

A REPORT ON  
**VISIT OF  
DISTRICT TUBERCULOSIS CENTRE  
(DTC)**

**KOTHI COMPOUND, RAJKOT,  
GUJARAT - 360001**

**ORGANISED BY  
DEPARTMENT OF COMMUNITY MEDICINE  
RAJKOT HOMOEOPATHIC MEDICAL COLLEGE  
PARUL UNIVERSITY**

**(A. Y. 2020-2022)**

**PLACE OF VISIT :-**

District Tuberculosis Centre (DTC)  
Kothi Compound, Rajkot, Gujarat - 360001

**DATE OF VISIT :-**

9th & 11th June 2021



beginning of the visit

## OBJECTIVE OF THE VISIT :-

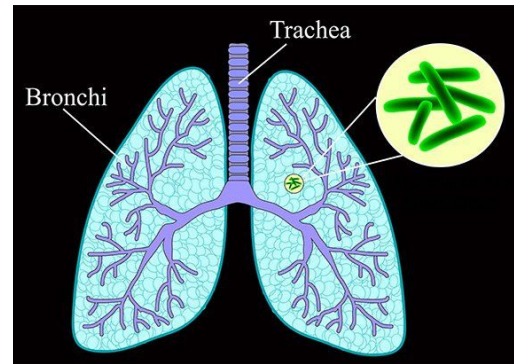
- To understand the role of "District Tuberculosis Centre (DTC)" institutes in prevention and control of Tuberculosis.
- To understand the ongoing strategies and programmes for prevention and control of Tuberculosis.
- To understand the epidemiology of the Tuberculosis.
- To understand the impact of hazard created by Tuberculosis in community.



Seminar hall - DTC Rajkot

## WHAT IS TUBERCULOSIS?

- Tuberculosis (TB) is an infectious disease usually caused by *Mycobacterium tuberculosis* (MTB) bacteria.
- Tuberculosis generally affects the lungs, but can also affect other parts of the body.



## PROBLEM OF TUBERCULOSIS IN INDIA :-

- India is classified along with the sub-Saharan African countries to be among those with a high burden and the least prospects of a favourable time trend of the disease as of now (Group IV countries).
- The average prevalence of all forms of tuberculosis in India is estimated to be 5.05 per thousand, prevalence of smear-positive cases 2.27 per thousand and average annual incidence of smear-positive cases at 84 per 1,00,000 annually.

## PROBLEM OF TUBERCULOSIS GLOBALLY :-

- Globally, more than 1 in 3 individuals is infected with TB. According to the WHO, there were 8.8 million incident cases of TB worldwide in 2010, with 1.1 million deaths from TB among HIV-negative persons and an additional 0.35 million deaths from HIV-associated TB. In 2009, almost 10 million children were orphaned as a result of parental deaths caused by TB.

## DISTRIBUTION OF TUBERCULOSIS :-

- A total of 1.4 million people died from TB in 2019 (including 208 000 people with HIV). Worldwide, TB is one of the top 10 causes of death and the leading cause from a single infectious agent (above HIV/AIDS).
- In 2019, an estimated 10 million people fell ill with tuberculosis(TB) worldwide. 5.6 million men, 3.2 million women and 1.2 million children. TB is present in all countries and age groups. But TB is curable and preventable.
- In 2019, 1.2 million children fell ill with TB globally. Child and adolescent TB is often overlooked by health providers and can be difficult to diagnose and treat.
- In 2019, the 30 high TB burden countries accounted for 87% of new TB cases. Eight countries account for two thirds of the total, with India leading the count, followed by Indonesia, China, the Philippines, Pakistan, Nigeria, Bangladesh and South Africa.
- Multidrug-resistant TB (MDR-TB) remains a public health crisis and a health security threat. A global total of 206 030 people with multidrug- or rifampicin-resistant TB (MDR/RR-TB) were detected and notified in 2019, a 10% increase from 186 883 in 2018.
- Globally, TB incidence is falling at about 2% per year and between 2015 and 2019 the cumulative reduction was 9%. This was less than half way to the End TB Strategy milestone of 20% reduction between 2015 and 2020.
- An estimated 60 million lives were saved through TB diagnosis and treatment between 2000 and 2019.
- Ending the TB epidemic by 2030 is among the health targets of the United Nations Sustainable Development Goals (SDGs).

