

**Time to act**  
**Save a million lives**  
**by 2015**

**Prevent and**  
**treat tuberculosis**  
**among people**  
**living with HIV**



# Living with HIV, dying from tuberculosis

## A THIEF IN OUR MIDST

We live in a time of unprecedented hope for the 33.3 million people living with HIV worldwide. Antiretroviral therapy (ART) offers the promise of a full and fulfilling life. Now people living with HIV can raise their families, work and pursue their dreams.

But a thief is in our midst—one that is routinely robbing people, and the countries they live in, of their futures. Every minute, three people living with HIV have their lives snatched away by tuberculosis (TB). Africa, hit hard by HIV, is also hit hard by TB. TB is the main cause of death in people living with HIV.

How can we allow this to happen? TB is preventable and curable with inexpensive medicines. It should not be a death sentence. Yet our efforts to stop so many unnecessary deaths are inadequate.

Between 2011 and 2015, two million people living with HIV will die of TB if we fail to act now.

## SOCIAL AND ECONOMIC CONSEQUENCES

TB and HIV form a deadly combination, and together they are thwarting progress in developing countries. Both diseases are mainly striking down young adults who should be in their most productive years and shaping their countries' futures.

TB does not respect borders or social class. But while it is prevalent with the poor and disadvantaged, it also affects individuals who are literate, have considerable education and earn good incomes. Breadwinners who become ill with TB are often too sick to work for weeks or months; and they and their families may face financial catastrophe. Children may have to leave school and go to work or stay at home to care for an ailing parent. Parents who die of TB leave behind millions of orphans. Health workers, one of our most precious resources in the response to TB and HIV, are at especially high risk of TB. Whatever their station in life, all people deserve access to TB services as a matter of basic human rights.

## FAST FACTS ON TB/HIV

**At least one out of three people in the world has latent TB infection, which increases the risk of becoming ill with TB.**

**People living with HIV have an estimated 20 to 30 times greater risk of developing active TB than people without HIV infection.**

**An estimated 9.4 million people become ill with TB worldwide in 2009, and of these people nearly 3 million, including 1 million people living with HIV, were in Africa.**

**Some 400 000 people died of HIV-related TB in 2009, which makes TB responsible for one in four AIDS deaths.**

# To save a million lives

Scientific modelling<sup>1</sup> has shown that by scaling up methods that are already available, we could save a million people living with HIV from dying of TB between 2011 and 2015. Here is what needs to be done:

**Make health services more widely available.** In 2010 less than a third of people living with HIV sought care for TB at a clinic. That needs to double by 2015.

**Improve the quality of TB care.** By 2015, the cure rate for TB should be at least 85%, up from 70%.

**Reach out to test for HIV and screen for TB.** In countries where HIV and TB are prevalent, screening programmes should provide testing for both infections to everyone in the population every three years. All people who test positive for HIV and are also found to have TB should start TB treatment immediately (while those who do not have active TB should begin ART when CD4 count reaches 350). After two weeks on TB treatment, they should begin ART. By end 2015, 80% of TB cases among people living with HIV should be detected and treated.

**Prevent TB.** People living with HIV who are routinely exposed to TB should be protected against becoming ill with TB. Such protection is cheap and simple—a daily dose of isoniazid. By end 2015, 30% of people living with HIV who do not have active TB should receive this preventive treatment.

**Provide ART sooner.** People living with HIV are far less likely to become ill with and die of TB if they begin ART before their immune systems begin serious decline. By 2015, people living with HIV should receive ART as soon as blood tests show that their CD4 count has dropped to 350.

## INTEGRATION OF HIV AND TB SERVICES

These objectives cannot be met in countries where the programmes providing HIV care operate in isolation from those providing TB care. Every country seeking to prevent deaths from TB among people living with HIV needs bold political leadership to integrate HIV and TB services at every level of the health system and carefully developed and fully funded plans.<sup>2</sup> They also need good systems for quickly tracking the numbers of people living with HIV who are becoming ill with TB, as an important step to improving their programmes. Last, they need to take measures to reduce TB exposure in places where people living with HIV may be concentrated, such as clinics, hospital wards and prisons.

