



RF(I)T

आइये समाज क्षयमुक्त करे

RF(I)T's effort towards a TB free India

by

2025



एक स्वस्थ जीवन की आशा...

# What is TB?

- Tuberculosis or TB, as it is commonly called, is an infection that usually affects the lungs
- It can also spread to other parts of the body, like the lymph nodes, abdomen, bone& joints, spine, brain etc.
- It is caused by a type of bacteria called *Mycobacterium tuberculosis*

# About TB ....

**Tuberculosis** is generally curable and preventable

**TB** is spread from person to person through the air

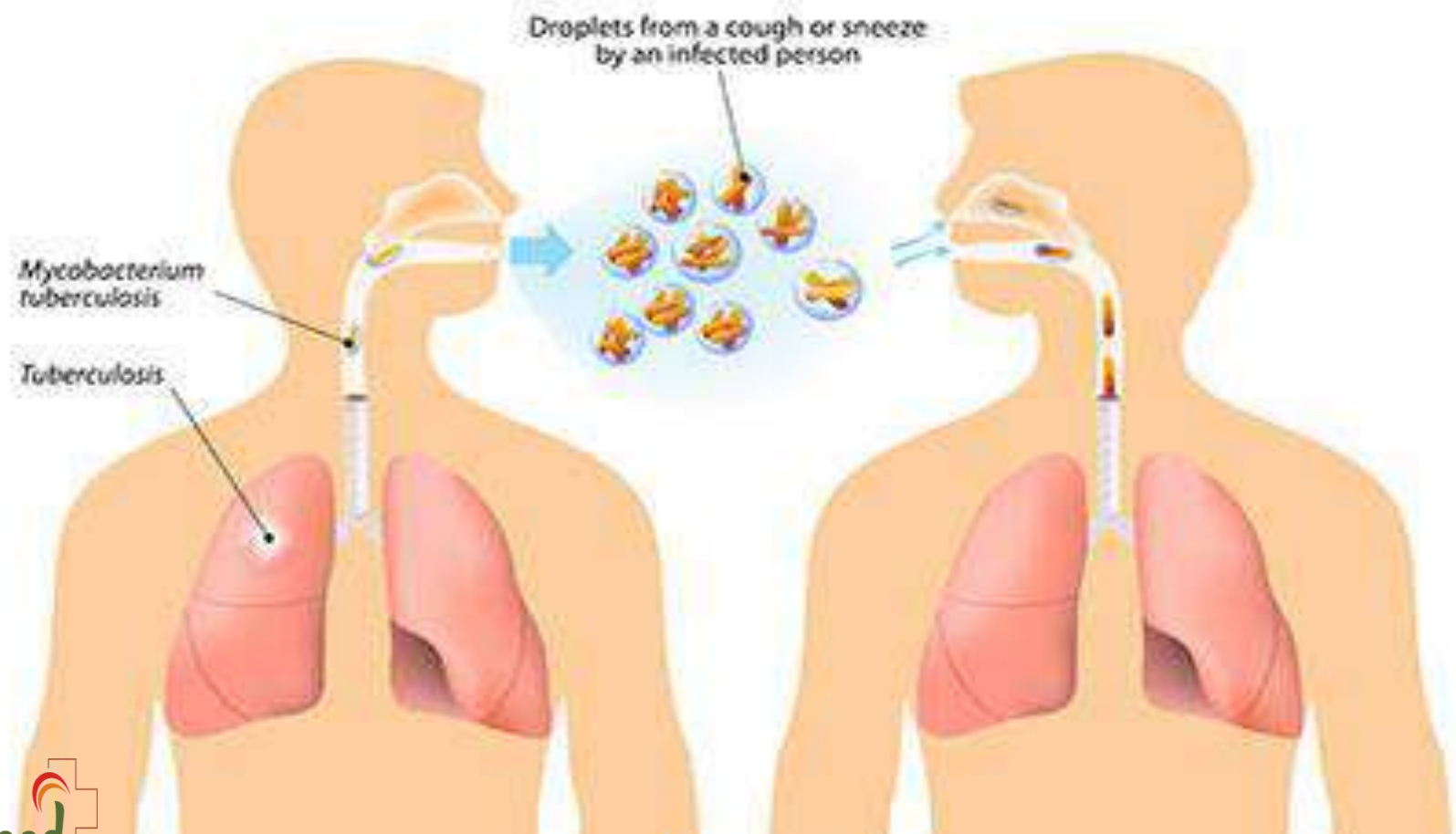
When people with lung **TB** cough, sneeze or spit, they propel the **TB** germs into the air