## SOCIAL & ECONOMICAL BURDEN OF TUBERCULOSIS :-

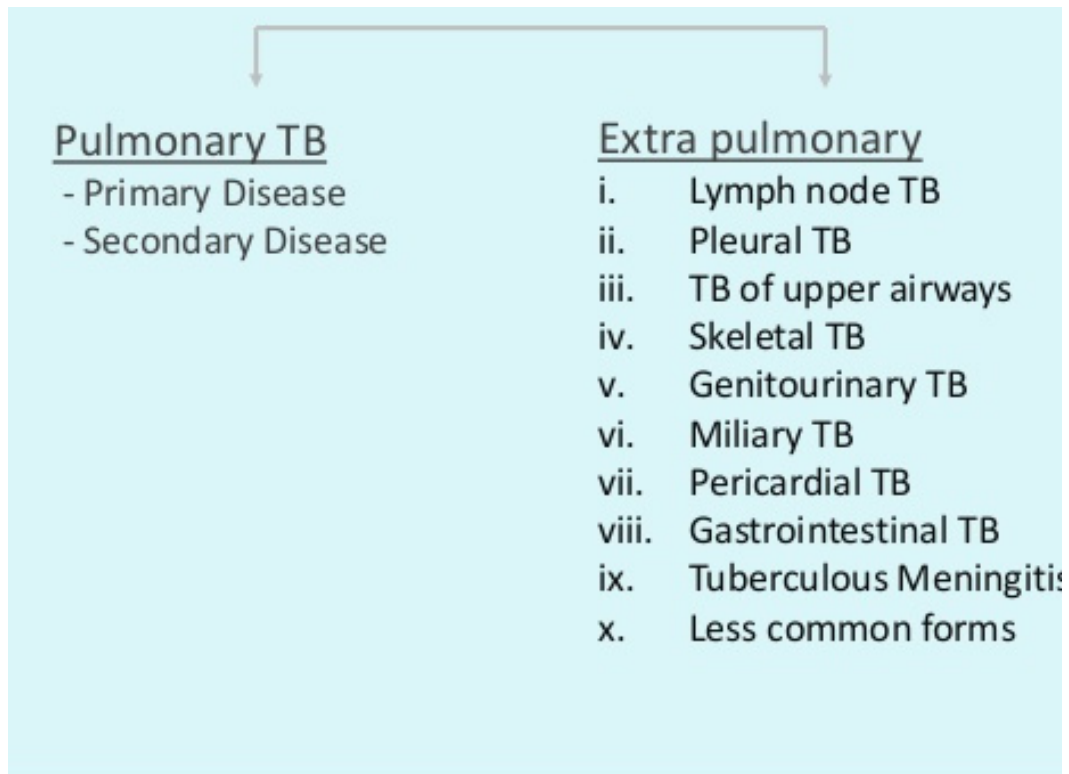
- TB was declared a “global emergency” by WHO in 1993 because of its toll on the health of individuals and wider social and economic impact on the overall progress of a country. The economic burden of TB on India is huge and is a great loss in terms of lives, money and workdays.
- It is estimated that about 170 million workdays are lost annually in the country due to the disease.
- The annual economic cost of tuberculosis to the Indian economy is at least US\$ 3 billion (more than Rs. 13,000 crore).
- It is estimated that around 40% of the population in the country is infected with the TB bacilli and it is estimated that about 10% of them will develop TB disease during their lifetime.
- There are over 8.5 million TB patients in India with an incidence of 1.9 million cases annually including 0.8 million new infectious cases.
- One sputum positive patient can infect 10–15 persons in a year if left untreated. Poorly treated patients can develop drug-resistant and potentially incurable forms of TB.

### Social and Economic Burden of TB in India

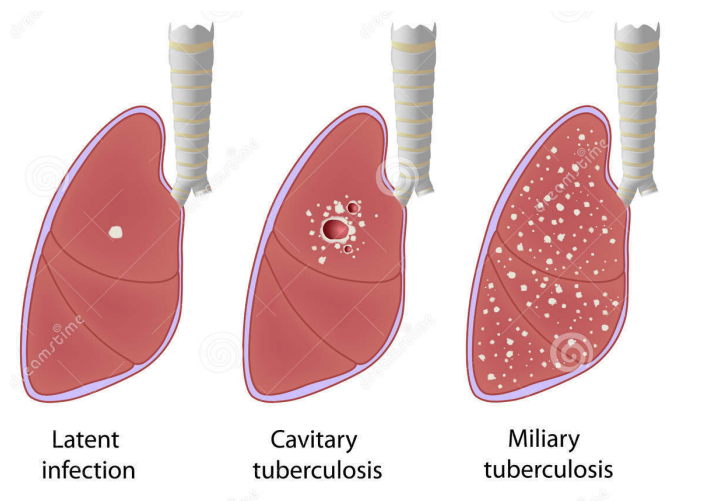
	<u>Estimated burden per year</u>
• Indirect costs to society	\$3 billion
• Direct costs to society	\$300 million
• Productive work days lost due to TB illness	100 million
• Productive work days lost due to TB deaths	1.3 billion
• School drop-outs due to parental TB	300,000
• Women rejected by families due to TB	100,000

