.

Key Issues for the U.S.

The U.S. is one of the largest donors to global TB control efforts and has highlighted TB as an important component of its global health investment. Looking ahead, there are several issues and challenges facing U.S. TB efforts, starting with questions about the extent to which the Administration will continue to support ongoing efforts, particularly in light of its budget proposal to significantly reduce TB funding. Other issues and challenges include:

- implementing TB control programs in the context of weak health systems, limited laboratory capacity, and treatment barriers and complications;
- tackling the emergence of antimicrobial resistance, specifically drug-resistant TB;
- supporting a range of research and development efforts to advance new drugs and vaccines but also to lay the foundation for future elimination efforts;
coordinating TB control efforts with other global health efforts, particularly HIV and maternal and child health (given the impact of TB during pregnancy and childhood);

addressing the cost of treatment;

continuing to expand access to TB services in the current restrained fiscal environment; and

coordinating efforts with other donors (including the Global Fund).

1 These bacteria can float in the air for several hours, depending on the environment. Persons who breathe in the air containing these TB bacteria can become infected. Since initial symptoms may be mild for months, people can sometimes delay seeking care, exposing more people to the bacteria.


8 Treatment in most cases is usually a six-month course of antibiotics.


20 Treatment for these forms of TB “is longer, and requires more expensive and more toxic drugs.” WHO, Global Tuberculosis Report 2017, 2017.


This means that “the global incidence of TB disease will be less than 1 case per million population per year.”


As outlined in a partner country’s national TB strategic plan, per the current and prior USG global TB strategies.


Represents specified funding for international TB programs in the President’s budget request, ForeignAssistance.gov, and Congressional appropriations bills. Additional support for international TB programs is provided through bilateral HIV programs at the State Department to address TB/HIV co-infection, for technical support and research activities through the CDC, and for research activities at the NIH.

The Assistance for Europe, Eurasia and Central Asia (AEECA) account was eliminated in FY13. Funding provided through this account was incorporated into other accounts (e.g. GHP and ESF). FY17 is based on funding provided in the “Consolidated Appropriations Act, 2017” (P.L. 115-31) and is a preliminary estimate. Some FY17 funding for TB programs provided through the Economic Support Fund (ESF) account is not yet known; for comparison purposes, FY17 TB funding through the ESF account is assumed to remain at FY16 levels.

FY17 is a preliminary estimate. Some FY17 funding for TB programs provided through the Economic Support Fund (ESF) account is not yet known; for comparison purposes, FY17 TB funding through the ESF account is assumed to remain at FY16 levels.