Other than Lung TB, there are other types of TB also

All types of TB are not infectious

# How does TB spread?

## TUBERCULOSIS



# How does TB Spread (contd...)



- TB germs spread when a person suffering from TB coughs, sneezes, speaks and spits in open spaces or in still water
- TB germs spread in an overcrowded, ill ventilated unhygienic environment and or in places where there is no direct sunlight
- People with weakness due to lack of a nutritious diet are more susceptible to TB
- Patients with other chronic ailments like HIV/AIDS, diabetes, whose resistance has become low are also more susceptible to TB
- People whose lungs have become weak due to smoking get more easily infected by TB

# When does a person become ill with TB?

- About one third people in the World are infected with TB bacteria
- But a person with TB bacteria becomes ill **ONLY IF** the TB bacteria in the person's body becomes active
- Latent (inactive TB bacteria) does not make a person ill with TB

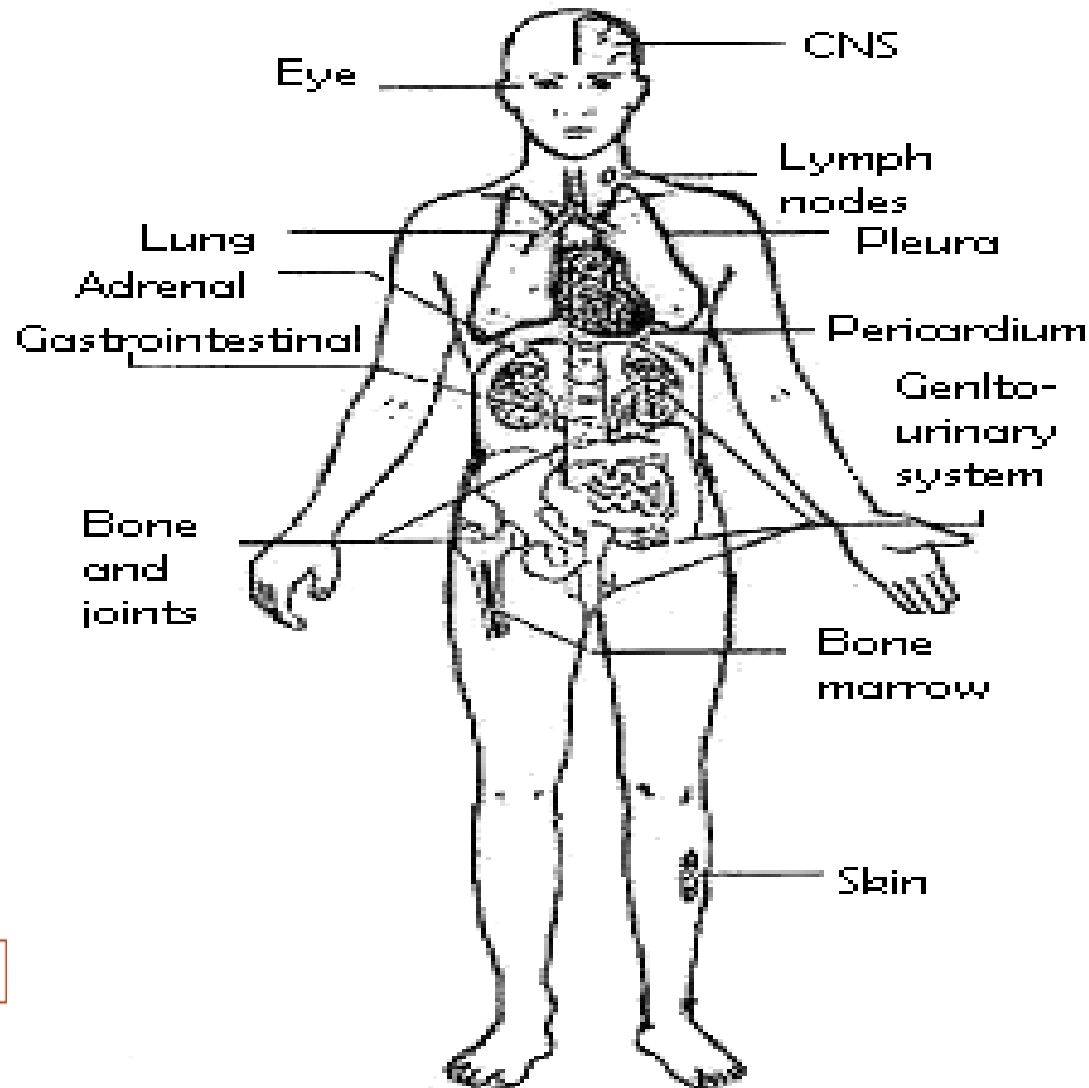
# When does a person become ill with TB? (contd...)