## CLASSIFICATION OF TUBERCULOSIS :-

- It can be classified into two broad groups :
- A. Pulmonary Tuberculosis
- B. Extra-pulmonary Tuberculosis



- Based upon phase of disease it can be :
- A. Latent Tuberculosis
- B. Active Tuberculosis
- C. Cavitory Tuberculosis
- D. Miliary Tuberculosis



## NATURAL HISTORY OF TUBERCULOSIS :-

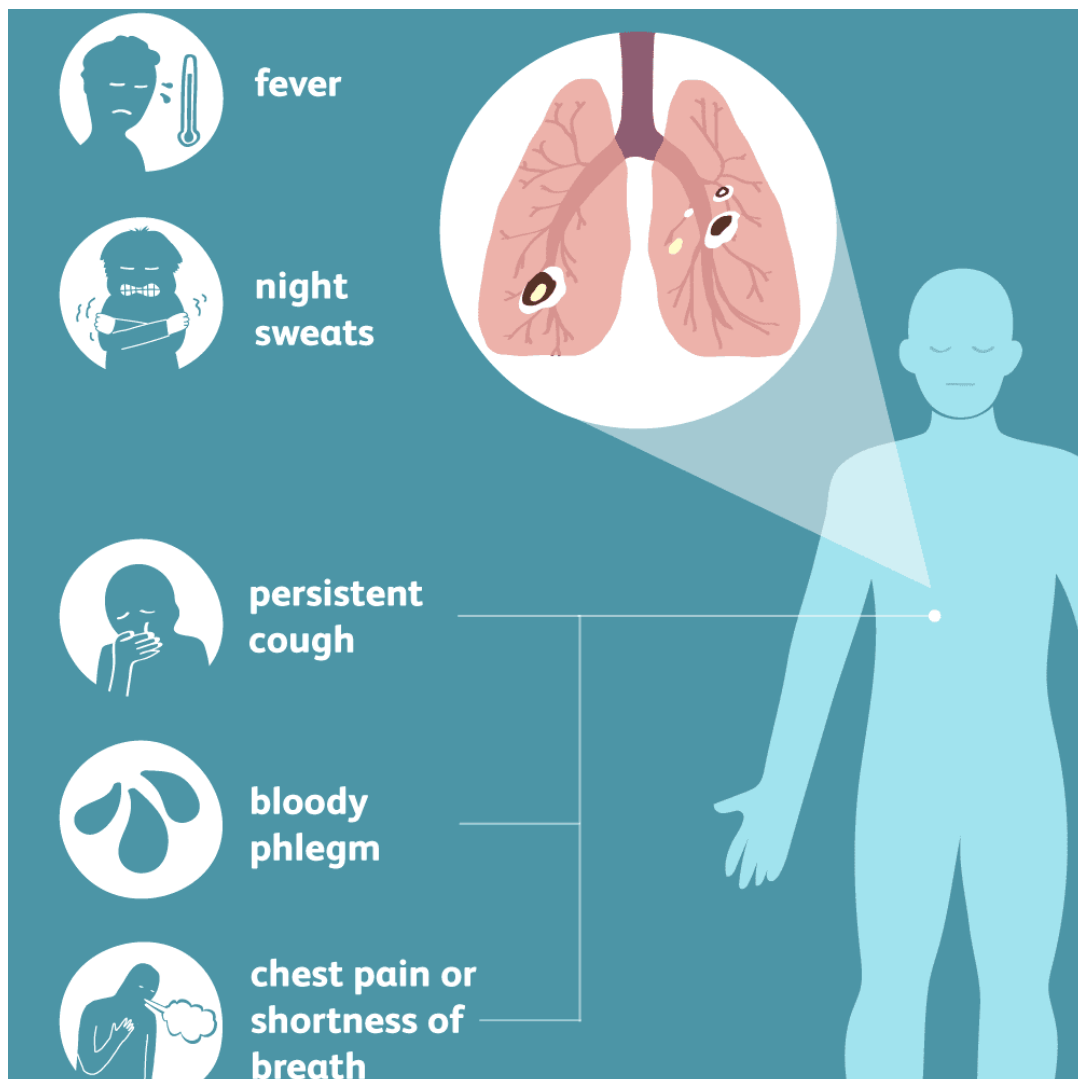
- On March 24, 1882, Dr. Robert Koch announced the discovery of *Mycobacterium tuberculosis*, the bacteria that cause tuberculosis (TB). During this time, TB killed one out of every seven people living in the United States and Europe.
- Dr. Koch's discovery was the most important step taken toward the control and elimination of this deadly disease.
- In 1982, a century after Dr. Koch's announcement, the first World TB Day was sponsored by the World Health Organization (WHO) and the International Union against Tuberculosis and Lung Disease (IUATLD).
- The event was intended to educate the public about the devastating health and economic consequences of TB, its effect on developing countries, and its continued tragic impact on global health.
- Today, World TB Day is commemorated across the globe with activities as diverse as the locations in which they are held. But more can be done to raise awareness about the effects of TB.
- Among infectious diseases, TB is now the leading killer of adults in the world, with 1.8 million TB-related deaths in 2015.
- In the United States, the overall number of TB cases increased over the previous year in 2015 after having declined yearly during 1993–2014.
- Until TB is eliminated, World TB Day won't be a celebration. But it is a valuable opportunity to educate the public about the devastation TB can spread and how it can be stopped.





