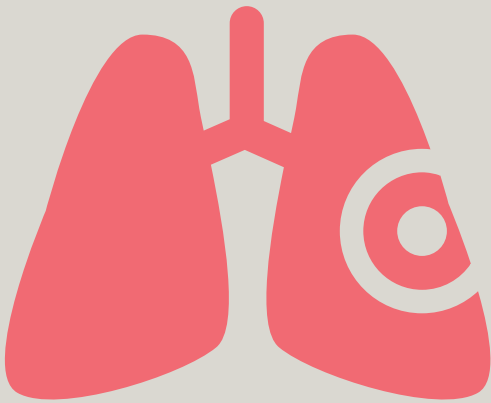


# TUBERCULOSIS AND HIV

IN 2017, 10 MILLION PEOPLE FELL ILL WITH TB AND 1.6 MILLION DIED FROM THE DISEASE



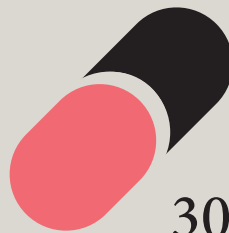
People living with HIV are up to **20 times** more likely to fall ill with **TB**

ANNUAL GLOBAL FUNDING FOR TUBERCULOSIS IS **US\$ 3.5 BILLION** SHORT OF WHAT IS REQUIRED



TB IS THE **LEADING CAUSE OF DEATH** AMONG PEOPLE LIVING WITH HIV

**UNAIDS** IS WORKING WITH PARTNERS TO REDUCE TB-ASSOCIATED DEATHS AMONG PEOPLE LIVING WITH HIV **BY 75% BY 2020**



In 2017, approximately **300 000** people died from AIDS-related TB

TB IS CURABLE: **45 MILLION** LIVES HAVE BEEN SAVED SINCE 2000

## SIMPLE, AFFORDABLE AND EFFECTIVE HIV/TB PROGRAMMES

All people living with HIV should have access to:

- Antiretroviral Therapy
- TB diagnostics and treatment
- Regular TB screening
- TB preventive therapy (if no TB symptoms)



All people living with TB should have access to:

- HIV testing and antiretroviral therapy
- TB treatment
- HIV prevention options



*“Ending TB, the world’s biggest infectious killer, would save millions of lives and help lift people out of poverty and disease. A third of all people living with HIV die of TB, so the impact on the AIDS response would be enormous. By working together we can achieve a healthier future for all.”*

**MICHEL SIDIBÉ**

Executive Director of UNAIDS



## An unprecedented opportunity

HIV-associated TB presents a risk to achieving the Sustainable Development Goals. Effective, sustained action is required to meet the needs of the most vulnerable populations.

United Nations Member States have committed to work towards the target of reducing deaths related to tuberculosis (TB) among people living with HIV by 75% by 2020, as well as reaching 90% of all people with TB with preventive or therapeutic treatment and achieving 90% treatment success for all people diagnosed with TB.

Member States have also set the framework for the HIV community's contribution to reduce the burden of TB among people living with HIV—all newly diagnosed people living with HIV should be screened for TB; all people with active TB must be started on treatment; people with no symptoms of active TB should receive preventive treatment; and all newly diagnosed adults and children living with HIV should be on antiretroviral therapy and either TB treatment or TB preventive treatment.

In 2018, the world is still far from reaching these targets and goals.

The 2018 United Nations General Assembly High-Level Meeting on Tuberculosis, taking place on 26 September at the United Nations in New York, United States of America, provides the world with a unique opportunity to take stock of the progress and shortfalls in the response to the interlinked epidemics of TB and HIV and forge a new partnership to end TB and AIDS as part of the Sustainable Development Goals.

The commitments from Member States must be bold and ambitious and leaders of Member States must be held accountable for their actions in taking urgent steps to end two of the world's leading infectious diseases, TB and HIV.

## TB and HIV—the facts

### **TB is the leading cause of death among people living with HIV**

- ▶ TB bacteria are spread from person to person through the air.
- ▶ About 1.7 billion people (23% of the world's population) are estimated to have a latent TB infection that could potentially develop into active TB disease during their lifetime.
  - It is estimated that between 5% and 10% of people with latent TB will fall ill with the disease at some point in their lives.
- ▶ TB most often affects the lungs, and people with compromised immune systems, such as people living with HIV, people who have diabetes or people who are malnourished, have a much higher risk of falling ill.
  - People living with HIV with latent TB infection, for example, are 20 times more likely to develop active TB.
  - In 2017, 10 million people developed TB disease, 9% of whom were people living with HIV.
- ▶ Around 70% of people with untreated pulmonary TB die within 10 years.
  - Although the risk is reduced by being on effective antiretroviral therapy, among people living with HIV, untreated TB is rapidly fatal in almost all cases.
- ▶ TB is the top infectious killer worldwide, with three people dying of TB every minute.
  - In 2017, there were around 1.6 million TB deaths, including 300 000 people living with HIV.
- ▶ There has been progress in reducing TB deaths among people living with HIV in recent years, which were reduced by 44% from 2010 to 2017.
  - However, TB remains the leading cause of death among people living with HIV, accounting for one in three AIDS-related deaths.

