

WHO launches new guidance on use of targeted NGS tests for diagnosis of drug-resistant TB

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The World Health Organisation (WHO) has just published recommendations on the use of a new class of diagnostic technologies i.e. targeted next-generation sequencing (NGS) tests for the diagnosis of drug-resistant tuberculosis (TB) in the third edition of the Consolidated guidelines on tuberculosis. Module 3: Diagnosis- Rapid diagnostics for tuberculosis detection. The recommendations provide a novel approach for the rapid detection of drug resistance to new anti-TB drugs using the latest technologies.

The guidelines are accompanied by a WHO operational handbook, which provides laboratory personnel, clinicians and other clinical staff, as well as ministries of health and technical partners, detailed guidance on implementing the evidence-based recommendations, including recent updates on targeted NGS tests. It describes the WHO-recommended tests for the rapid bacteriological diagnosis of TB disease, including procedures for the tests, model algorithms, and the steps and processes required to implement and scale up new tests to diagnose TB and detect resistance to anti-TB drugs.

To accompany the new guidance, WHO has also launched a new TB sequencing portal with more than 56,000 sequences. The portal, developed in partnership with FIND and Unitaid, represents the most advanced sequencing and phenotyping knowledgebase for *Mycobacterium tuberculosis*. The portal includes a dashboard visualising the data used in the WHO mutation catalogue published in November 2023.

The WHO TB sequencing portal will greatly contribute to the collective understanding of mutations in the *Mycobacterium tuberculosis* genome and their association with drug resistance.