



## Letter

## Childhood tuberculosis in high burden settings

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An estimated one million cases of tuberculosis (TB) occur globally each year in children younger than 15 years, approximately a quarter of whom will die from TB [1]. The majority of the childhood TB cases and deaths occur in low- and middle-income countries (LMIC), where difficulties and delays, principally in TB case detection, contribute to poor outcomes in children [2]. Childhood TB is paucibacillary and obtaining good quality sputum specimen is a challenge, particularly in the very young. In addition, the clinical presentation of TB in children mimics other common childhood diseases such as HIV, pneumonia, viral and bacterial blood infection and malnutrition. Therefore, the development of novel non-sputum-based diagnostic tools that could give a rapid and reliable diagnosis of TB in children as well as the optimisation of the currently available diagnostic tools are a clear critical need.

Prior to the COVID-19 *syndemic* [3], reductions in morbidity and mortality from vaccine-preventable infections in LMIC were observed. These were attributable to improvements in immunisation and vaccines coverage, and highlighted the relative importance of TB as a preventable and treatable cause of childhood disease and death [4]. The existing difficulty in diagnosing TB in children, coupled with the emergence of COVID-19 as a new challenge to TB control services, are major threats to achieving the third Sustainable Development Goal (SDG-3) and the 'End TB Strategy' of the World Health Organization (WHO) [5].

Children most often acquire TB infection following exposure to adults with infectious TB disease, with a high risk of progression to disease and death. The strict lockdown measures imposed as part of the

have the potential to result in more household exposure of children to infectious TB index cases. In addition, COVID-19 has resulted in significant reductions in access to routine TB diagnosis and treatment services, including contact tracing activities, in high TB burden settings.

Therefore, concerted efforts will be required to mitigate this impact through advocacy, policy engagement, and increased funding for translational research studies. Such studies will include those aimed at better understanding of TB transmission dynamics particularly in the era of COVID-19, and the development of improved TB diagnostics that are applicable for use at lower levels of the health care system in LMIC. Also, there is a need for sustained increase in investments geared toward achieving Universal Health Coverage (UHC), in LMIC in particular.

## Contributors

TT is responsible for the conceptualisation, writing and refinement of the letter.

## Declaration of Competing Interests

None to declare. TT is alone responsible for the views expressed in the letter.

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## References

- [1] World Health Organization (WHO). Global tuberculosis report 2020. Geneva, Switzerland Available from: <https://apps.who.int/iris/bitstream/handle/10665/336069/9789240013131-eng.pdf?ua=1>. [cited 2020 Nov 5 ], 2020.

public health response to COVID-19 in many TB endemic countries

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