

POINT-OF-CARE TB DIAGNOSTICS

Your Go-To Guide



FIND TB
TO
TREAT TB!



Tuberculosis (TB), a contagious infection caused by the bacteria *Mycobacterium tuberculosis*, remains the largest infectious killer in the world. It primarily affects the lungs but can also target other parts of the body.

TB spreads through the air when an infected person coughs or sneezes, making it important to diagnose and treat the disease promptly to prevent its spread to others.

Common symptoms of TB include cough, weight loss, night sweats, and loss of appetite.

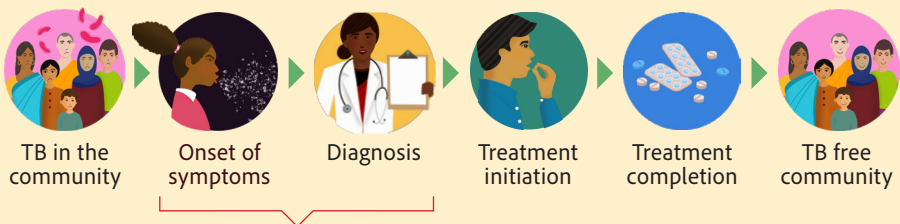
TB Burden

	Population	Incidence	DR-TB Burden	Mortality	Missing People
Global	790 Crore	1.06 Crore	4.10 Lakh	14 Lakh	31 Lakh
India	140 Crore	28 Lakh	1.10 Lakh	3.31 Lakh	5 Lakh

Source: WHO Global TB Report 2023

IN INDIA, 907 PEOPLE LOSE THEIR LIVES TO TB EVERY DAY.

Pathway to Cure



Conversations with the community members have shown that it can take anywhere from 4 weeks to 18 months to receive a correct TB diagnosis after the onset of symptoms.

Find TB to Treat TB!

Helps doctors start the right TB treatment on time, making the path way to cure easier.

If TB is not treated quickly, it can turn into more serious kinds of TB (eg. DR-TB) that are harder to cure.

By catching TB early and treating it quickly, we can keep our communities healthier and stop the spread of the disease to others.

A precise TB diagnosis is not just a step; it is essential for receiving effective treatment! Timely diagnostics are crucial on the journey to recovery.

Words of Importance

Point-of-care (POC)

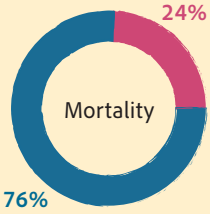
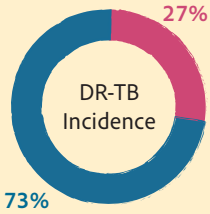
Tests or treatments done right where people are, like in a clinic or community center, instead of sending samples to a distant lab.

Deoxyribonucleic acid (DNA)

Found in all living cells, it is like a blueprint that contains all the information needed for living things to grow, develop and function.

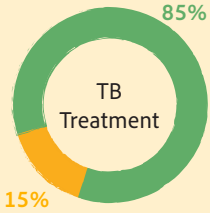
Rapid Molecular Diagnostics (RMD)

Quick tests that use genetic techniques by analyzing DNA to detect diseases like TB.



■ India
■ Rest of the World

Missing people: People with the TB disease who have not been diagnosed, treated, or reported to the national health authorities.



■ Cured
■ Not cured

WHO Recommended Point-of-Care Rapid Molecular Diagnostics (WRMD)



Truenat

Truenat is a world-class, Indian made, portable diagnostic tool for TB testing.

Affordable

Can be used in community settings

Detects rifampicin resistance

Takes 1 hour from sample collection to receive results

Battery operated

Ever heard of NAATs? They are special nucleic acid amplification tests that quickly check samples like sputum for TB bacteria. They are accurate and fast, and they even tell if the TB bacteria are resistant to certain medicines. Plus, you don't need to be an expert to understand the results – the test does it for you!