## MEETING THE GOALS OF THE GLOBAL PLAN TO STOP TB

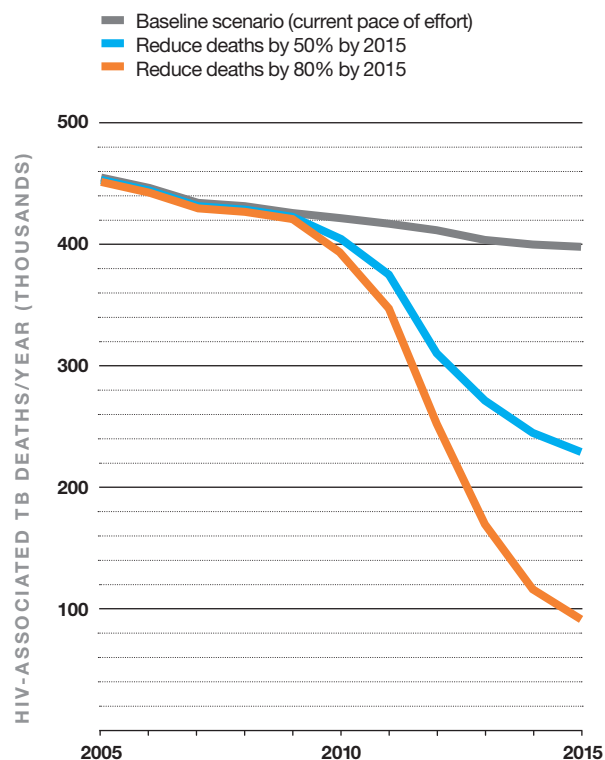
At the very least we know it is feasible to meet the targets set by the Stop TB Partnership and UNAIDS; as specified in the *Global Plan to Stop TB 2011–2015*.<sup>3</sup> In the Global Plan, the year 2004—when deaths from HIV-associated TB were measured for the first time—is taken as a baseline. The aim is to cut in half the number of deaths among people living with HIV, compared to 2004 levels, by end 2015. This goal would translate into nearly 600 000 lives saved. We can do even more.

<sup>1</sup> Williams B, Dye C et al, *Tuberculosis among people living with HIV: is it possible to prevent a million TB deaths by 2015?* Unpublished technical report.

<sup>2</sup> *Interim policy on collaborative TB/HIV activities*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330). [http://whqlibdoc.who.int/hq/2004/WHO\\_HTM\\_TB\\_2004.330.pdf](http://whqlibdoc.who.int/hq/2004/WHO_HTM_TB_2004.330.pdf)

<sup>3</sup> *The Global Plan to Stop TB 2011–2015: transforming the fight towards elimination of tuberculosis*. Geneva, World Health Organization, 2010 (WHO/HTM/STB/2010.2).

## Three scenarios for reducing TB-related deaths among people living with HIV



# Scenario: Save a million lives by 2015: 80% reduction in deaths

By testing for HIV and TB every three years and scaling up methods that are already available, we can reduce deaths by 80%.

*Each figure represents 10 000 lives saved.*

## IMPROVED TREATMENT IN CLINICS

### Better health services

% of people living with HIV seeking TB care at a clinic.

**Baseline:** 30%

**80% scenario:** 70%



### More cures

% of people living with HIV cured of TB.

**Baseline:** 70%

**80% scenario:** 85%



## IMPROVED DIAGNOSIS AND TESTING

### Improved diagnosis

% of people living with HIV who are diagnosed accurately for TB.

**Baseline:** 40%

**80% scenario:** 80%



### Active case detection

TB cases actively sought in people living with HIV.