TB bacteria in a person's body becomes active only when their immunity is low

Immunity can be low due to -

- some other illness such as HIV/AIDS, diabetes, substance abuse, tobacco smoking, chronic kidney diseases, cancers etc.
- Lack of proper nutrition

# Various organs involved in TB



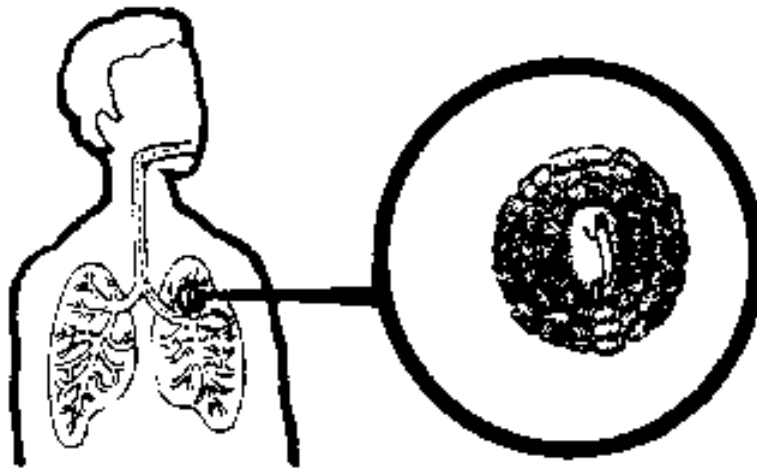


# Symptoms of TB

- Consistent, but not very high fever beginning in the evening , observed over a few weeks
- A persistent cough, over a long period of time, which is not cured despite treatment
- There may be blood in sputum
- Decrease in appetite
- Decrease in body weight and weakness
- Pain in the chest while taking deep breaths

# How does TB Infect/ Invade the Lungs

## Latent Vs. Active TB



Effective  
immune  
response

Infection limited  
to small area of lung

Immune response  
insufficient

# How is TB diagnosed?

- Sputum examination
- X-rays, sonography, CT scans etc.
- Biopsy
- Facilities are available free at government institutions

# Treatment of TB

- Treatment of TB is of long duration
- Many medicines are used in combination to treat TB
- There are two phases of treatment
  - **intensive phase (IP)** and
  - **continuation phase (CP)**
- Treatment depends on the type of TB diagnosed – drug sensitive or drug resistant

