

Preventing Tuberculosis: The WHO Way **Lalitha Venkateswaran***

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Abstract

Tuberculosis (TB) is a disease of chronicity with a high prevalence worldwide. The bacterial agent causing TB is an aerobic, non-capsulated, non-motile, and non-spore-forming strain of *Mycobacteria*, commonly referred to as *Mycobacterium tuberculosis*. According to the World Health Organization (WHO), one-third of the world's population is estimated to be infected with TB, with most cases reported in the developing countries owing to increased poverty, starvation, and human immunodeficiency virus (HIV) infection among others. A total of 22 countries have been listed as significantly affected by TB over the years. TB primarily affects children alone, but TB is preventable. The WHO has developed guidelines and operational handbooks for increased treatment coverage in countries. The WHO supports countries worldwide in preventing TB infections through guidance and implementation of infection prevention and control measures. In this article, we shall discuss the various measures advised by the WHO for preventing TB.

Keywords: Tuberculosis, Aerobic, Non-capsulated, Non-motile, Non-spore-forming strain, World Health Organization, Human immunodeficiency virus, Bacille Calmette–Guérin

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Introduction

The ongoing research on TB has shed significant insights on the biology and epidemiology of the disease. However, HIV and diabetes are the common comorbidities in the modern era, with all of these contributing to an increased susceptibility to TB. Thus, there remains an intimidating challenge in globally reducing the incidence of this disease via prevention strategies.

Vaccination of children with the Bacille Calmette–Guérin (BCG) vaccine can confer protection, particularly in severe paediatric cases. The WHO guidelines issued in 2018 recommend TB preventive treatment for PLHIV, household contacts of bacteriologically confirmed pulmonary TB cases and clinical risk groups (e.g. those receiving dialysis). Globally in 2018, 65 countries reported initiating TB preventive treatment for 1.8 million PLHIV (61% in South Africa) [1]. Although funding for the provision of TB prevention, diagnostic and treatment services has doubled it still falls far short of what is needed. In the years to come, post pandemic, we hope that more organizations would work toward building preventive programmes.

Discussion

As is well known, to achieve the targets and milestones, the End TB Strategy has four underlying principles and three pillars: the four principles are government stewardship and accountability, with

monitoring and evaluation; a strong coalition with civil society organizations and communities; protection and promotion of human rights, ethics and equity; and adaptation of the strategy and targets at country level, with global collaboration. The three pillars are integrated, patient-centred TB care and prevention; bold policies and supportive systems (including UHC, social protection, and action on TB determinants); and intensified research and innovation [2].

The new consolidated guidelines recommend a range of innovative approaches to scale up access to TB preventive treatment:

WHO recommends a scale-up of TB preventive treatment among populations at highest risk including household contacts of TB patients, people living with HIV and other people at risk with lowered immunity or living in crowded settings.

WHO recommends an integration of TB preventive treatment services into ongoing case finding efforts for active TB. All household contacts of TB patients and people living with HIV are recommended to be screened for active TB. If active TB is ruled out, they should be initiated on TB preventive treatment.

WHO recommends that either a tuberculin skin test or interferon-gamma release assay (IGRA) be used to test for TB infection. Both tests are helpful to find people more likely to benefit from TB preventive treatment but should not become a barrier to scale-

up access. Testing for TB infection is not required before starting TB preventive treatment in people living with HIV, and children under 5 years who are contacts of people with active TB.

WHO recommends new shorter options for the preventive treatment in addition to the widely used 6 months of daily isoniazid. The shorter options that are now recommended range from a 1-month daily regimen of rifapentine plus isoniazid to 3 months weekly rifapentine plus isoniazid, 3 months daily rifampicin plus isoniazid, or 4 months of daily rifampicin alone [3].

Conclusion

Thus, as TB remains the top cause of death, reinvigorated

efforts by governments, health services, partners, donors and civil society will be needed to increase access to TB preventive treatment to the levels targeted.

References

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