## CLINICAL FEATURES OF TUBERCULOSIS :-

- The usual symptoms of TB include:
- Fever
- Chills
- Night sweats
- Cough
- Loss of appetite
- Weight loss
- Blood in the sputum (phlegm)
- Loss of energy



## PREVENTION & CONTROL OF TUBERCULOSIS :-

- **STAY HOME** : Don't go to work or school or sleep in a room with other people during the first few weeks of treatment for active tuberculosis.
- **VENTILATE THE ROOM** : Tuberculosis germs spread more easily in small closed spaces where air doesn't move. If it's not too cold outdoors, open the windows and use a fan to blow indoor air outside.
- **COVER YOUR MOUTH** : Use a tissue to cover your mouth anytime you laugh, sneeze or cough. Put the dirty tissue in a bag, seal it and throw it away.
- **WEAR A MASK** : Wearing a surgical mask when you're around other people during the first three weeks of treatment may help lessen the risk of transmission.
- **FINISH ENTIRE COURSE OF MEDICATION** : This is the most important step you can take to protect yourself and others from tuberculosis. When you stop treatment early or skip doses, TB bacteria have a chance to develop mutations that allow them to survive the most potent TB drugs. The resulting drug-resistant strains are much more deadly and difficult to treat.
- **VACCINATIONS** : In countries where tuberculosis is more common, infants often are vaccinated with bacillus Calmette-Guerin (BCG) vaccine because it can prevent severe tuberculosis in children. The BCG vaccine isn't recommended for general use in the United States because it isn't very effective in adults. Dozens of new TB vaccines are in various stages of development and testing.

## PREVENTION & CONTROL PROGRAMS IN INDIA :-

- **THE NATIONAL TUBERCULOSIS ELIMINATION PROGRAM (NTEP)** : is the Public Health initiative of the Government of India that organizes its anti-Tuberculosis efforts. It functions as a flagship component of the National Health Mission (NHM) and provides technical and managerial leadership to anti-tuberculosis activities in the country. As per the National Strategic Plan 2018–22, the program has a vision of achieving a "TB free India", and aims to provide Universal Access to TB control services.[1] The program provides, various free of cost, quality tuberculosis diagnosis and treatment services across the country through the government health system.
- **THE NATIONAL TB PROGRAMME (NTP)** : was launched by the Government of India in 1962 in the form of District TB Centre model involved with BCG vaccination and TB treatment. In 1978, BCG vaccination was shifted under the Expanded Programme on Immunisation. A joint review of NTP was done by Government of India, World Health Organization (WHO) and the Swedish International Development Agency (SIDA) in 1992 and some shortcomings were found in the programme such as managerial weaknesses, inadequate funding, over-reliance on x-ray, non standard treatment regimens, low rates of treatment completion, and lack of systematic information on treatment outcomes.



## PREVENTION & CONTROL PROGRAMS IN INDIA :-

- **REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME** : Around the same time in 1993, the WHO declared TB as a global emergency, devised the directly observed treatment short course (DOTS), and recommended to follow it by all countries. The Government of India revitalized NTP as Revised National TB Control Programme (RNTCP) in the same year. DOTS was officially launched as the RNTCP strategy in 1997 and by the end of 2005 the entire country was covered under the programme.
- During 2006-11, in its second phase RNTCP improved the quality and reach of services, and worked to reach global case detection and cure targets. These targets were achieved by 2007-08. Despite these achievements, undiagnosed and mistreated cases continued to drive the TB epidemic. TB was the leading cause of illness and death among persons living with HIV/AIDS and large number of multidrug resistant TB (MDR-TB) cases were reported every year. During this period for achievement of the long term vision of a "TB free India", National Strategic Plan Tuberculosis Control 2012-2017 was documented with the goal of 'universal access to quality TB diagnosis and treatment for all TB patients in the community'.



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