



## TUBERCULOSIS (TB)

### Case definition

#### MDR TB:

Multidrug Resistant tuberculosis is defined as tuberculosis disease caused by strains of *Mycobacterium Tuberculosis* that are resistant to both Rifampicin and Isoniazid, with or without resistance to other drugs.

#### XDR-TB:

Extremely Drug Resistant Tuberculosis is defined as tuberculosis disease caused by strains of *Mycobacterium tuberculosis* that are resistant to Rifampicin and Isoniazid and in addition also resistant to any fluoroquinolone and at least one of the three injectables used as second line drugs for the treatment of MDR-TB (Capreomycin, Amikacin and Kanamycin)

#### Signs and Symptoms:

Coughing for longer than 2 weeks, malaise or tiredness, loss of weight, night sweats, fever and loss of appetite.

#### M(X)DR TB Outbreak

Variations in incubation periods and expression of disease with some patients manifesting as latent disease and others as active disease contribute to difficulties in recognition. An increase in expected TB cases would be therefore difficult to use as a criteria to recognize an outbreak. Unusual patterns of drug resistance are an important alert to the possibility of an outbreak. Relapse of TB disease in a cluster of apparently successfully treated patients may also alert one to the possibility of an outbreak.

A cluster of cases, often with resistant or unusual susceptibility pattern, that may be epidemiologically linked.

#### Management

Susceptibility testing of the tuberculosis strains is critical as outbreaks frequently involve drug resistant strains, frequently with unusual or extensive drug resistance. Molecular fingerprinting of isolates must be carried out to confirm the epidemiological links. Sputum specimens from people with suspected drug resistant TB must always be submitted for microscopy, culture and drug susceptibility testing.

There is a standardised regimen for the treatment of MDR TB using a combination of drugs, which the patient has not been exposed to. For XDR-TB the regimen is individualised based on the resistance profile of the patient and drugs to which they are still sensitive to are used but a combination of at least four drugs should be used.

#### Household Members

Should carry out symptom screening and all those who are symptomatic should be investigated further by sputum examination (culture and sensitivity).

#### Gatherings

All close contacts in aggregate settings (jails, hospitals, schools, hospices) should be screened like the household members.

**Prevention**

MDR-TB is best prevented by treating drug sensitive TB properly. However, MDR-TB can be transmitted and cases of MDR-TB should be isolated, especially in settings where there are also HIV positive people.

Children under the age of 5 in household contact with an MDR-TB case should receive chemoprophylaxis – the choice of drugs will depend on the sensitivity pattern of the organism of the index case.

**Health Education**

Community members should be informed of an outbreak of MDR-TB. All possible media should be used but care should be taken not to stigmatise the disease or the index case and also not to spread panic in the community. Information to the community should include symptoms of TB and what to do if symptoms are present.