An introduction to TB

Target 3.3

By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

What is tuberculosis?

Tuberculosis is a contagious airborne disease which commonly attacks the lungs but can affect any part of the body, from the bloodstream to the brain. It isn't new; the earliest cases are believed to have been found around 70,000 years ago, and the disease has gone on to kill millions of people since. Despite being preventable, detectable and curable, nearly 9.6 million people are infected with the disease each year and 1.5 million people die from it, almost exclusively in developing countries (over 95% of cases and deaths).

Why is it important?

A dangerous combination of outdated or ineffective treatment methods, coupled with a chronic lack of financial and political will to tackle the disease has led to tuberculosis surpassing HIV to become the world's deadliest infectious disease.

Drug-resistant tuberculosis

Strains of TB which are resistant to the antibiotics used to treat it are known as multi-drug resistant TB (MDR-TB). An estimated 500,000 people worldwide have MDR-TB and 190,000 people die from the disease every year.

The majority of MDR-TB cases are as a result of unsuccessful or incomplete treatment for pulmonary TB. MDR-TB is treated with a larger cocktail of drugs. Standardised treatment lasts for 2 years, during which patients may take up to 14,000 pills, including 8 months of daily intravenous injections. The risk of adverse effects is high, with deafness a common side effect of one of the most commonly used drugs.

The length and difficulty of the treatments for both pulmonary TB and drug-resistant TB are major factors in the continuation of the epidemic. Without new and better treatments, eradicating TB will be difficult.

HIV/TB co-infection

Co-infections with diseases such as HIV and diabetes make TB harder to diagnose, treat and cure. TB is the leading killer of people living with HIV, causing 1 in 3 deaths. Due to the weakened immune systems of HIV positive people, they are 20-30 times more likely to develop TB than those not infected with the virus.

The human cost of tuberculosis is staggering, but the burden of the disease doesn’t end there. The loss of productivity and cost of TB treatment, can reach as high as 4-7% of GDP according to the World Bank. This will continue to increase if we do not manage to curb the increase of drug-resistance.
What can be done?
To bring the pandemic under control several things need to happen.

Investment in Research and Development (R&D) for new a TB vaccine, drugs and diagnostics The current drugs, diagnostics (tests for finding the disease) and vaccine are all hugely out dated. The best drugs for treating TB are over 40 years old and the BCG vaccine - which only provides protection against the more extreme forms of the disease and wears off after childhood - is over 90 years old. Much more investment is needed from governments all over the world and the private sector into developing new drugs, diagnostics and an effective vaccine. We cannot end TB without affordable, effective and shorter drug regimens that are accessible and affordable to those that need them.

The Global Fund to Fight AIDS, TB and Malaria The Global Fund to Fight AIDS, TB, and malaria is the world’s largest financier of TB care and control. Continued government support of the Global Fund is critical to reducing and eventually eliminating TB as a leading killer. With many people with TB now living in what are classified as middle-income countries, National Governments must also provide domestic resources to fund their National TB and HIV programmes. The global responses to HIV and malaria have shown that with greater investments and more effective policies, remarkable progress can be made.

SHAMSIYA’S STORY

Shamsiya is a citizen of Tajikistan. Over the course of two decades she has watched nine of her family members succumb to the harrowing consequences of tuberculosis. Today, Shamsiya and her father are the only members still alive out of a large family who were once living happily before TB found its way into their lives.

Shamsiya’s family knew very little about TB before 1994. It was in this year that her eldest sister suddenly began to vomit blood and was immediately taken to hospital. One and a half months later and Shamsiya’s sister unexpectedly died.

Just over a decade later and the family’s troubles with TB returned. In 2006, both Shamsiya’s mother and her 24-year-old brother fell ill with a cough and a fever. Together, they made their way to the doctors in Dushanbe where they were diagnosed with TB. Tragically, after just over a month, both her mother and brother passed away.

The misery for the family further expanded as time went on. Between 2007 and 2014, Shamsiya lost her remaining four siblings. One of these siblings was diagnosed with multidrug-resistant TB (MDR-TB) and was put on treatment. This treatment was terminated when her liver started swelling. These days, Shamsiya spends as much time with her father as she can. She cleans the house, the yard, and helps her father with his bee farming. Her father is now sick with TB as well. “The other day he didn’t recognise me. At times he suddenly stands up and moves around the house, saying he hears the voice of his children. I have to be with my father. Now I’m his daughter, I’m his son, I’m his mother and I’m his father”

It has not just been the emotional burden that Shamsiya and her family have had to bear. Her family also struggled financially and had to work hard in order not only to make ends meet but also to purchase the medicines necessary for treatment.