TUBERCULOSIS

WHAT YOU SHOULD KNOW:
Tuberculosis (TB), an airborne disease, is the biggest killer among infectious disease agents, killing 4,900 people each day — more than malaria and HIV combined. In 2017, 10.2 million people developed TB and 1.6 million died from it, including 300,000 people who were living with HIV.1 TB is economically devastating,2 and health care personnel are disproportionately at risk. The existing TB vaccine is only effective in children.

In 2016, there were an estimated 600,000 new cases of rifampicin- and multidrug-resistant TB (RR/MDR-TB),3 while an estimated 240,000 people died from MDR-TB.4 However, despite increased TB testing, only 153,000 drug-resistant cases of TB were detected in the same year.5 Countries reported providing MDR-TB treatment to 130,000 people, or about 22% of those with new TB infections.6 Because a powerful new antibiotic, bedaquiline, dramatically increases survival, the U.S. Agency for International Development (USAID) is currently building the capacity for countries to use it.

Tuberculosis knows no borders. It is found in every American state, with nearly 9,093 reported U.S. cases in 2017, 470 attributed U.S. deaths,7 and as many as 13 million latent infections estimated across the country.8 From 2012 to 2016, there were an additional 467 reported cases of MDR-TB,8 straining public health budgets with average treatment costs of $160,000 per person — and $513,000 per person for those with extensively drug-resistant TB (XDR-TB).9

In 2015 the National Institutes for Health (NIH), Centers for Disease Control and Prevention (CDC), and USAID developed a National Action Plan for Combating Multidrug-Resistant Tuberculosis (National Action Plan),10 focusing on 10 priority countries and targeting treatment to 560,000 persons with MDR-TB. The plan warned that the United States “has a window of opportunity to ensure that accelerating progress towards a TB-free world is not imperiled by MDR-TB.” However, massive cuts to TB programs proposed by the Trump administration would result in as many as 31,100 new TB cases.11

Bilateral assistance is essential for helping countries strengthen applications to the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund); facilitating grant implementation; and improving the management of drug-resistant TB cases. Through the Global Drug Facility, USAID resources lower the cost of medications and help countries avoid dangerous treatment interruptions.12 USAID’s TB program, along with the NIH and CDC, also supports research efforts that must be urgently accelerated.

RECOMMENDATIONS FOR CONGRESS
Take advantage of new momentum to reach those unreached and to eradicate TB in all forms. Finding active TB cases is resource-intensive; greater U.S. assistance can play a critical role in improving active-case approaches. Funding should be increased for USAID and CDC Center for Global Health TB programs through a new budget line item. The U.S. pledge to the Global Fund, which has more than tripled MDR-TB funding over the last six years, should be sustained.

Increase access to new technologies and invest in research.
New child-friendly medicines, new antibiotics, and advanced molecular diagnostics can dramatically accelerate progress in the fight against TB. Yet without a well-funded and focused effort to get these innovations into the field and invest in new TB research, the global fight against TB will fail.

Include TB in the U.S. response to antimicrobial resistance (AMR).
The United States has committed to an ambitious response to AMR, except in one key area: despite the fact that drug-resistant TB causes almost one-third of AMR-related deaths, drug-resistant TB is not part of the U.S. AMR plan. The Department of Health and Human Services (HHS) Biomedical Advanced Research and Development Authority (BARDA) is a key component of research, development, and production for medical countermeasures; BARDA should be leveraged to help end the threat from drug-resistant TB.

WHY THIS INVESTMENT IS IMPORTANT
TB programs offer one of the highest known returns on health investment — $56 for each dollar invested.13 U.S. funding makes an enormous difference: TB incidence in the 23 countries with USAID TB funding has fallen by 25% since 2000 and by 6% from 2014 to 2017, which is six times greater than in countries not receiving U.S. bilateral assistance.

Reductions in U.S. assistance for TB would cost lives, lose valuable momentum gained from prior investments, and place people in the United States at greater risk for TB. Current USAID TB funding represents just 2% of the $8.69 billion provided to global health programs at USAID and the Department of State.14

Domestic funding within affected countries is important. Yet even in the most optimistic scenarios for increased domestic funding, and assuming that Global Fund investments in TB continue, a large funding gap remains in countries eligible for Global Fund assistance: $7.4 billion over 5 years.15

A volunteer with the Conference of the Philippines-Episcopal Commission on Health Care’s Community-Based Health Program educates church members on TB. Credit: USAID
Tuberculosis

Of particular concern is drug resistance. Treating MDR-TB involves 250 injections and 15,000 pills over a two-year period, along with side effects that often include permanent hearing loss. The five-year survival rate for XDR-TB is just 20%, which is worse than the rate for most forms of cancer. Even with the National Action Plan in place, USAID has reported to Congress that “additional resources will be required” to reach planned objectives. Innovations can now dramatically shorten treatment, reduce side effects, and improve outcomes — provided they reach patients in need.

The global TB epidemic increases health costs in the United States. A CDC analysis of MDR-TB and XDR-TB cases in the United States from 2005 to 2007 found that direct costs resulting from these cases totaled approximately $53 million, plus $100 million in direct-plus-productivity-loss costs. CDC estimates for the cost of U.S. TB cases in 2016 totaled $450 million. Given the nature of this disease and origin of cases, a strategy of strengthening the southern U.S. border would, by itself, do little to reduce this problem.

The rate of new TB cases declined by 1.9% between 2015 and 2016, but this must accelerate to a 4%-5% decline per year by 2020 to reach the first WHO End TB Strategy milestones. Fortunately, faster progress is possible due to recent advances in diagnosis and treatment, as well as growing political will and community engagement.

In 2018 the UN High Level Meeting (HLM) on TB provided an unprecedented political opportunity to address this long-neglected issue. At this historic meeting, 120 countries agreed to ambitious new detection, treatment, and prevention targets. In Congress, 106 members of the House and 43 members of the Senate signed bipartisan letters urging the administration to prioritize the HLM and leverage its findings to accelerate progress against TB. At the meeting, USAID announced a new initiative, the Global Accelerator to End TB, which helps countries meet the commitments outlined in the UN Political Declaration on the Fight Against Tuberculosis. This initiative would work directly with local entities, including faith-based and other community organizations, to provide accessible services in TB priority countries. USAID also committed to increasing U.S. support for India, which has the largest TB epidemic in the world.

With increasing buy-in at the highest political levels of key countries, USAID and CDC support can do even more to strengthen national programs and leverage Global Fund grants. The United States now has an unprecedented opportunity to lead the world in ending the TB threat to global health security.

RESOURCES
We Cannot Deny It Anymore. TB is the New Global Health Emergency http://bit.ly/2fimEiT
'This Is Real Momentum': World TB Day Finally Marks A Promising Shift http://bit.ly/2O06tvy
USAID: Tuberculosis http://bit.ly/1KDGFi

CONTRIBUTORS
David Bryden, RESULTS, Co-Chair TB Roundtable, dbryden@results.org
Nuala Moore, American Thoracic Society, Co-Chair TB Roundtable, nmoore@thoracic.org

CITATIONS