GeneXpert is another powerful tool that uses NAAT, but it is not a point-of-care diagnostic tool as it requires laboratory settings with controlled environmental conditions.

Truenat Process

1. Collect a sputum sample from a person who might have the TB disease.
2. Prepare the sample using special kits to separate and purify DNA.
3. Amplify the DNA using a small machine called Truelab Real-time micro-PCR analyzer.
4. Get results within an hour on whether the disease is present and learn if you are Rifampacin resistant.

Truenat can help remote communities get reliable TB diagnosis quickly. This means people can start treatment sooner, which stops TB from spreading.

Impact Stories

Truenat in Bantayan Municipality of Cebu, Philippines

316

rise in new TB case detection from '21 to '22

1192

rise in TB screening from '21 to '22

Bringing TB diagnostic technology to the community makes people more open to getting tested.



Truenat on wheels in Dili, Timor-Leste

32%

rise in new TB case detection from '21 to '22

The mobile van helped to screen TB among different populations, including high risk people.



Truenat is used by over 70 countries worldwide.



According to the WHO Global TB Report 2023, only 33% of people were diagnosed with TB using WRMDs in India.

GOA completely replaced sputum microscopy with molecular diagnostics, and early TB detection increased by 2.5%.

Truenat has helped the Indian National TB Elimination Programme screen over 56 lakh people in 2021-2022. Of these, 10 lakh people were diagnosed with drug-susceptible TB and drug-resistant TB.

The WHO initiative Find.Treat.All, asks all governments to replace microscopy with molecular diagnostics by 2027.

Lateral Flow Urine Lipoarabinomannan Assay (LF-LAM)

LF-LAM is more sensitive in diagnosing TB in people living with HIV (PLHIV), helping to detect the disease earlier and ensure timely treatment. It can be done right at the clinic or health center, without the need for sending samples to a lab.

LF-LAM is simple to perform and does not need complicated equipment. You can read the results with just your eyes. The test only takes about 25 minutes to perform, saving you time and reducing the waiting period for diagnosis.



Why Discontinue Sputum Microscopy for TB Diagnosis?

Despite WHO guidelines recommending the use of molecular tests over microscopy for TB diagnosis, India still relies heavily on sputum microscopy.



Accuracy

WHO recommended molecular diagnostics (WRMDs) provide more accurate results compared to sputum microscopy, helping to avoid misdiagnosis and ensuring appropriate treatment.



Accessibility

Some of the WRMDs can be used in community settings, enabling same-day diagnosis and treatment initiation at the first point of contact. This ease of access to diagnostics tools helps bridge the gaps in TB diagnosis and ensures timely care for people with TB, especially in remote or resource-limited areas.



Speed

WRMDs deliver results within hours, whereas sputum microscopy can take days, delaying treatment initiation.

In India, using reliable TB tests will help people get better faster and play a big role in achieving our #TBMuktBharat goals!

Frequently Asked Questions

1. **Can TB diagnostic tools detect drug-resistant TB?**
Not all TB diagnostic tools can detect drug-resistance. Truenat, GeneXpert and LPAs are some of the few WRMD diagnostic tools that are able to detect drug resistance quickly.
2. **Should culture-based diagnostic tools be used for TB diagnosis?**
Culture-based methods are not ideal for diagnosing TB due to the long time it takes to obtain results, which may delay treatment initiation and increase the risk of disease transmission. However, they are valuable for monitoring treatment progress and assessing treatment response over time.
3. **Which diagnostic tools can be used in rural settings?**
Both Truenat and LF-LAM provide quick and accurate diagnosis in settings where there is limited infrastructure and resources.
4. **Where can I go to get diagnosed for TB?**
In India, individuals seeking to get diagnosed for tuberculosis (TB) can visit various centers and hospitals across the country.
 - Government Hospitals
 - District TB Centers
 - Private Laboratories
 - TB Clinics
5. **Is there a TB helpline number where I can get more information?**
Yes. You can call the toll free number 1800-11-6666 for more information.



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