

National Tuberculosis Elimination Programme

Background Information

TB is one of the most ancient diseases. It has been referred to in the Vedas and Ayurvedic Samhitas. The TB burden in India is staggering. Tuberculosis (TB) is a contagious disease caused by Mycobacterium tuberculosis. Left untreated, each person with infectious pulmonary TB will infect an average of between 10 and 15 people every year.

Tuberculosis generally affects the lungs, but can also affect other parts of the body. Most infections do not have symptoms, in which case it is known as latent tuberculosis. About 10% of latent infections progress to active disease which, if left untreated, kills about half of those infected. The classic symptoms of active TB are a chronic cough with blood-containing sputum, fever, night sweats, and weight loss.

Tuberculosis is spread through the air when people who have active TB in their lungs cough, spit, speak, or sneeze. People with latent TB do not spread the disease. Active infection occurs more often in people with HIV/AIDS and in those who smoke. Diagnosis of active TB is based on chest X-rays, as well as microscopic examination and culture of body fluids.

Prevention of TB involves screening those at high risk, early detection and treatment of cases, and vaccination with the bacillus Calmette-Guérin (BCG) vaccine. Those at high risk include household, workplace, and social contacts of people with active TB. Treatment requires the use of multiple antibiotics over a long period of time. Antibiotic resistance is a growing problem with increasing rates of multiple drug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB).

Situation of TB Uttarakhand

In Uttarakhand the estimated total TB Cases are 237/Lac per year in 2022 including both public and private sector.

The National Tuberculosis Elimination Programme is based on the daily DOTS (Directly Observed Treatment with short course chemotherapy) strategy. In Uttarakhand Program has introduced daily regimen for treatment of drug sensitive TB in the year 2017, October month. This is a major shift in the TB treatment policy being followed by the Central TB Division. WHO revised its TB management guidelines in 2010, recommending that the daily drug regimen be adopted under NTEP.

Under the new daily drug regimen, TB patients will be given fixed drug combinations (FDCs) — three or four drugs in specific dosages in a single pill — on a daily basis. The drugs will be administered according to the weight of the patient.

Infrastructure of NTEP in state:-

| | | |
|---------------------------------|-----|---|
| State TB Cell | 01 | |
| Intermediate Reference Lab | 01 | IRL, Dehradun |
| State Drug Store | 02 | 1-Dehradun 2- US Nagar |
| District TB Centre | 13 | |
| Tuberculosis Unit | 95 | |
| Designated Microscopy Centers | 154 | |
| Nodal Drug Resistant TB Centers | 02 | 1- HIHT Jolly Grant 2- GMC, Haldwani, Nainital |
| CBNAAT Site | 15 | |

Laboratory Services

Diagnostic services under the program are provided through a network of various types of laboratories operating in a three tier fashion. At the service/ facility level there are microscopy and rapid molecular tests, constituting the first tier. The second tier is constituted by Intermediate Reference Laboratories (IRL) and Culture and Drug Susceptibility Testing (C&DST) Labs, which provide advanced DST facilities and supervisory support to the first tier. The National Reference Laboratories constitute the third tier, and provide quality assurance and certification services for C&DST labs and co-ordinate with WHO Supra National Reference Laboratory Network. In addition to the above, Chest Radiography, available at tertiary and secondary healthcare levels, also play an important role in screening for Tuberculosis signs and clinical diagnosis.

Designated Microscopy Centers (DMC)

Sputum smear microscopy, using the Ziehl – Neelsen staining technique, is conducted at the DMCs. This is the most widely available test with over 154 quality controlled laboratories across Uttarakhand. For diagnosis, two sputum samples are collected over two days (as spot-morning/morning-spot) from presumptive TB case (patients with presenting with a history of cough for two weeks or more or any symptom of TB).

Rapid Molecular Testing Labs

Cartridge Based Nucleic Acid Amplification Test (CBNAAT) using the GeneXpert Platform, and TrueNat are rapid molecular test for TB diagnosis and Rifampicin resistance detection. This test is the first choice of diagnostic test for high risk population, children, contact of drug resistant cases and PLHA (Patient Living with HIV AIDS). Currently there are about 15 CBNAAT and 85 TrueNat laboratories in the state, established at the district and in some cases at a sub-district level.

Culture and Drug Susceptibility Testing Labs

Advanced tests such as the Line Probe Assay, Solid Culture, and Drug Susceptibility Testing are available at IRL, this provide additional drug resistance/ susceptibility testing services for a number of Anti-TB drugs.

Treatment Services

Standardized treatment regimen composed of multiple anti- Tuberculosis drugs are provided through the program. Treatment of TB is consisting of an intensive phase of two months for drug sensitive TB and of six months for drug resistant TB and the continuation phase is of four months for the drug sensitive TB and of one and half years for MDR TB.

Based on the nature of anti- microbial to the disease different treatment regimen are offered through the program. New Cases and those which exhibit no resistance are offered a six month, short course of the four first line drugs; Isoniazid-H, Rifampicin-R , Pyrazinamide –Z , and Ethambutol -E. The drugs are administered through daily weight band based doses of Fixed Dose Combinations, consisting of HRZE for the intensive phase of two months and HRE for the continuation phase of four months. For drug resistant cases, depending upon the pattern of drug resistance a number of regimen are available composed of a combination of 13 drugs.

Existing Government Schemes under NTEP for the benefit of TB Patients and Providers

- Free Diagnosis of TB
- Free & Quality Treatment for All types of TB
- Free Pre treatment evaluation of MDR patient with travel support to the patient and one attendant.
- Free monthly routine diagnostic services to MDR TB Patents.
- Free chest X-Ray service to all eligible presumptive TB cases.
- Nikshay Poshan Yojana (NPY): DBT of Rs 500/month to All Types of TB Patients for the complete duration of Anti TB Treatment.
- Informers incentive: @ Rs 500 per confirmed TB Case.

| Contact Details (District TB Officer) | | | | |
|--|------------------|-----------------------------|----------------------------|--|
| S.No | District | Name of DTO | Office Phone Number | Email |
| 1 | Almora | DR Pranshu Denial | 05962-254355 | dtouramr@rntcp.org |
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Contact Details (District Program Coordinator)- NTEP

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| 11 | U.S. Nagar | Mr. Naveen Pandey | 8958888128 |
| 12 | Uttarkashi | Mr. Ajay Bisht | 7088838804 |