Elizabeth Glaser Pediatric AIDS Foundation
Fighting for an AIDS-free generation

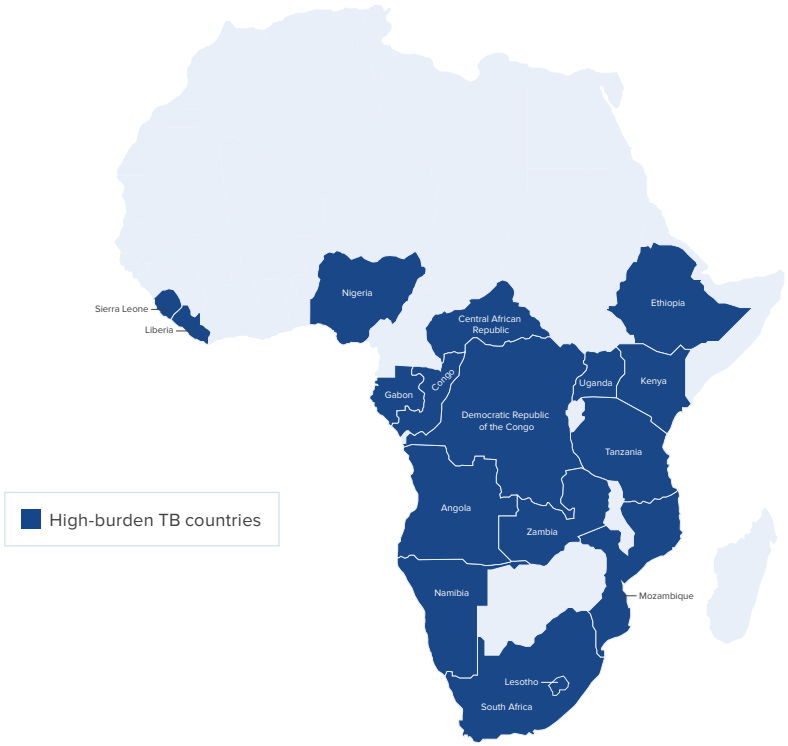
Addressing Child & Adolescent Tuberculosis Case Finding Gaps in Africa

Overview

Tuberculosis (TB) remains a significant and ongoing public health challenge in Africa, with the continent bearing a disproportionate burden. Seventeen of the 30 countries with the highest TB burden globally are African nations.[1]

In 2022, an estimated 322,000 children and young adolescents (under 15 years) in Africa fell ill with TB, representing a third of all childhood TB cases worldwide.[2] Two-thirds of African children with TB are undiagnosed, due in part to non-specific symptoms and diagnostic limitations, leading to faster progression of the disease and increased risk of death, especially in young children. It is estimated that 75,000 children in Africa lose their lives due to TB each year.[3]

These statistics underscore the critical and pressing need to address TB among children and adolescents to reduce the morbidity and mortality caused by this curable disease. Key to this effort is effective TB case finding for this population.



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What is TB Case Finding?

TB case finding is the systematic process of identifying individuals with TB, including those who are asymptomatic or have non-specific symptoms. Effective case finding is crucial for early diagnosis and treatment, reducing TB transmission across communities, preventing severe health complications, and lowering mortality rates. In children, especially younger ones, timely case finding is vital due to the risk of rapid progression of TB and the elevated risk of severe, life-threatening complications.

Commitments on Case Finding

The Roadmap Towards Ending TB in Children and Adolescents (WHO, 2023) lists case finding as one of the 10 key actions towards addressing TB. Similarly, the African Union's Catalytic Framework to End AIDS, TB, and Eliminate Malaria in Africa by 2030 focuses on achieving "universal access to TB diagnosis and treatment" as a strategy to reduce TB deaths and cases. In line with these initiatives, the 2023 political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis emphasizes robust case finding methods to address TB, urging commitments to screen, diagnose, and treat TB cases.