# Types of TB

- Treatment of Drug sensitive TB: Initially, when a person is detected with TB, first line treatment is given, which is basically a combination of 4 types of medicines

This treatment is usually for 6 to 9 months

- If a patient does not complete the first line of treatment, it is likely that the TB will become **Multiple Drug Resistant( MDR)**
- A person can also get infected with MDR TB directly from another patient with drug resistant TB

# Types of TB – MDR

- MDR patients usually do not respond to 2 important types of first line TB medication. Their treatment can go up to 2 years or more
- An MDR TB patient has to take about 14,600 pills in 2 years. The medication is strong and has side effects like nausea, giddiness , weakness, toxicity etc.

# Types of TB – XDR & TDR

- Usually, when MDR TB patients do not complete treatment, they become resistant to most types of medication used for the 2<sup>nd</sup>. line of treatment and become **Extremely Drug Resistant (XDR)**

Stronger medication has to be used for their treatment

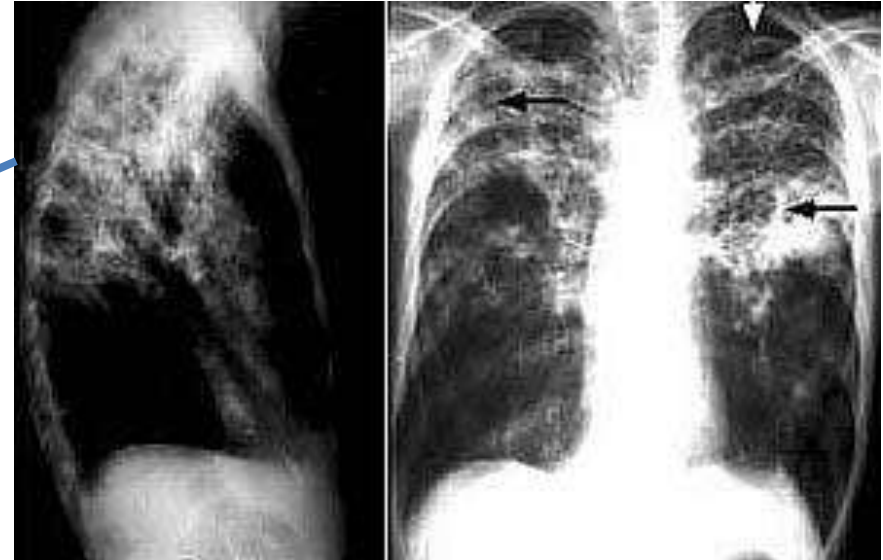
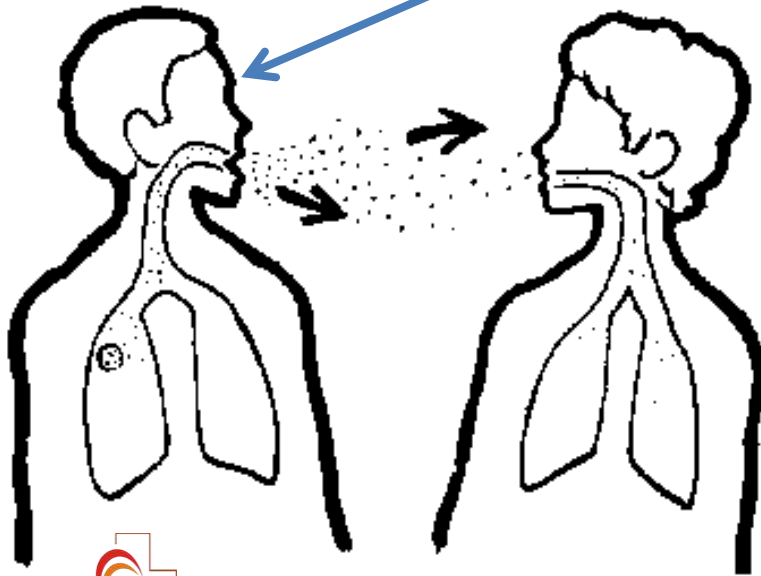
- If this treatment too is not completed, the patient becomes **Totally Drug Resistant (TDR)**