## TB is preventable and curable

- ▶ People living with HIV who do not have TB should start preventive treatment for TB in areas with high rates of the disease.
  - In 2017, around 1 million people living with HIV started preventive treatment for TB.
- ▶ The treatment success rate for people newly diagnosed with TB was estimated at 82% in 2016.
  - However, it is lower among people living with HIV.
- ▶ It is estimated that between 2000 and 2017, TB treatment averted 45 million deaths among HIV-negative people.
  - Among HIV-positive people, TB treatment, supported by antiretroviral therapy, averted an additional 9 million deaths.
- ▶ TB treatment is cheap and highly effective.
  - On average, treatment can give people in the middle of their productive life around 20 additional years of life.
  - This results in substantial economic and health returns.
- ▶ However, less than half of the estimated cases of TB among people living with HIV are found and notified, and less than 60% of known TB patients are tested for HIV, precluding treatment and resulting in preventable deaths.
- ▶ Despite its effectiveness, treatment of TB is long and toxic, and the side-effects often lead people to stop taking their medicines.
  - This lack of adherence has contributed to the rise in antibiotic resistance, which is jeopardizing efforts to end TB.
  - In 2017, around 560 000 people developed TB that was resistant to rifampicin, the most effective first-line medicine, and of these 82% had multidrug-resistant TB.

# TIMELINE OF HIV AND TB

Tuberculosis (TB) is the leading cause of illness and death among people living with HIV. TB can be cured.

**1988** WHO and the Union recommend a joint approach to tackling TB and HIV.

**2005** Malawi uses a model for delivering antiretroviral therapy based on the TB model incorporating the DOTS principles. People with TB are offered HIV testing and given priority for antiretroviral therapy if eligible. During the year, 47% of registered people with TB accept HIV testing, 69% test positive and 92% start HIV treatment.

**2006** WHO convenes an urgent meeting to discuss the implications of a deadly outbreak of extensively drug-resistant TB among people living with HIV in South Africa. Extensively drug-resistant TB is resistant to the most important first- and second-line anti-TB drugs.

**2009** guidelines recommend that everyone who is living with HIV should receive antiretroviral therapy regardless of their CD4 count.

**2003** An estimated 3% of people with TB are tested for HIV.

**2004** Globally, the rate of new TB cases peaks at 143 (range 136–151) cases per 100 000 population.

1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

**1982** The World Health Organization (WHO) and the International Union against Tuberculosis and Lung Diseases (the Union) sponsored the first World TB Day on 24 March, 100 years to the day since Robert Koch discovered the TB bacillus, the cause of TB. Dr Koch's discovery opened the way to diagnosing and curing TB.



**1986** The first reports of high HIV prevalence among people with TB in Africa from Zaire (the Democratic Republic of the Congo). Subsequent cases confirmed across sub-Saharan Africa.



**1983** The first reports of an association between TB and HIV among people with AIDS in Haiti.



**1995** Data show that people living with HIV with active TB have higher viral loads and die sooner than people without TB.

**1997** New worries arise in the TB response. In 35 countries surveyed, researchers find multi-drug-resistant TB rates exceeding 2% in about one third of the countries surveyed. The highest rates were in the countries of the former USSR (including the Baltic countries), Argentina, India and China.



**1995–2008** The overall TB burden falls as more people with TB successfully treated in DOTS strategy for TB control), with up to 6 million people cured.

**1990–2004** The number of TB cases stabilizes or falls steadily in many parts of the world. In sub-Saharan Africa, the rate of new TB cases rises dramatically, fuelled by the HIV prevalence among adults exceeds 5%.



New WHO  
commend  
with TB who  
HIV should  
roviral therapy,  
their CD4 count.

**2010** A study published in the *American Journal of Tropical Medicine and Hygiene* suggests that the Gambian pouched rat could be trained to detect the TB bacillus. Researchers hope that this 1.5 kg mammal, with a highly developed sense of smell, could one day be part of routine first-line screening for TB. The rats are already helping to detect landmines.



**2010** WHO endorses a new TB testing tool that does not require trained laboratory technicians. It can also diagnose TB and multidrug-resistant TB cases in less than two hours.



