

## FOCUS ON

# Drug-resistant Tuberculosis



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Drug-resistant TB is a major global public health problem that threatens the significant progress made in TB care and prevention in recent decades.

Drug-resistant TB is part of the growing challenge of antimicrobial resistant superbugs that do not respond to existing medications, resulting in fewer treatment options and increasing mortality rates for illnesses that would ordinarily be curable — including TB. Global development partners must move faster to contain this threat of antimicrobial resistance before it escalates to claim millions of lives around the world.

The rise of antimicrobial resistance coincides with the growth of TB. Despite steady progress since 1990, the disease killed more than 1.8 million people in 2015, surpassing HIV as the deadliest infectious disease globally. Drug-resistant forms of TB are also on the rise, complicating an already dire situation.

## The Challenge

In most cases, tuberculosis is treatable and curable. However, standard TB treatment requires up to six months of drugs that can cause nausea, vomiting and stomach pain. The duration and side effects drive some people to abandon their treatment, which can lead to drug resistance — when tuberculosis bacteria is resistant to at least one of the main TB drugs.

Globally, only half of multidrug-resistant tuberculosis (MDR-TB) patients who initiate treatment are successfully treated, mostly due to high mortality and falling out of the treatment programs. Outcomes for individuals with extensively drug-resistant tuberculosis (XDR-TB) are worse — as reported by WHO in 2015, only 26 percent of patients were successfully treated.

As antimicrobial resistance goes, tuberculosis is an enormous problem. Deaths from drug-resistant TB now account for about one-third of all antimicrobial resistance deaths worldwide. Treating drug-resistant TB is costlier and can take three to four times as long — not all people survive.

In 2015, of approximately 580,000 cases of drug-resistant TB, 200,000 patients died. A recent study published in *The Lancet Infectious Diseases* forecast that cases of drug-resistant TB will increase in four high burden countries — India, the Philippines, Russia, and South Africa — over the next 20 years. That rise is likely to come from increased transmission of drug-resistant TB between people, rather than drug resistance developing from misuse or mismanagement of TB drugs.

To achieve the global goal of ending TB as an epidemic by 2030 and prevent a potential health disaster, global health partners must stop the spread of drug-resistant TB. The Global Fund is a major external source of financing for the drug-resistant TB response in low- and middle-income countries. The amount of MDR-TB funding available through the Global Fund has more than tripled over the last six years through reprogramming of existing grants. Yet, those investments are not nearly enough.

### FINDING MISSING CASES

Despite treatment success and lower mortality rates, “missing” cases of TB — people who fail to be diagnosed, treated or reported — are a major challenge in the fight against TB, and contribute to the growing problem of drug-resistant TB. Worldwide, 40 percent of the 10.4 million people who get sick with TB and 80 percent of the 580,000 people suffering from drug-resistant TB were missed in 2015.

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When Mykola, an 18-year old from Ukraine, found out that he had multidrug-resistant TB, he was very worried. “I thought that my life was over.” But he gathered himself together and fought the disease, committing himself to the long and taxing treatment of 12 pills a day. “I have a whole life ahead of me, I have decided that I want to go to the university to become a psychologist to help people get through difficult times,” Mykola says. “Tuberculosis has not defeated me. Let us not let it defeat others.” There are more than 17 million people across the world that have received TB treatment with the support of the Global Fund. Mykola is one of them.



Reuben Kimweli tracks down cases of tuberculosis that go undiagnosed, untreated or unreported in his community in Kibera, Kenya. Working for a program run by Amref Health Africa, he is one of thousands of community health workers on the frontlines of the global effort to reduce emerging drug resistance.

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## The Global Fund Response

In addition to regular TB interventions, the Global Fund has launched a new investment called catalytic funding to support innovative programs, gathering evidence and expanding the most successful approaches to find cases of TB missed by public health systems. With it, the Global Fund is investing an additional US\$115 million in 12 countries that account for 55 percent of all missed cases of TB and multidrug-resistant TB: Bangladesh, Democratic Republic of Congo, Indonesia, Myanmar, Nigeria, Pakistan, Philippines, South Africa, Tanzania, Ukraine, Kenya and Mozambique. Among other things, this means adding TB screening to other routine check-ups during medical visits, and developing more efficient and effective ways for private health care providers who are treating TB cases to report those cases to the national TB program.

The Global Fund partnership is supporting the procurement of new diagnostic technologies and drugs to help in the response to drug-resistant TB. WHO recently endorsed a shorter, less expensive treatment regimen for MDR-TB cases, including for children. This is a major step in expanding treatment coverage and in improving treatment results.

## Diagnostic Technology

GeneXpert technology has transformed the way the world diagnoses drug-resistant tuberculosis. It has allowed screening of thousands of TB cases around the world, quickly and efficiently. The Global Fund partnership is investing heavily in expansion of this technology but the need continues to be bigger than the resources available. There is also need to expand the testing for resistance to second line medications. This is important in helping identify patients with drug-resistant TB who are eligible for short treatment regimens, saving more lives and resources.