Treatment of such patients becomes a challenge as they do not respond to most types of medication

TDR cases have been reported from 3 countries in the world- India, Iran and Italy

# Examples of TB:

## Lung TB & Skin TB





# What should a TB infected patient DO?

- Take prescribed medication regularly and complete the medicine course advised by the Doctor
- Take a regular, nutritious, high protein diet to build immunity and to be able to tolerate TB medication
- Cover the mouth while coughing
- Regularly get the diagnostic tests done, as advised by the Doctor( Sputum, X-ray, blood test etc.)
- All those living in close proximity with the infected patient should also get their check up done and follow the advice of the Doctor
- Keep your surroundings clean and infection free

# What should a TB infected patient **NOT DO?**

- Do not stop treatment unless advised by a Doctor  
***Leaving TB treatment mid-way, without consulting your Doctor can be very risky***
- Do not Keep mouth and nose uncovered while coughing
- Do not spit in open spaces
- After spitting, clean the place properly. Sputum can also be collected in containers, boiled in water and discarded to prevent spread of infection
- Do not take medication without proper advice from the Doctor. Consult the Doctor in case of side effects

# Please Remember !!!!

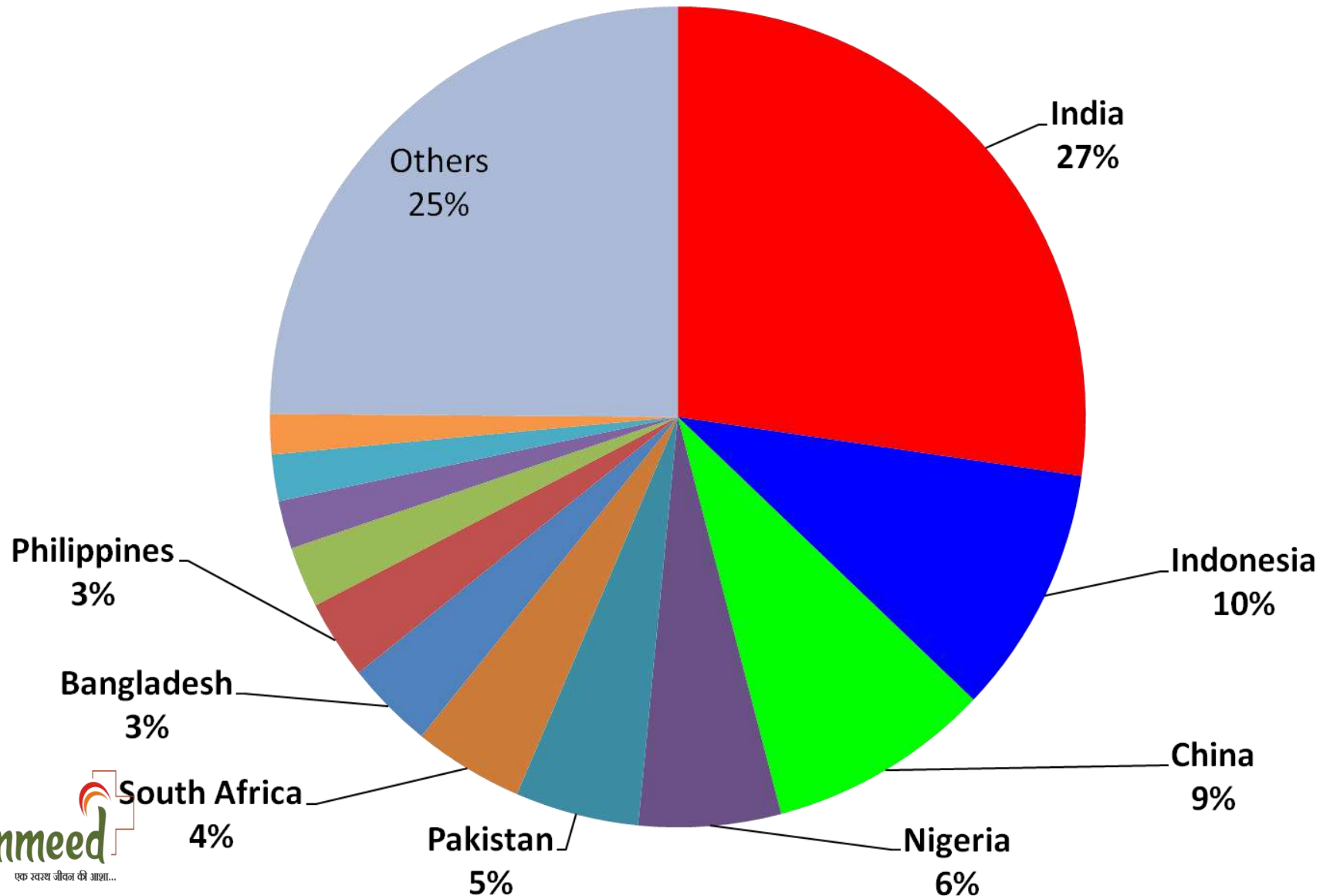
- Be alert about the symptoms of TB not only for yourself, but for those around you
- Do not ignore the symptoms of TB
- TB is curable if we take the correct and regular treatment and complete it properly
- TB treatment is free under the Government's NTEP( National TB Elimination Programme)
- Contact your nearest Government dispensary, Health Post, Hospital for free treatment and free diagnostic tests