**2016** 600 000 people develop drug-resistant TB.

**2016** A total of 10.4 million people fall ill with TB and 1.7 million people die from TB, including approximately 374 000 people living with HIV.

**2016** WHO recommendations announced to speed up detection and improve treatment outcomes for multidrug-resistant TB through use of a rapid diagnostic test and a shorter, cheaper treatment regimen.

**2016** United Nations Political Declaration on Ending AIDS includes working towards the target of reducing TB-related deaths among people living with HIV by 75% by 2020 and commitment to funding and implementing to achieve the 90-90-90 TB targets.

**2030**

Sustainable  
Development Goal  
target date to end  
AIDS and TB.



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

**2002-2007**

Data from Botswana indicate a decline in the number of TB cases reported nationwide that coincides with rapid roll-out of antiretroviral therapy. Improvements in Botswana's national TB programme during this same period, including case detection and reporting, mean that this decline probably reflects a true reduction in TB infections due to antiretroviral therapy.

**2006**

Jorge Sampaio, the former President of Portugal, is appointed as the United Nations Secretary-General's first Special Envoy to Stop Tuberculosis.

**2015** Eric P. Goosby appointed as the United Nations Special Envoy on Tuberculosis.

**2015** TB death rate nearly half what it was in 1990.

**2015** Millennium Development Goal 6 target date to combat HIV/AIDS, malaria and other diseases.



**2017** WHO Global Ministerial Conference on Ending TB, at which 120 national delegations adopt the Moscow Declaration to End TB.

**2017** For the first time, the number of people living with HIV accessing treatment exceeds the number of people not on treatment.

TB response shows a cumulative total of 36 million  
OTS programmes (the internationally recommended  
n deaths averted.

ost parts of the world, except for  
the HIV epidemic, especially where

**2018** 26 September.  
First ever United Nations General Assembly High-Level Meeting on Tuberculosis "United to end tuberculosis: an urgent global response to a global epidemic".

**2000-2017** An estimated 45 million lives were saved through TB diagnosis and treatment between 2000 and 2017.

## Together we can end TB and HIV

Many breakthroughs can be achieved by improving collaboration between HIV and TB programmes and investing in diagnostics, vaccines and medicines, including preventive medicine and medicine to treat TB, including multidrug-resistant TB. However, more commitment, investment and action are needed.

It is estimated that US\$ 10.4 billion is required in 2018 for an effective response to TB in the 118 low- and middle-income countries that account for 97% of reported cases globally. The actual amount available in 2018 was US\$ 6.9 billion, a shortfall of US\$ 3.5 billion.

To respond effectively to HIV, UNAIDS estimates that US\$ 26.2 billion will be required for the AIDS response in 2020. In 2017, US\$ 21.3 billion was available in low- and middle-income countries, a shortfall of around US\$ 5 billion. Filling the funding gaps as well as investing in research and innovation will not only save lives but yield significant returns.

Countries with a high burden of HIV-associated TB need to rapidly integrate and scale up their TB/HIV services. Early and frequent TB screening and testing for people newly diagnosed with HIV is essential and the delay between diagnosis and treatment must be drastically reduced.

People diagnosed with active TB must be started on treatment and people with no symptoms of active TB should immediately receive TB preventive treatment. Similarly, people newly diagnosed and treated for TB should be encouraged to test for HIV and if HIV-positive should be started on antiretroviral therapy as soon as possible.

TB and HIV programmes need to coordinate efforts to find the missing millions who are not being reached by HIV and TB services. This can be done by:

- ▶ Informing and engaging key populations about their increased risk of TB and HIV and facilitating better access to client-centred TB and HIV prevention, diagnostic and treatment services.
- ▶ Integrating TB and HIV service delivery for key populations using a “one-stop shop” model.
- ▶ Reconfiguring health services to better reach and meet the needs of the communities being left behind.
- ▶ Identifying vulnerable households and communities to guide community case-finding activities.
- ▶ Multidisease health screening campaigns that can be tailored to the major causes of vulnerability, morbidity and mortality in each community, with the costs shared between health, social and education programmes.

TB and HIV programmes must advocate for the political commitment needed to build the components of universal health coverage that are necessary for an effective global response to HIV-associated TB. These include sustainable health financing, health systems governance, the health workforce, essential medicines and health products, health statistics and information systems, and service delivery.

In addition, TB and HIV programmes must advocate, together with other health programmes, for governments to actively engage and invest in addressing the social and structural drivers that increase people’s risk of falling ill or reduce their access to services, such as stigma, discriminatory laws and practices, poverty and gender inequality.

By working together we can end TB and HIV.



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