Editorial

Implications of new WHO guidelines for Tuberculosis in the Asia Pacific Region

Prof. Rajeshwar Dayal [1], Madhu Nayak [1]

Author's Affiliation:
1- S N Medical College, Agra.

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Tuberculosis (TB) remains a serious infectious disease affecting children. Of the 10.6 million estimated TB cases globally in 2021, 11% were among children aged less than 15 years.[(1)] National TB programmes (NTPs) notify less than half of these children, implying a large case detection gap.[(2)] Globally in 2021, of the estimated 1.4 million TB deaths among HIV-negative people, 14% were children (aged <15 years). Of the 187,000 TB deaths among HIV-positive people, 11% were children. The higher share of TB deaths in children compared to their estimated share of cases, suggests poor access to diagnosis and treatment.[(1)]

According to the Status update of The United Nations General Assembly High- Level Meeting on The Fight against Tuberculosis held in September 2023, between 2018 and 2022, the total number of children who received TB treatment was 2.5 million, representing 71% of the cumulative five-year target of 3.5 million. The proportion of children with MDR/RR-TB who received treatment remained very low (19%). Only 55% of the cumulative five-year target set for the number of household contacts under the age of five receiving preventive treatment was met while only 10% of the target was met for household contacts aged 5 years and over.[(3)]

Most TB cases in 2021 were in the WHO South-East Asia (SEA) region (45%) followed by Africa (23%) and the Western Pacific (18%).[(1)] The Member States of the Asia Pacific region have been making steady, albeit slow, progress towards achieving the End TB targets. The COVID-19 pandemic reversed much of the progress made towards ending TB, directly through reduced case notifications and indirectly by exacerbating the social and economic determinants of the disease such as poverty and undernutrition.

The WHO launched the new consolidated guidelines on the Management of Tuberculosis in Children and Adolescents in 2022. The new WHO guidelines recommend Xpert MTB/RIF Ultra as the initial diagnostic test for TB, the use of stool as an alternative to other samples, treatment-decision algorithms for settings without laboratory infrastructure, shortening of therapy from 6 months to 4 months for non-severe TB in children aged 3 month to 16 years, all-oral treatment regimens for children with multidrug-resistant or rifampicin-resistant tuberculosis and family-centred, integrated models of care for TB case detection and prevention in children and adolescents.

Implementing the new WHO guidelines in children poses significant challenges. Paediatric TB care is often centralized at secondary and tertiary levels. Primary health care workers and private sector providers, who are

often the first point of care in many countries, have limited capacity in managing paediatric TB. This is where most children with TB or at risk of TB seek care, resulting in many missed opportunities for contact tracing, TB prevention, detection and care. Furthermore there is weak integration of child and adolescent TB services with other programmes.

Peripheral healthcare facilities often lack Xpert diagnostic tools. Stool can be used as a good alternative to gastric aspirate (GA) for diagnosis of pulmonary tuberculosis in children. In our study, we found that the diagnostic accuracy of Cartridge based nucleic acid amplification test (CBNAAT) in stool is comparable to GA CBNAAT in children.[4] However, there is scarcity of personnel skilled in stool processing techniques.

The shorter treatment regimens are costly, limiting their widespread use. Also, there is lack of regulatory approval for newer treatments such as rifapentine. The pediatric drug formulations are either unavailable or in short supply. Reliance on chest radiography to identify non-severe disease may be a challenge in areas where radiology facilities are limited. Efforts are therefore needed to make portable digital radiography and artificial intelligence–based software for reading radiographs more affordable and accessible in primary health care.[5]

Despite being part of WHO guidelines, contact investigation is not always regularly conducted in many countries in the SEA Region. The major challenges for TPT scale-up in the Region are resource shortages, knowledge and service delivery/uptake gaps among providers and service recipients, and the lack of adequate quantities of rifapentine for use in shorter TPT regimens.[6]

To address the above challenges, specific key initiatives are important for the region. Firstly, a strong political will to set ambitious targets in National Strategic Plans and to address national regulatory and policy barriers. The health sector alone cannot end TB. Rather, ending TB requires dedicated action from multiple sectors and should be coordinated by national high-level mechanisms.

Secondly expanding coverage of high-quality TB prevention, diagnosis, treatment and care services requires adequate and sustained investment. In 2022, TB allocations in the SEA Region reached US$ 1.4 billion, of which 60% was from domestic sources. However, for mission success, at least US$ 3 billion annually is needed, which will also help maintain key social protection programmes, such as for nutritional support. [7]

Thirdly, more investment is needed in the research and development of new technologies to combat TB, including TB vaccines, diagnostic and drugs. The funding for TB Research was just half the target of US$2 billion per year set at the 2018 high-level meeting of the General Assembly on the fight against TB.[3]

Lastly, countries must develop child-friendly policies and an integrated, family-based approach to tuberculosis care and services to address the vulnerabilities faced by children affected by tuberculosis, support their caregivers, in particular women and the elderly, and provide social protection.[8] TB programs cannot exist in a medicalized vacuum of vertical service delivery but integrated into other child health services.

To conclude, the recent guideline updates are a key milestone in the management of childhood TB and possess significant potential to alleviate the burden of this disease. Members of the Asia Pacific region should now prioritize their efficient implementation while simultaneously working to bridge existing evidence gaps.

REFERENCES

1. Global Tuberculosis Report 2022. World Health Organization 2022. Available at: https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022. Accessed 24 September, 2023.
2. World Health Organization. WHO consolidated guidelines on tuberculosis Module 5. Management of tuberculosis in children and adolescents. 2022. World Health Organization. Available at: https://www.who.int/publications/i/item/9789240046764. Accessed 24 September, 2023.
3. Status Update Reaching The Targets In The Political Declaration Of The United Nations General Assembly High- Level Meeting On The Fight Against Tuberculosis September 2023. Available at: https://cdn.who.int/media/docs/default-source/un-high-level-meeting-on-tb/who-ucn-tb-2023.4.pdf?sfvrsn=170abaa4_3&download=true. Accessed 25 September, 2023.
4. Singhal, R., Dayal, R., Bhatnagar, S. et al. Diagnostic Accuracy of Cartridge Based Nucleic Acid Amplification Test (CBNAAT) in Stool Samples in Pediatric Tuberculosis. Indian J Pediatr (2023). https://doi.org/10.1007/s12098-023-04849-6
5. Pai M, Zar HJ (2022) Childhood tuberculosis - time for shorter and differentiated treatment. N Engl J Med 386:988–989
6. Satyanarayana S, Bhatia V, Mandal P, Kanchar A, Falzon D, Sharma M. Urgent need to address the slow scale-up of TB preventive treatment in the WHO South-East Asia region. Int J Tuberc Lung Dis. 2021;25(5):382–7.
7. WHO South-East Asia Region commits to further enhance efforts to end TB, adopt Gandhinagar Declaration. WHO [Internet]. 2023 Aug 17 [cited 2023 Sept 28]. Available from: https://www.who.int/southeastasia/news/detail/17-08-2023-who-south-east-asia-region-commits-to-further-enhance-efforts-to-end-tb-adopt-gandhinagar-declaration.
8. Zawedde-Muyanja S, Reuter A, Tovar MA, et al. Provision of decentralized TB care services: a detect-treat-prevent strategy for children and adolescents affected by TB. Pathogens 2021; 10: 1568.