## New Drugs

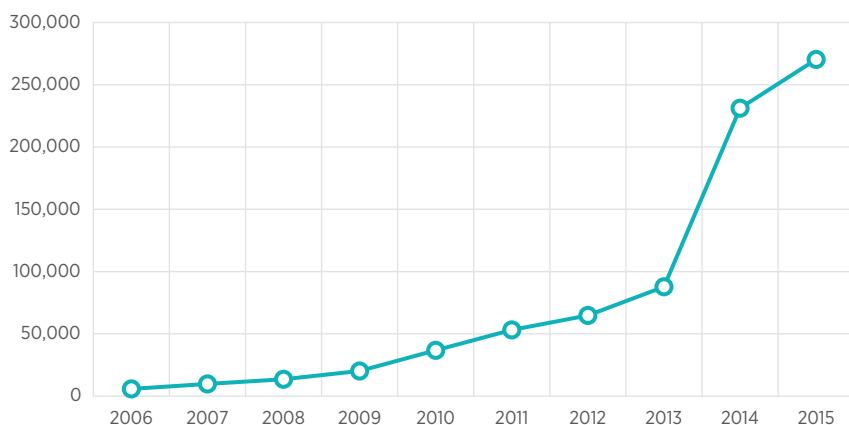
The Global Fund is supporting countries to introduce bedaquiline and delamanid, two groundbreaking new drugs for the treatment of drug-resistant TB. As bedaquiline is currently available free through a USAID donation from Janssen Pharmaceuticals, countries have been able to reprogram Global Fund investments that were originally set aside for treatment of the disease, freeing up funds to support additional MDR-TB interventions. The new drugs have fewer side effects and shorter treatment times, increasing the chances that people will stay on the treatment and be cured.

## Community Involvement

TB patients frequently stop treatment before it is completed, leading to drug-resistant TB. The Global Fund invests in community systems, supporting volunteers to raise awareness, fight stigma and improve access to TB health services, treatment and care. By supporting community health workers who knock on doors and support community members through treatment, the Global Fund is working with local health workers across the world to prevent people from getting drug-resistant TB and to treat those already affected by the disease.

### Cumulative number of MDR-TB patients treated by Global Fund-supported programs

NO. OF PATIENTS TREATED



© The Global Fund / Photo courtesy of Mildred Fernando-Pancho

Investments by the Global Fund partnership are supporting 20 XDR-TB patients through treatment in the Philippines. Others have gone through such treatment and recovered fully, including Mildred Fernando-Pancho. Mildred was diagnosed with ordinary TB in 2001. Through 10 years of pain and treatment of various forms of TB — including XDR-TB — Mildred fought on until she completed her final round of treatment in 2011. Today she works as an advocate for other people suffering from TB. “It is my way of giving back,” she says.

## Health Security

Diseases know no borders; as people move, so do diseases. Untreated, a person with active TB can transmit the infection to 10-15 people over the course of a year. In a globalized world, ending TB is critically important for all across the world. Ending drug-resistant TB will not only save millions of lives and reinvigorate communities and economies in vulnerable, low- and middle-income countries, it will also have an impact in improving global health security. In addition to grants allocated to countries, the Global Fund partnership is providing special funding to address cross-border issues including MDR-TB response among migrant workers, and providing treatment to refugees and internally displaced people. The Global Fund is also investing to accelerate care and treatment for populations disproportionately affected by drug-resistant TB, such as poor people in crowded settings, migrants, prisoners, refugees, miners and people who use drugs.

## Stronger Systems for Health

In the end, the response to drug-resistant TB relies heavily on strong and functional health systems. One-third of the Global Fund's investments support building resilient and sustainable systems for health, including training for health workers, improved facilities and access, and strengthened information systems and supply chain management.



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In Zaatari camp in the Jordanian desert, the Global Fund is supporting the provision of essential TB prevention, diagnosis and treatment services to Syrian refugees. What started as a temporary shelter for people fleeing the conflict in Syria has grown into a city of about 80,000 people. The people here benefit from TB services such as screening upon arrival, medical care and referral services, as well as health education.

## About the Global Fund

The Global Fund is a 21st-century partnership designed to accelerate the end of AIDS, tuberculosis and malaria as epidemics. As a partnership between governments, civil society, the private sector and people affected by the diseases, the Global Fund mobilizes and invests nearly US\$4 billion a year to support programs run by local experts in more than 100 countries. The Global Fund's operating costs are just 2.3 percent of grants under management, reflecting an exceptionally high degree of efficiency. By challenging barriers and embracing innovative approaches, we are working together to better serve people affected by the diseases.

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