

# TB/HIV Co-infection

## Disease Burden

- TB is the leading infectious killer of HIV positive people in the developing world, killing one-third of HIV/AIDS patients worldwide. Individuals are living with HIV, but dying from TB.
- 80% of those co-infected with TB and HIV/AIDS live in Africa.
- Some countries in Africa have a co-infection rate as high as 80%.
- An HIV-positive person is 50 times more likely to develop active TB than an HIV-negative person.
- Unlike HIV/AIDS, TB is completely curable in the vast majority of cases, with drugs to treat a standard case costing as little as \$20 for a full course of treatment. Nevertheless, TB needlessly takes 1.7 million lives each year.

## The Critical Importance of TB-HIV Coordination

- Untreated, TB can kill a person with HIV/AIDS in a matter of weeks. With TB treatment, life can be extended by years, and HIV/AIDS testing, counselling, and treatment can be accessed.
- Providing routine HIV testing and counselling to TB patients is one of the most effective means of finding those with HIV and ensuring access to treatment for both diseases.
- The team implementing the US President's Emergency Plan for AIDS Relief (PEPFAR) in Kenya estimated that coordinating TB and HIV activities through DOTS programs would result in 100,000 referrals for HIV care each year.

## Drug-Resistant TB Threatens Progress in the Fight against HIV/AIDS

- Extensively drug-resistant tuberculosis (XDR-TB) is resistant to not only the most effective first-line drugs, but also to critical second-line drugs. In some sampled populations, fatality rates approach 100%.
- XDR-TB has now been found in over 45 countries, however many HIV/AIDS endemic countries lack laboratory capacity to test for drug resistance.
- In the first reported outbreak of XDR-TB patients, in KwaZulu-Natal Province, South Africa, 52 of 53 patients with XDR-TB died. Of the 43 patients tested for HIV, all were positive.

## New Tools are Drastically Needed to Address TB-HIV Co-infection

- The standard therapy for TB relies on drugs that are over 40 years old and which in some cases cannot be taken with antiretroviral therapy for HIV.
- HIV significantly increases the chance that a person with TB will have a sputum-smear negative form of the disease, which is impossible to detect using the standard diagnostic tool of sputum smear microscopy.
- In order to accurately and effectively diagnose and treat those with TB-HIV co-infection:
  1. New drugs must be developed that can safely and effectively treat TB in those co-infected with HIV.
  2. Laboratory capacity must be scaled up throughout developing countries so that TB can be quickly and accurately detected.
  3. Infection control measures must be put in place in order to prevent HIV patients from becoming infected with TB in clinical settings.