

### What is the impact of HIV on TB?



It is important to know that HIV/TB form a lethal combination HIV:

- Leads to increase in TB case load
- Low TB cure rates
- High case fatality rates during treatment
- Under diagnosis of TB
- Emergence of drug resistant TB.

Hence, early detection of TB & HIV, treatment of TB under DOTS, prevention of HIV and care of AIDS cases are vital in the management of the both epidemics.

### What is DOTS and Why?

DOTS stand for Directly Observed Treatment Short-course, internationally recognized and cost effective strategy intervention for cure and control TB.



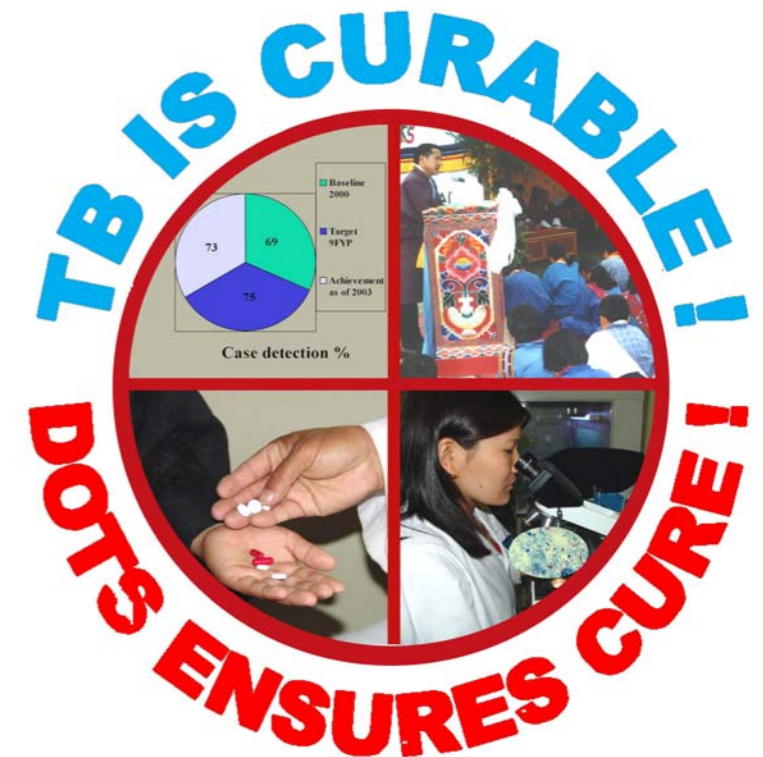
DOT ensures cost effectiveness, increase cure rates; prevent transmission of new infections and development of multi-drug resistant (MDR TB)

### *Our appeal:*

- TB is a communicable disease caused by an organism known as Mycobacterium tuberculosis/ tubercle bacilli and not a hereditary disease.
- TB is spread through coughing, sneezing and by talking
- TB is a curable if the patient completes full course of anti TB treatment
- Treatment should start as soon as TB is diagnosed.
- Failure of taking medicine as per advice can bring about MDR (multi drug resistance) which is expensive and toxic for the patients.
- TB diagnosis and treatment are available free of cost at all health centers in the country.
- DOTS strategy is the effective way to treat and control TB.
- Every one of you is a partner to control this curable disease.

Designed by ICB oct 2005 for  
NTCP, Department of Public Health,  
Ministry of Health. Thimphu Bhutan

## INFORMATION ABOUT TUBERCULOSIS



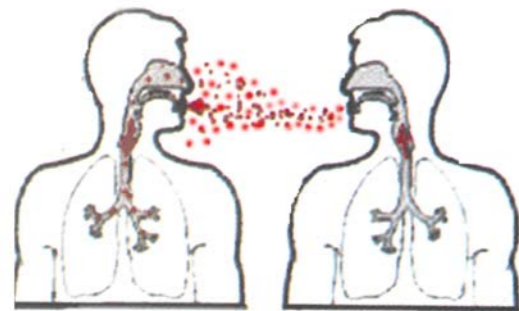
**NATIONAL  
TUBERCULOSIS CONTROL PROGRAMME**  
Department of Public Health,  
Ministry of Health. Thimphu Bhutan

### What is TB (Tuberculosis)?

TB is a communicable disease caused by an organism called *Mycobacterium tuberculosis*. This organism is also called as tubercle bacilli.

Usually they affect the lungs. It can affect other part of the body such as brain, bones, glands, genitourinary tract and intestines etc. It is reported that 80% of the TB are pulmonary (lungs) TB.

### How does TB spread?



When a person with Pulmonary TB, coughs, sneezes, laughs, or talks tubercle bacilli are spread into the air in tiny droplets. People who are in close contact can breathe in these droplets and become infected.

### What types of TB are there?

There are two types of TB (according to organ/parts of the body affected)

1. Pulmonary TB (TB of the lungs)
2. Extra pulmonary TB (if affected other than lungs)

### What are the symptoms of Pulmonary TB?

- Cough more than three weeks.
- Chest pain.
- Blood in sputum.
- Fever, especially rising in the evening.
- Loss of weight and appetite.

### Who are vulnerable to TB?

- People in the slum area
- People who are close contacts of the TB patients
- People with HIV infection
- People addicted to alcohol
- People having chronic lung disease
- People with poorly controlled diabetes
- People suffering from cancer and smokers



### How TB is detected?

Pulmonary TB is detected by sputum examination which is very specific. Chest X-ray will only help in diagnosis of TB of the lungs. The sputum microscopy is better method of diagnosis than X-ray because it is simple, easy to perform; less expensive and more reliable.



### How TB is treated?

TB is treated with combination of oral drugs & sometimes together with injection. The total duration of treatment is 6-8 months. And Anti TB medications are available free of cost in all the health centers in Bhutan.

It is essential to complete full course of treatment without interruption untreated or interrupted treatment of TB will lead to *Drugs Resistant TB* which is difficult to treat as it is expensive and very toxic to the patient. Hence, DOTS is widely implemented in Bhutan.



Follow-up of sputum examinations at the end of 2, 5 and 8 months of treatment is very important to check the progress and to declare patient as cured.

### What are the side effects of anti TB drugs?

TB drugs may sometimes cause side effects, such as:

- Nausea
- Anorexia
- Abdominal pain
- Joint pains etc.

These may cause the patients to stop taking medicines. It is therefore, important for the patient to know that these symptoms are harmless and must take the medication and complete them.

### How can we help patient understand about their disease?

- Make sure that patients know that TB is curable.
- Be a DOTS provider in the community
- Give moral support and help them in all possible ways.
- Counsel them to do follow up sputum examination.

### What to do if a TB suspect is found?

If any body is found to have TB symptoms, he/she must be helped to send to the nearest health facility for sputum check up and appropriate treatment.

### Why Pulmonary TB is a concern?

Pulmonary TB is the main sources of infection in the community. One untreated TB patient can infect 10-15 people every year. And they are at higher risk of dying if not treated properly and they become the sources of drug resistant bacilli.