



Tuberculosis is an airborne, infectious disease caused by the bacteria Mycobacterium Tuberculosis.

Drug-Resistant Tuberculosis (DR-TB) is caused when the TB bacteria are resistant to at least one of the first-line TB medications - isoniazid (INH), rifampicin (R), ethambutol (EMB), and pyrazinamide (PZA). DR-TB has fewer treatment options, higher treatment cost and increased mortality rate.

Causes of Drug-Resistant Tuberculosis



Mutation* in the TB bacteria that makes a drug ineffective



Exposure to someone with DR-TB



Inadequate or poorly managed treatment regimen - e.g., interruptions or early end of treatment, or poor adherence



Medicine that has been taken is not enough to destroy all of the mycobacteria



Gaps in TB services that lead to delays in detection and effective treatment of drug resistance

^{*} Mutation is a change in the DNA of the bacteria



Types of Drug-Resistant Tuberculosis

RR-TB: TB bacteria that are resistant to rifampicin (R)

MDR-TB: TB bacteria that are resistant to two of the most important TB drugs, rifampicin (R) and isoniazid (INH)

Pre-XDR TB: MDR/RR-TB + resistance to any fluoroquinolones, such as moxifloxacin, levofloxacin, etc.

XDR-TB: Pre-XDR TB + resistance to at least one additional drug that is prioritized during the treatment of tuberculosis, such as bedaguiline and linezolid

New WHO Guidelines for Drug-Resistant Tuberculosis

WHO suggests the use of the 6-month treatment regimen composed of bedaquiline, pretomanid, linezolid (600 mg) and moxifloxacin (BPaLM) rather than the 9-month or longer (18-month) regimens in MDR/RR-TB patients. In cases of documented resistance to fluoroquinolones, BPaL [regimen without moxifloxacin] can be started or continued.

Conventional Regimen vs. BPaL | BPaLM

Details	Conventional Regimens	BPaL	BPaLM
Efficacy	~60%	~90%	~90%
Duration	9-18 months	6 months	6 months
Number of Pills	Between 2828 - 4898 pills (depending on body weight and duration)	564 pills	746 pills
Number of Injections	85-130 injections	None	None
Hearing Loss	Yes	No	No
Kidney Failure	Yes	No	No

Pretomanid, an essential drug in the BPaL and BPaLM regimens, has already been procured by 70+ countries.



BPaL | BPaLM in Programmatic Settings

- √ Solid clinical evidence
- √ WHO recommendation
- √ Cost effectiveness

BPaL | BPaLM is recommended for people with

- ✓ MDR-TB
- ✓ Pre-XDR TB
- ✓ Pulmonary TB
- ✓ Extrapulmonary TB**

When starting the regimen, it is important to make sure that the person with DR-TB has not previously taken bedaquiline, linezolid, pretomanid or delamanid for more than 1 month. When these medicines have been taken for more than 1 month, people can still receive these regimens if resistance to the specific medicines has been ruled out.

 $^{^{\}star\star}$ Except for TB involving the central nervous system , bones and joints, and disseminated (spread from the lungs to other parts of the body through the blood or lymph system) TB

Frequently Asked Questions

Can a person living with HIV take BPaL/BPaLM?

Yes, people living with HIV can take BPaL/BPaLM.

What is the cost of BPaL/BPaLM?

The total cost for BPaL/BPaLM is 40-90 percent lower than the cost of the conventional regimen.

Can children take BPaL/BPaLM?

According to WHO guidelines, BPaL/BPaLM is only recommended for people over the age of 14.

Can pregnant and breastfeeding women take BPaL/BPaLM?

No, BPaL/BPaLM is not recommended for pregnant and breastfeeding women.

Can people with XDR-TB take BPaL/BPaLM?

No, BPaL/BPaLM is not recommended for people with XDR-TB.



Supported by TB Alliance