

## **Background Information on TB, TB/HIV Co-infection and Drug-Resistant TB**

- One-third of the world's population is currently infected with the TB bacillus.
- Approximately two million people die annually of TB.
- TB is a leading cause of death among people who are HIV-positive.
- In 2004, an estimated 424,000 people had multidrug-resistant TB (MDR-TB).

### **Tuberculosis**

Tuberculosis (TB) is a disease that usually attacks the lungs but can affect almost any part of the body. A person infected with TB does not necessarily feel ill – such cases are known as silent or “latent” infections. When the lung disease becomes “active,” the symptoms include a cough that last for more than two or three weeks, weight loss, fever, night sweats and coughing up blood.

Like the common cold, it spreads through the air. Only people who are sick with TB in their lungs are infectious. When infectious people cough, sneeze, talk or spit, they propel TB germs, known as bacilli, into the air. A person needs only to inhale a small number of these to be infected. Left untreated, each person with active TB disease will infect approximately 10 to 15 people every year. However, on average, globally, most of the people infected with TB bacilli do not become sick with the disease. If someone has a weak immune system, the chances of becoming sick are much greater.

### **Multi- and Extremely Drug-Resistant TB**

When TB is improperly treated, strains of the bacteria can become resistant to the major anti-TB drugs. Examples of improper treatment include health workers who provide the wrong dosage of anti-TB drugs, poor quality or erratic supply of drugs, and patients who do not take the full course of treatment. The standard treatment regimen for basic TB requires daily consumption of anti-TB drugs for approximately six months.

Drug-resistant strains are especially deadly and can infect other people. They are far more difficult – though not impossible – to treat and cure. Multidrug-resistant TB (MDR-TB) describes strains of TB that are resistant to at least the two main first-line TB drugs - isoniazid and rifampicin.

Extremely drug-resistant TB (XDR-TB) is MDR-TB that is also resistant to three or more of the six classes of second-line drugs. As of March 1, 2007, cases of XDR-TB have been found in 28 countries, including Italy, China, and India. In South Africa, researchers reported that 85 percent of people with XDR-TB die; many of those patients are also grappling with HIV/AIDS.

### **Linkages Between TB and HIV/AIDS**

HIV/AIDS and TB are so closely connected that the term “co-epidemic” or “dual epidemic” is often used to describe their relationship. HIV and TB form a lethal combination, each speeding the other's progress. HIV weakens the immune system. Someone who is HIV-positive and infected with TB bacilli is many times more likely to become sick with TB than someone infected with TB who is HIV-negative. TB is also more difficult to diagnose and more complicated to treat among people who are HIV-positive; this leads to delays in treatment of TB and increased risk of spreading TB to other people. In Africa, HIV is the single most important factor determining the increased incidence of TB in the past 10 years.

Source: World Health Organization, 2007 ([www.who.int/tb/en/](http://www.who.int/tb/en/))