# TB in India

- India has the highest number of TB patients in the world ( 25%)
- The Government's India TB Report 2020, puts the number of notified TB cases in India in 2019 at more than 24 lacs
- TB is India's biggest health problem
- 4.5 lakh people die of TB in India every year
- Daily deaths due to TB are more than 1,150

Hence we have to spread awareness about TB - it's causes, symptoms and treatment

# TB Disease Burden



# TB In India

- The incidence of TB is about 211 per lakh of people at present. Working towards a TB free India we want to bring it down to 43 per lakh of people
- 32 per lakh of people die of TB ( excluding HIV). Working towards a TB free India we want to bring it down to 3 per lakh of people
- Mumbai has the dubious distinction of being the TB Capital of India , with the highest number of TB and MDR cases in the country

# TB & Covid 19

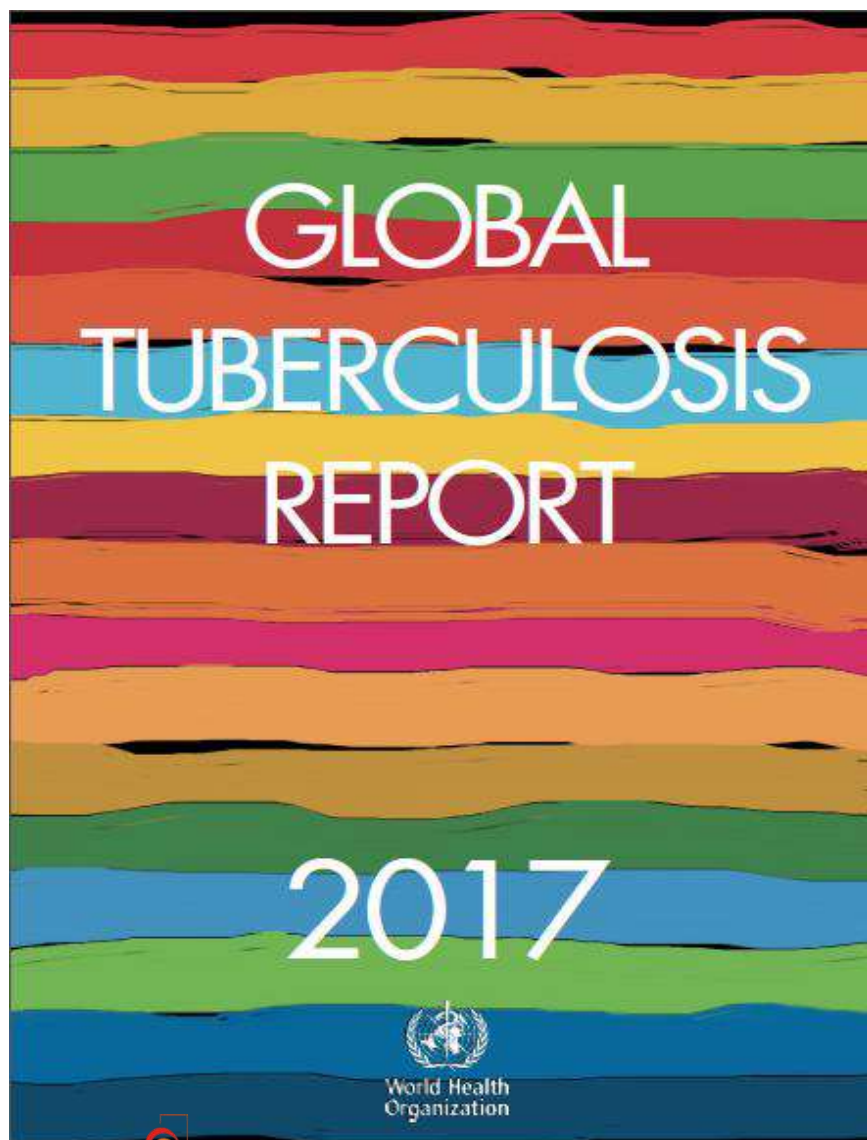
- Response to treatment is poor if a TB patient is also infected with Covid 19, specially if TB treatment is interrupted
- TB & Covid 19 – both are infections that affect the lungs
- Both Diseases have similar symptoms such as cough, fever and difficulty in breathing

# TB & Covid 19

- TB has a longer incubation period, with a slower onset of the disease than Covid 19
- In the Covid 19 pandemic, TB patients are advised not to interrupt treatment, regularly consult their Doctors and follow their advice on other precautions to be taken