**Baseline:** 30%

**80% scenario:** Testing for TB and HIV every three years, with 80% of TB cases detected among people living with HIV.



## INCREASED PREVENTION EFFORTS

### Preventive treatment

% of people living with HIV who do not have active TB receiving successful preventive treatment with isoniazid.

**Baseline:** Implemented at low levels

**80% scenario:** 30%



### ART at 350

All people living with HIV receive ART as soon as blood tests show that their CD4 count has dropped to 350.



**Total lives saved**



# Scenario: Save 600 000 lives by 2015: 50% reduction in deaths

By testing for HIV and TB every five years and scaling up methods that are already available, we can reduce deaths by 50%, as targeted in the Stop TB Partnership's *Global Plan to Stop TB 2011-2015*.

*Each figure represents 10 000 lives saved.*

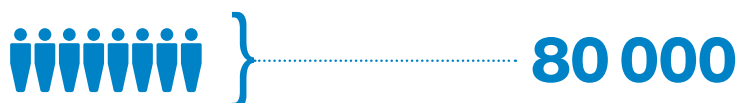
## IMPROVED TREATMENT IN CLINICS

### Better health services

% of people living with HIV seeking TB care at a clinic.

**Baseline:** 30%

**50% scenario:** 50%



### More cures

% of people living with HIV cured of TB.

**Baseline:** 70%

**50% scenario:** 85%



## IMPROVED DIAGNOSIS AND TESTING

### Improved diagnosis

% of people living with HIV who are diagnosed accurately for TB.

**Baseline:** 40%

**50% scenario:** 60%



### Active case detection

TB cases actively sought in people living with HIV.

**Baseline:** 30%

**50% scenario:** Testing for TB and HIV every five years, with 80% of TB cases detected among people living with HIV.



## INCREASED PREVENTION EFFORTS

### Preventive treatment

% of people living with HIV who do not have active TB receiving successful preventive treatment with isoniazid.

**Baseline:** Implemented at low levels

**50% scenario:** 10%



### ART at 350

All people living with HIV receive ART as soon as blood tests show that their CD4 count has dropped to 350.



**Total lives saved**



# What will it cost per year?

(Figures are in US\$)



**\$410 million**

**To save 600 000 lives by 2015**

*This figure includes improved access to care, preventive treatment with isoniazid, HIV testing and TB screening across the population every five years and TB care.*



**\$790 million**

**To save a million lives by 2015**

*This figure includes improved access to care, preventive treatment with isoniazid, HIV testing and TB screening across the population every three years and TB care.*

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## Focus on: Pregnant women and children

The past decade has seen a troubling trend: an increasing number of women living with HIV, especially women under the age of 24, are becoming ill with TB.

### WHAT NEEDS TO BE DONE

**Provide preventive treatment** (isoniazid) to all women living with HIV who are at risk of TB exposure.

**Examine all pregnant women** for signs and symptoms of TB and provide treatment if needed.

**Any case of TB should prompt** a careful assessment of the whole family's TB risk.

**New child-friendly diagnostic methods** and treatment regimens are urgently needed.

**Children should be protected** against exposure to TB by limiting contact with family members or care givers who have infectious TB.

### FAST FACTS

**More than half a million women of child-bearing age die from TB each year.**

**In Africa, where women are disproportionately affected by HIV, more than 1 million women develop TB every year.**

**TB during pregnancy more than doubles the risk of mother-to-child transmission of HIV to an unborn child.**

**In places where TB and HIV are prevalent, children living with HIV are highly vulnerable to becoming ill with and dying from TB.**

# Questions and answers



**BONGANI KHUMALO**  
*Nurse Manager at Cabrini Ministries Health Centre, Swaziland.*

The health centre, covering three chiefdoms in the Lubombo region of Swaziland, provides fully integrated TB and HIV care to 20 000 people. Bongani Khumalo personally cares for 600 people living with HIV, 105 whom are currently taking TB treatment.