Challenges in TB Case Finding in Children and Adolescents

Identifying and diagnosing TB in children and adolescents presents a unique set of challenges that hinder effective case finding and treatment. These challenges include:

- Non-specific symptoms: TB symptoms in children and adolescents, such as persistent cough, fever, and weight loss, often overlap with presentations of other common illnesses, making clinical diagnosis challenging.
- Diagnostic limitations: Even the most recently developed rapid molecular diagnostic assays are suboptimal for diagnosis of TB in children. Those assays are mostly based on sputum samples but children, especially younger ones, often cannot produce sputum. In addition, TB in children is often characterized by a low bacterial load, making it more difficult for diagnostic assays to detect the bacilli.
- Healthcare access: Geographic, economic, and social barriers limit access to healthcare facilities where TB can be diagnosed and treated.
- Lack of awareness: Insufficient awareness and training among healthcare providers on pediatric and adolescent TB leads to missed or delayed diagnoses.
- Stigma and social barriers: Fear of stigma and social isolation discourages families and adolescents from seeking TB diagnosis and treatment.

Strategies and Actions to Improve TB Case Finding in Children and Adolescents

To effectively address the challenges above, we need to:

Adopt and implement national policies with WHO guidelines

- Align national TB strategic plans and guidelines with the latest WHO Roadmap towards ending TB in children and adolescents, and with the latest WHO guidelines on the management of TB in children and adolescents.
- Ensure all aspects of TB care—prevention, diagnosis, treatment, and follow-up—are integrated within national health systems.

Enhance capacity for laboratory-based and radiological diagnosis

- Invest in building healthcare workers' capacity to collect the alternative samples needed to diagnose TB in children, prioritizing sample types that require less or noninvasive procedures (such as nasopharyngeal aspirates and stool)
- Strengthen the national networks of WHO-recommended rapid molecular tests to ensure adequate capacity for all presumptive TB patients to receive a rapid molecular assay as the initial diagnostic test.
- Improve access to chest X-ray (CXR): Invest in the availability and accessibility of CXR-based investigations for children, prioritizing the use of digital devices and capacity building for CXR interpretation among healthcare workers.

Strengthen healthcare systems

- Robust policies: Develop and enforce policies prioritizing pediatric and adolescent TB in national programs.
- Training and capacity building: Provide specialized training for healthcare workers on pediatric and adolescent TB to strengthen capacity and confidence to manage TB in this population.
- Treatment-decision algorithms: Prioritize the rollout of the TB treatment-decision algorithms for the management of children below 10 years with presumptive pulmonary TB to support healthcare workers (especially those at the lower levels of the healthcare system); these algorithms support the decision-making process to start a child on TB treatment.
- Scaled-up contact investigation: Identify and screen household members and close contacts of TB index cases, and link those identified with presumptive TB to TB diagnostic investigations. Offer TB preventive treatment to eligible contacts, prioritizing children who are in close contact with infectious TB cases. As contact investigation is a key gateway for both case finding and TB preventive treatment, adequate resources should be dedicated to support scale-up and optimal coverage of this intervention.
- Integrated health services: Integrate TB services with other health services for children and adolescents to ensure comprehensive care and reduce missed diagnoses.

Engage Communities and address social determinants

- Awareness campaigns: Educate the public on TB symptoms in children and adolescents to help improve health-seeking behaviors, emphasizing early diagnosis and available healthcare services.
- Community health workers: Involve community health workers for active case finding, especially in high-risk and hard-to-reach populations.
- Reduce stigma: Implement campaigns to create a supportive environment for TB patients and their families.
- Improve access: Ensure healthcare services are geographically and financially accessible, particularly in rural and underserved areas.

Invest in children's health:

- Secure long-term funding for TB control programs, focusing on investments in children and adolescent health.
  - Prioritize child health within universal health coverage strategies.
  - Increase domestic investments in TB control programs, focusing on children and adolescents.

Endnotes

1 High TB burden country Profiles (who.int)
2 Tuberculosis in the African Region_ 2023 report.pdf (who.int)
3 https://theconversation.com/tb-kills-75-000-children-in-africa-every-year-how-this-can-stop-202151