

## CPA FACT SHEET 3A – TUBERCULOSIS: BASIC FACTS & INFORMATION

Tuberculosis (TB) is second only to HIV as the leading cause of death worldwide from infectious disease. Most cases of TB are caused by *mycobacterium tuberculosis*, a mycobacteria which is everywhere. About one third of the world's population is infected with TB.

### QUICK FACTS

- TB commonly affects the lungs but can occur in almost any organ.
- Pulmonary TB accounts for about 80% of cases worldwide.
- Disease can occur years after initial infection.
- Transmission is almost solely via people with active pulmonary forms of the disease.
- Transmission occurs by inhalation of droplet nuclei exhaled by infected person coughing, sneezing or talking.
- Transmission is accelerated in crowded, poorly ventilated environments.
- Infection can lead to:
  - eradication
  - latent disease
  - primary diseasedepending on the host's immune response and the virulence of the bacilli.
- Pulmonary TB patients, depending on the stage of the infection, usually present with the following symptoms:
  - a cough lasting more than two weeks
  - weight loss
  - fever
  - night sweats
  - fatigue
  - shortness of breath
  - chest pain
  - coughing up blood (later stages)
- Of those who overcome primary infection, 5% will develop post primary disease either through reactivation or reinfection.
- HIV is now the most important risk factor for reactivation of latent TB infection.

### Diagnosis of Active TB

Symptoms are often non-specific and depend on the part of the body affected. The possibility of TB should always be considered in people at high risk:

- Those in contact with TB cases (including healthcare workers and professionals)
- Those with reduced immunity (HIV, renal failure, diabetes)
- Those in countries with high incidence of TB
- Those with high socioeconomic risk factors

**Chest X-Ray** is often the first suggestion of TB given symptoms can be non-specific. In HIV+ patients chest x-rays may not be characteristic of TB.

**Microbiological investigation** or culturing clinical samples, is a four step process, usually carried out in hospital microbiology departments. The first step (smear test) gives results in 24 hours, identifying "sputum smear-positive patients" – considered the most infectious. However, confirmation of presence of *mycobacterium tuberculosis* requires further laboratory testing.

### Diagnosis of Latent TB

The Tuberculin Skin Test (TST) is currently the only tool for diagnosing latent TB.

### Treatment for Pulmonary TB

Therapy aims to cure patients, to prevent death, disease progression and emergence of acquired drug resistance, to avoid relapse, and to protect the community. Tuberculosis is treated in two phases:

- **the initial phase**, usually lasting two months, is treatment with rifampicin, isoniazid and pyrazinamide

- **the continuation phase**, usually lasting four months, is treatment with rifampicin and isoniazid

**Compliance is essential for treatment success & to prevent drug resistance. Directly observed therapy (DOTS) may be necessary to ensure compliance.**