**Q: What does integrated care mean to you?**

**Khumalo:** It means that after we provide HIV testing and counselling, we do TB screening in every case. Then if needed we start TB treatment immediately, and after two weeks we begin antiretroviral therapy.

**Q: Do people get discouraged taking so many medicines when they need treatment for both TB and HIV?**

**Khumalo:** When people start their TB medicine they start to feel so much better after two weeks! Then they begin antiretroviral therapy and at first the treatment makes them feel unwell; but really they just have to get used to it, which takes another couple of weeks. Then they really feel better. It is so wonderful to see patients smiling, singing, feeling well. Most of them have no signs of any illness. It makes me feel stronger.

**Q: What is your greatest wish for the people in the community you serve?**

**Khumalo:** My wish is that the patients I care for will live to see the next generation, as people did in the old days. It is my wish to help them stay alive so they keep their own children alive; and that they will get to see their children and grandchildren free of disease.



**GRACIA VIOLETA ROSS QUIROGA**  
*National Chair of the Bolivian Network of People living with HIV and Community Representative for TB-HIV, Stop TB Partnership.*

**Q: What prompted you to take up the cause of stopping TB deaths among people living with HIV, such as yourself?**

**Ross Quiroga:** When I was studying in Peru there was a waiting list for ART, so I was unable to receive it. But at the clinic they told me there was one other important thing I could do. They said catching TB was a big risk for me and gave me isoniazid preventive therapy, and I am convinced it saved my life. I came to recognize how vulnerable I am, as are all people living with HIV, to dying of TB.

**Q: You are one of the few vocal advocates on TB among people living with HIV. Why do you think that is?**

**Ross Quiroga:** Not many people in the HIV advocacy community in developed countries have had TB themselves. So I suspect they have the same attitude I used to have: this is not my problem. But they should think of it as their problem, because in developing countries the number of people dying of TB is really shocking. I had many friends living with HIV who died of TB without ever having their TB diagnosed.

**Q: Who do you believe could, and should, take up this cause?**

**Ross Quiroga:** The women's movement, especially networks of women living with HIV, should do this because TB is a huge issue for women and children. In many countries, a woman living with HIV who is pregnant and gets sick with TB has to go for HIV care to one centre, antenatal care at another and TB care at yet another. This is so difficult that they often they drop off from TB treatment. The results are terrible. They may transmit TB to their children and they may die, leaving their children orphaned. Women should be a strong voice against TB.

# Statements of support on TB/HIV



## **JORGE SAMPAIO**

*UN Secretary-General's Special Envoy to Stop TB and former President of Portugal*

In 2008 I convened the HIV/TB Global Leaders' Forum at UN Headquarters, which was endorsed by the UN Secretary-General Ban Ki-moon. Since then there has been a tremendous surge in awareness about the deadly TB epidemic among people living with HIV, but insufficient action. Now new scientific work has shown that we can prevent a million deaths among people living with HIV by end 2015 by providing integrated HIV and TB care. I call on the world's leaders to take up this challenge. It is time to take bold action. Not to do so would be an outrage.



## **LUCICA DITIU**

*Executive Secretary, Stop TB Partnership*

We have it in our power to prevent a million deaths from TB among people living with HIV. If we don't do it, we will have no excuse! To move towards that goal, and be persistent and committed, we need to keep focused on what it really means. Behind this number are a million faces. A million people who, like the rest of us, want to go on living. We cannot stand by and contemplate the prospect that all those mothers, fathers and children succumb to a fate no one deserves—to die of a curable illness.



## **MARGARET CHAN**

*Director-General, World Health Organization*

Untreated TB can kill within weeks. We need to ask ourselves the question, where is the benefit if a person receives life-prolonging drugs for AIDS yet dies very quickly from tuberculosis? There is no technical obstacle standing in the way of HIV/TB collaboration. Why aren't we doing it? We need to act with urgency.



