

Where are we in the battle of ending tuberculosis in children and adolescents in South Africa?

To the Editor: Ambitious targets to end tuberculosis (TB) were set at the United Nations General Assembly High-Level Meeting (UNHLM) on TB in September 2018, with children and adolescents specifically noted as key populations deserving of more attention.^[1] In addition, the World Health Organization (WHO) launched a revised 'Roadmap towards ending TB in children and adolescents',^[2] outlining key actions that should be taken at country level to engage relevant stakeholders to optimally prevent and treat TB in these age groups.

In South Africa (SA), paediatric TB notifications (<15 years) declined steeply between 2015 and 2017 (29 137 in 2015, 20 546 in 2016 and 15 628 in 2017).^[3] This fall could be due either to a true decline in cases or to a smaller proportion of cases being found. In 2018, SA reported 17 561 cases to the WHO,^[3] a 12% increase from 2017 and probably due to the national 'finding the missing TB cases campaign' that was implemented in SA in 2018.

The WHO uses mathematical modelling to estimate the TB burden at both global and national level. In 2018, the WHO estimated that 27 000 children (<15 years; 95% confidence interval 18 000 - 36 000) developed TB in SA.^[3] Despite the 2018 increase in notifications, these estimates suggest that the SA childhood TB case detection rate is still only 65%, leaving a third of children with TB in SA undiagnosed or unreported.

At the UNHLM, SA committed to diagnose and treat 95 500 children between 2018 and 2022 (Fig. 1).^[4] Although SA achieved 96% of its target for 2018, services will need to be strengthened if it is to keep up with these commitments and improve case detection. To achieve this, the country will need better diagnostics for young children, non-invasive and point-of-care microbiological sampling and testing for all children, and more training to empower healthcare workers to make clinical diagnoses. Following diagnosis, it is also essential to ensure accurate and complete reporting of all cases. Sub-national analyses of routine TB data can additionally provide information on where interventions are most needed.

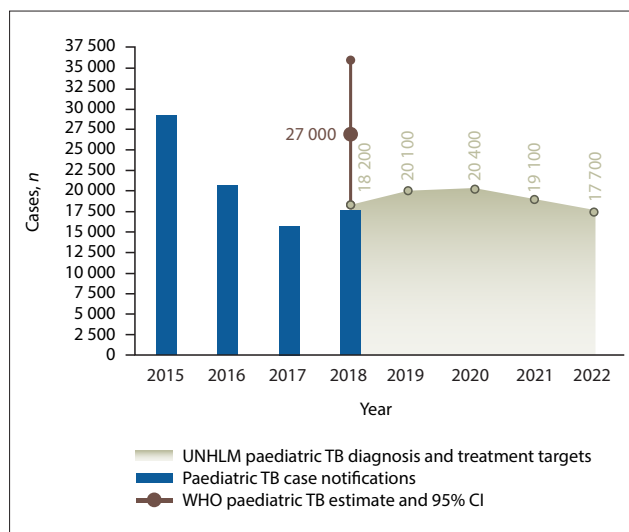


Fig. 1. National paediatric (<15 years) TB case notifications, WHO burden of disease estimates and committed UNHLM paediatric TB diagnosis and treatment targets for South Africa. (TB = tuberculosis; WHO = World Health Organization; UNHLM = United Nations General Assembly High-Level Meeting; CI = confidence interval.)

TB preventive therapy (TPT) is a safe and effective strategy to prevent TB disease in children following exposure.^[5] At the UNHLM, SA committed to provide TPT to 206 510 child contacts aged <5 years.^[4] SA is shortly to roll out shorter TPT regimens, and if this approach is coupled with strengthened TB contact management and PT implementation,^[6] it could drastically reduce the burden of TB disease among children and adolescents.

The lack of surveillance data on adolescents (10 - 19 years) with TB remains a concern. Despite being recognised as a vulnerable group, they are 'missing' in the age bands currently reported, being included either with children in the 5 - 14-year age band or with adults in the 15 - 24-year age band.^[7] SA has a strong TB surveillance system, allowing age-disaggregated reporting at a much more granular level. The country should either revise the current age bands or report adolescents separately if service provision to this age group is to be evaluated properly.

On 24 March, we commemorated World TB Day. Each year, this represents an opportunity to reflect on the promises made for children and adolescents, to evaluate progress, and to identify future priorities.

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1. Political Declaration of the United Nations General Assembly High-Level Meeting on Ending TB. 26 September 2018, New York. Geneva: World Health Organization, 2018. <https://www.who.int/tb/unhlmonTBDeclaration.pdf> (accessed 16 March 2020).
2. World Health Organization. Roadmap towards ending TB in children and adolescents. 2nd ed. Geneva: WHO, 2018. <http://apps.who.int/iris/bitstream/handle/10665/275422/9789241514798-eng.pdf?ua=1> (accessed 16 March 2020).
3. World Health Organization. TB Data: WHO's global tuberculosis database 2019. <https://www.who.int/tb/data/en/> (accessed 30 March 2020).
4. United Nations High-Level Meeting on TB: Country targets for childhood TB diagnosis and treatment. <http://www.stoptb.org/resources/countrytargets/> (accessed 16 March 2020).
5. Ayieko J, Abuogi L, Simchowitz B, Bukusi EA, Smith AH, Reingold A. Efficacy of isoniazid prophylactic therapy in prevention of tuberculosis in children: A meta-analysis. *BMC Infect Dis* 2014;14:91. <https://doi.org/10.1186/1471-2334-14-91>
6. Szkwarko D, Hirsch-Moverman Y, du Plessis L, du Preez K, Carr C, Mandalakas AM. Child contact management in high tuberculosis burden countries: A mixed-methods systematic review. *PLoS One* 2017;12(8):e0182185. <https://doi.org/10.1371/journal.pone.0182185>
7. Snow KJ, Cruz AT, Seddon JA, et al. Adolescent tuberculosis. *Lancet Child Adolesc Health* 2020;4(1):68-79. [https://doi.org/10.1016/S2352-4642\(19\)30337-2](https://doi.org/10.1016/S2352-4642(19)30337-2)

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