

Distinguishing Tuberculosis from Non-Tuberculosis Mycobacterium Infections in South Africa: A Policy Brief

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Executive Summary

Tuberculosis (TB) misdiagnosis due to Non-Tuberculosis Mycobacterium (NTM) infections poses a critical challenge to South Africa's healthcare system. Misdiagnosed cases undermine treatment efficacy, escalate healthcare costs, and delay appropriate care, threatening the objectives of the National Strategic Plan for HIV, TB, and STIs (2017-2022) and progress toward the WHO's End TB Strategy. This brief emphasizes the urgent need for improved diagnostic capabilities, clinician training, public awareness, and updated policy guidelines to address this growing issue.

Introduction

Tuberculosis remains a significant public health burden in South Africa. However, the rise of NTM infections complicates diagnosis and care. NTMs, presenting with symptoms like chronic cough, fever, and weight loss, are frequently misdiagnosed as TB due to limitations in current diagnostic practices. This mismanagement leads to ineffective treatments and increased strain on the healthcare system. Addressing this issue is vital for achieving South Africa's health policy goals and the Sustainable Development Goals (SDGs).

Key recommendations

Strengthening diagnostic frameworks with advanced molecular tools.



Enhancing clinician capacity for NTM-TB differentiation.



Implementing NTM-specific surveillance and reporting systems.



Revising national TB guidelines to incorporate NTM protocols.



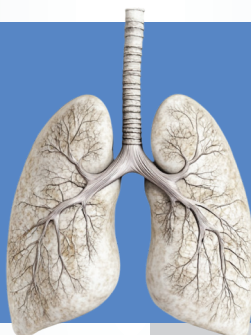
Launching targeted public health campaigns.



Problem Statement

Routine diagnostic tools like sputum smear microscopy and GeneXpert are unable to distinguish NTM from Mycobacterium tuberculosis (MTB), leading to:

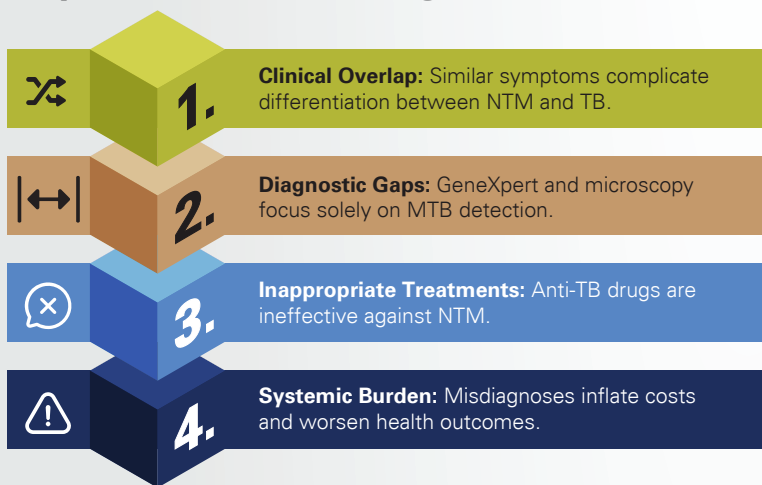
- Misdiagnosis and inappropriate treatment.
- Delayed care for NTM patients.
- Increased healthcare costs and burden.
- Undermining of TB control programs and national targets.



Policy Context

South Africa has made strides in TB management through initiatives like the GeneXpert rollout and the National Health Laboratory Service's support. However, diagnostic limitations for NTM infections jeopardize the efficacy of these advancements. Without addressing this gap, South Africa risks falling short of its 2030 TB elimination targets under the WHO's End TB Strategy.

Key Issues and Challenges



Policy Recommendations

Enhance Diagnostic Capacity

- Deploy advanced tools like Line Probe Assay (LPA) and Next-Generation Sequencing (NGS).
- Expand culture-based diagnostics for suspected NTM cases.

Clinician Training

- Conduct capacity-building workshops for differential diagnosis.
- Integrate NTM-specific systems into TB management protocols.

Surveillance and Reporting

- Establish a national NTM monitoring system under the NICD.
- Standardize NTM case reporting across provinces.

Revise Guidelines

- Update TB program guidelines to include NTM management protocols.
- Align updates with WHO strategies for high-burden settings.

Public Awareness Campaigns:

- Raise community awareness about NTM infections and their implications.
- Distribute educational materials emphasizing the importance of accurate diagnosis.

Conclusion

Addressing NTM misdiagnosis as TB is vital for strengthening South Africa's healthcare and achieving TB elimination goals. Implementing these recommendations ensures effective care, reduces systemic burdens, and sustains momentum toward global health targets.