



**F.1-51-Advisory/TB/FE&DSD/2018**  
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Focal Point for International Health Regulations-2005

12 March 2018

**Subject: Advisory for the Prevention and Control of Tuberculosis**

*Mycobacterium tuberculosis (Mtb)*, the etiological agent of tuberculosis (TB), is a leading cause of human disease and death, particularly in developing countries. Tuberculosis (TB) most often affect the lungs, can involve other systems of the body as well. Tuberculosis is a curable and preventable disease. TB is an air-borne infection and spreads when TB patient cough, sneeze or spit, which propel the TB germs into the air. A person needs to inhale only a few of these germs to become infected.

About one-quarter of the world's population is infected with the disease and over 95% of TB deaths occur in low- and middle-income countries. People infected with TB bacteria have 5–15% lifetime risk of falling ill with TB. In 2016, globally, 10.4 million people became infected with TB and 1.7 million died from the disease while in Pakistan, 51,800 developed Tuberculosis and only 69% of these were notified and put on treatment in 2016.

When a person develops active TB disease, most common symptoms are cough for more than two weeks, low grade fever, night sweats, loss of appetite or weight loss. These nonspecific symptoms can lead to delays in seeking care, and transmission of the bacteria in the community. People with active TB can infect 10–15 other people through close contact over the course of a year. Once infected, the risk of developing the disease is high in children <5 years of age, adolescents, elderly, malnourished, Immune-compromised, people having HIV, diabetes & renal failure, and also in smokers, if left untreated.

Objectives of this advisory are to sensitize the health-care authorities to strengthen the TB control efforts and find missing TB cases which are the transmission source of the disease in the community and to improve the level of preparedness for control and prevention of tuberculosis at all levels.

**Diagnosis:** Besides conventional microbiological tests (AFB smear and culture), WHO have introduced new diagnostic tool (WRD) which are molecular based, more rapid and sensitive (Xpert MTB/ RIF). Free diagnostic facilities are available in public and selected private sector across country.

**Pulmonary Tuberculosis (PTB):** Laboratory testing for PTB diagnosis is indicated in people having symptoms suggestive of Tuberculosis and/ or those having abnormal shadows on X-ray. Sputum examination is recommended for diagnosis of PTB. Sputum induction (using nebulized hypertonic saline) or gastric lavage may be attempted in patients unable to expectorate. Two sputum samples are recommended and should be collected in wide-mouth containers with a screw cap lid. Sputum collection from patients should be performed in well-ventilated areas and away from other people. Appropriate infection control measures should be in place in health care setting.

**Extra-pulmonary TB (EPTB):** The investigation of extra-pulmonary TB is often problematic and requires the collection of samples from disease sites (e.g. CSF, bone, lymph node, and peritoneum) by radiological guidance or at operation. It is important that EPTB should also be sent for bacteriological

examination for definite diagnosis and relevant staff must be trained on specimen handling accordingly (e.g. for bacteriological diagnosis critical to place specimens in saline and NOT formalin).

### **Treatment:**

**Drug susceptible TB (DSTB)**, is sensitive to first-line anti-TB drugs, a combination of standard four first line drugs are given for two months of intensive phase followed by combination of two drugs for four months during continuation phase. More than 95% of DSTB patients are cured on completion of 6month treatment if taken as prescribed. Treatment compliance is important for favorable treatment outcome. TB may recur and drug resistance is likely to develop in patients who fail to adhere to prescribed treatment.

Directly Observed Therapy (DOT) is the best approach and recommended strategy to control TB by which early diagnosis, uninterrupted availability of treatment and drug intake is ensured and contributes in better cure rate and TB control in patients.

**Drug-resistant TB (DRTB)** is difficult to treat as currently available treatment is longer, second-line TB drugs used are less effective, side effects are often more and treatment outcome are not as good as in DSTB. Special treatment facilities are established for free treatment of drug resistant tuberculosis.

### **Facilities provided by the government:**

The current available facilities included approximately:

- 1300 Public sector facilities providing TB care
- 5000 private sector healthcare providers engaged for free TB services
- Network of 412 Gene Xperts
- 35 PMDT sites from are & support etc

### **Free of cost diagnostic & therapeutic services are available at all sites**

More information can be acquired from website [www.ntp.gov.pk](http://www.ntp.gov.pk)

### **Prevention:**

Undiagnosed and untreated TB patients are the source of TB transmission. Best way to control transmission is to find and treat all TB cases to break chain of TB transmission.

- Early diagnosis and treatment is the most effective way to prevent the spread of tuberculosis.
- BCG vaccine has a documented protective effect against TB meningitis in children and should be given within 7 days after birth.
- Improving awareness about TB symptoms and TB care facilities in the communities and health seeking behavior.
- Systematic screening of TB contacts and others vulnerable groups who are at higher risk of TB.

NIH recommends this advisory be widely distributed among all concerned.

  
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