## **NELSON MANDELA**

*Former President of South Africa and TB survivor*

We cannot win the battle against AIDS if we do not also fight TB. TB is too often a death sentence for people with AIDS. It does not have to be this way.



## **BILL CLINTON**

*Former President of the United States and founder of the William J. Clinton Foundation*

It is our responsibility as human beings to collectively commit our energy, our resolve and our resources to eliminating TB... Those engaged in the fight against TB also have a direct stake in the fight against AIDS and vice versa.





**MICHEL SIDIBÉ**  
*Executive Director, UNAIDS*

Halving TB deaths in people living with HIV by 2015 is possible and is within our reach. We could save up to a million lives by 2015 and bring us one step closer to the UNAIDS vision of 'Zero AIDS deaths.'



**LUCY CHESIRE**  
*Leading international advocate on behalf of people affected by HIV-associated TB, which nearly took her life, even though she was on ART.*

Our message is clear and simple. If people living with HIV don't get tested and treated for TB, many of us will die from this disease, even though we are receiving life-saving antiretroviral treatment. It's a terrible waste, because TB is curable.



**GOTTFRIED HIRSCHALL**  
*Director, WHO HIV/AIDS Department*

We are seeing great progress in delivering HIV treatment and TB care. But too many people are missing life-saving opportunities by testing or receiving treatment for only one of the diseases. People need not miss the chance to test for TB while testing for HIV, or fail to access HIV treatment, when already being cared for TB. We can save many lives and improve the efficiency of our health programmes by linking and integrating delivery of TB and HIV services.



**RAY CHAMBERS**  
*UN Secretary-General's Special Envoy for Malaria and UN MDG Advocate*

The goal of saving one million lives from HIV and TB co-infection by 2015 is not only possible, it's also one of the most clear cut methods of saving lives on such a massive scale. HIV and TB can be manageable diseases, but when acquired in unison, the combination is far deadlier — which is why it makes sense to formulate a collaborative response. From a business and a humanitarian perspective, working to meet this 2015 goal is so compelling, and I applaud the leadership of Stop TB and UNAIDS for this new commitment.



**MARIO RAVIGLIONE**  
*Director, WHO Stop TB Department*

In the past few years we have made encouraging progress in the fight against TB and also gained clear understanding of what needs to be done to prevent a million deaths from TB among people living with HIV by 2015. Now is the time to apply that knowledge and further intensify our efforts starting with bold leadership of national governments.



**PENG LIYUAN**  
*WHO Goodwill Ambassador for tuberculosis and HIV/AIDS*

Around 400 000 people living with HIV died of tuberculosis last year. Most of these people would be alive today if they were able to get both tuberculosis and HIV treatment. WHO is promoting a new HIV strategy that includes strengthening linkages between HIV and tuberculosis services so that thousands of lives can be saved. As a WHO Goodwill Ambassador for TB and HIV, I fully support this new strategy and hope you will do the same.

# Even more could be achieved with better diagnostic methods, drugs and a vaccine

## DIAGNOSTICS

**Where we are:** Diagnosis mostly done by microscopy, which is generally a poor test for TB in people living with HIV. For every 100 people with HIV-associated TB this test will detect TB in only 40. New rapid molecular tests are now becoming available. They can correctly diagnose TB in 80 out of every 100 people with HIV-associated TB, but the technology is costly.

**What we need:** Cheap, rapid, low-tech test for TB.

least 18 months of treatment with combination of drugs that have severe side effects.

**What we need:** New drugs with shorter treatment time that can be used safely in combination with ART and are safe and effective for people living with HIV.