# Global TB Burden -2017



	Global	India
Incidence	1,04,00,000 (140/lakh)	27,90,000 (211/lakh)
Deaths	16,74,000 (22/lakh)	4,35,000 (33/lakh)
HIV TB cases	10,30,000 (14/lakh)	87,000 (6.6/lakh)
HIV TB deaths	3,74,000 (5.0/lakh)	12,000 (0.9/lakh)
Estimated MDR/RR cases	6,01,000 (8.1/lakh population)	1,47,000 (11/ lakh population)

# Treatment of TB

- We have a **Vision** of a TB free India, with zero deaths, disease and poverty due to TB
- Treatment of TB is free under the Government of India's National Tuberculosis Elimination Program ( NTEP) available through Govt. Dispensaries, Health Posts and Hospitals
- TB is a notifiable disease in India since 2012 . As per current laws ALL doctors and Chemists have to report TB cases to the Government

# Treatment of TB

- TB patients need a protein rich diet. The government gives an allowance of Rs. 500 per month to each registered patient under the **Nikshay Poshan Yojna**
- Govt. has set up a Nikshay Sampark helpline ( toll free) **1800-11-6666** for any query or help related to TB. It is operational from 7 am to 11 pm on all days

**Still 50% cases are treated in the private sector in India**

# Make TB free India a Reality



Let us pledge to make India TB free by

Sharing this information

&

Acting on this information

when and where required