## VACCINE

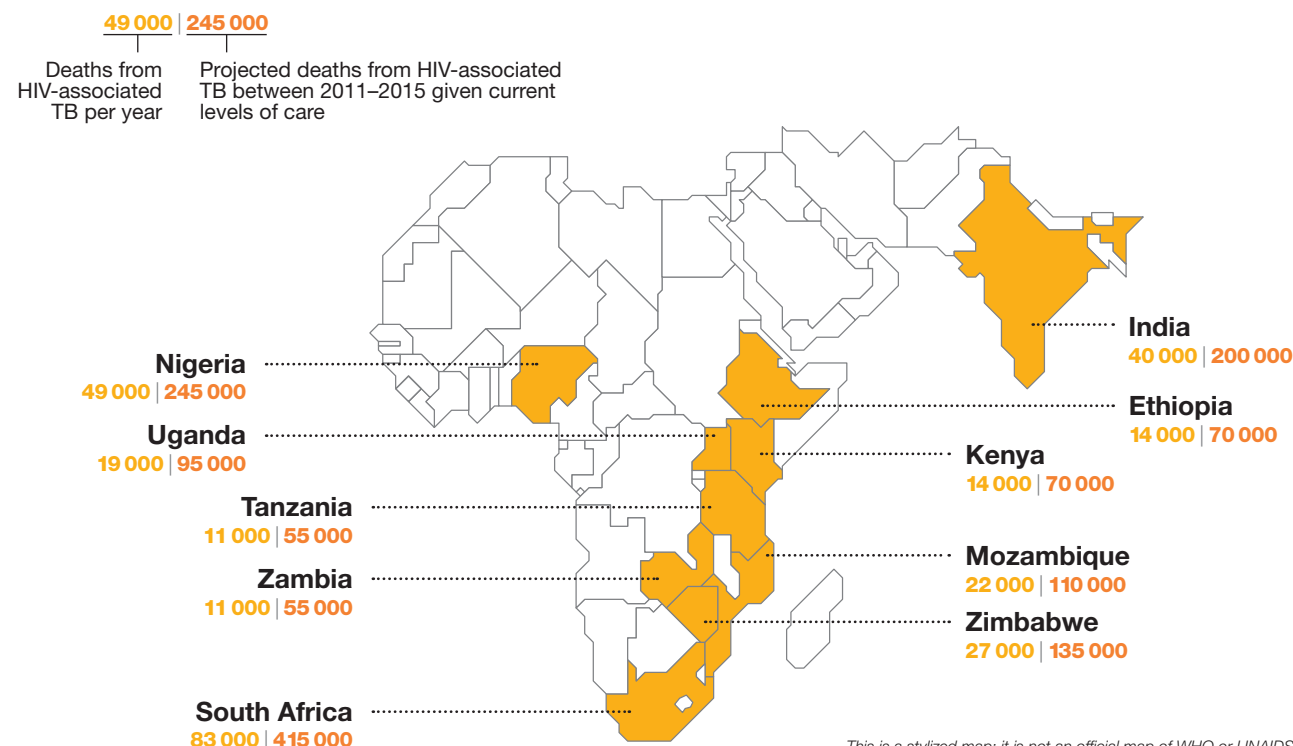
**Where we are:** The current vaccine for TB was discovered almost a century ago and offers only limited protection.

**What we need:** A fully effective vaccine that protects people of all ages including those living with HIV.

## DRUGS

**Where we are:** TB treatment requires taking a mix of four different drugs over six months. For multidrug-resistant TB, at

# Countries with the highest number of deaths from HIV-associated TB



*This is a stylized map; it is not an official map of WHO or UNAIDS.*

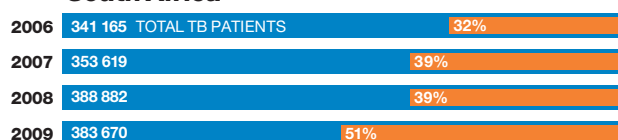
# Scaling up HIV testing among people with TB: Quick wins are feasible

Between 2006 and 2009, most of the countries with the highest number of TB deaths among people living with HIV showed that rapid scale-up of HIV testing among TB patients—which is the gateway for providing life-saving interventions—is possible. This is an important first step towards providing a full package of TB care to people living with HIV.

## India



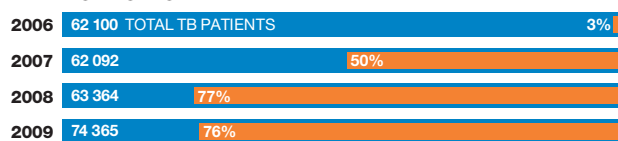
## South Africa



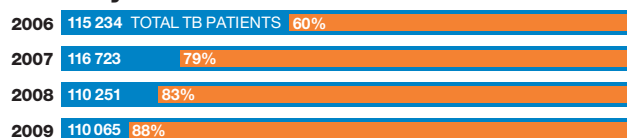
## Ethiopia



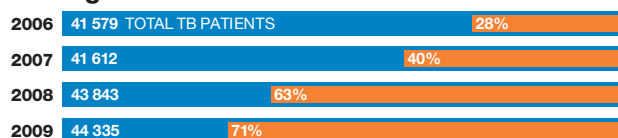
## Tanzania



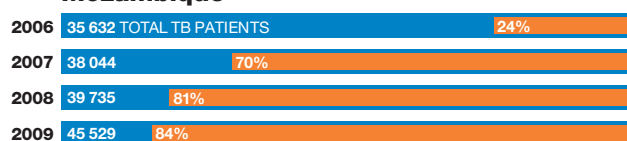
## Kenya



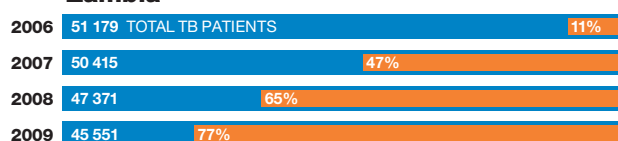
## Uganda



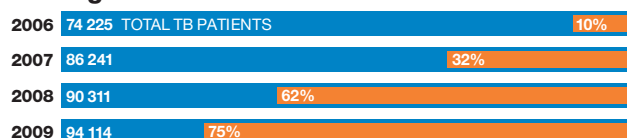
## Mozambique



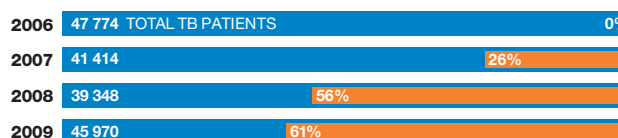
## Zambia



## Nigeria



## Zimbabwe



■ Total TB patients  
 ■ TB patients tested for HIV

# What is TB?

**Tuberculosis (TB) is an ancient disease that has affected people all over the world for millennia. There is a long list of historical figures who died of TB. Poets Elizabeth Barrett Browning, John Keats and Edgar Allan Poe all died of TB. So did philosopher Baruch Spinoza, composer Frédéric Chopin and actress Vivien Leigh.**

TB is an infectious disease and spreads from person to person through the air. When people with infectious TB cough, sneeze or spit, they propel the germs that cause TB into the air. A person needs to inhale only a few of these germs to become infected. TB can infect any part of the body, but most often it attacks the lungs.

A healthy person may be infected without being infectious to others. This state is known as latent TB. Even when the person develops active disease and becomes infectious to others, the symptoms may be mild for many months.

Most people with TB can be cured by taking a six-month course of drugs costing about US\$ 25. When people can't or don't take all their treatment, TB bacilli become resistant to them and multidrug-resistant TB (MDR-TB) can develop. MDR-TB takes longer to treat and can only be cured with second-line drugs, which are up to 1000 times more expensive and have more side-effects.

Extensively drug-resistant TB (XDR-TB) can develop when people can't or don't take all treatment with these second-line drugs. XDR-TB is virtually untreatable.

Both MDR- and XDR-TB can spread from person to person. The best way to stop drug-resistant TB is to ensure that every person with TB has access to accurate diagnosis, effective treatment and cure.

## Stop TB Partnership

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