

ON WORLD CHILDREN'S DAY, FIND WELCOMES IMPROVED ACCESS TO CHILDHOOD DIAGNOSIS OF TUBERCULOSIS

- **Latest data from the World Health Organization (WHO) indicate 1 in 10 people with tuberculosis (TB) are under the age of 15 years old, but standard sputum tests aren't feasible for young children**
- **Updated WHO guidance for the management of TB in children and adolescents draws on extensive data provided by FIND and others, with stool now recommended as the primary sample for molecular testing of TB in children, greatly increasing access to diagnosis in this population**

Geneva, Switzerland – 20 November 2021 – On World Children's Day, FIND, the global alliance for diagnostics, welcomes updated [guidance](#) issued recently by the World Health Organization (WHO) on the management of tuberculosis (TB) in children and adolescents, which includes a recommendation of the use of stool as the primary sample for diagnosing childhood TB. TB is most usually diagnosed using samples of sputum or gastric aspirates, which are unpleasant to provide and can be challenging to obtain at all in children. Stool, in contrast, is a non-invasive sample that can be provided easily and painlessly by any child – and this updated guidance therefore has the potential to enable greatly expanded access to testing in this population.

The recently published [2021 Global Tuberculosis Report](#) indicates that 11% of TB cases are in children (<15 years old). The updated diagnostic recommendation is based on extensive evidence provided by multiple research institutions, including FIND. Since 2017, FIND has partnered on multiple projects to generate evidence on the viability of stool as a sample, working on a [disposable stool processing kit](#) with [42 Technology](#) (42T), [Rutgers University](#), and the [University of Cape Town](#), and with [KNCV Tuberculosis Foundation](#) and the [TB-Speed](#) consortium (Strengthening Paediatric TB services for Enhanced Early Detection) to evaluate three stool processing methods.

While stool is not quite as sensitive a sample as sputum when it comes to diagnosing TB, its easy availability makes it a good alternative. The new WHO recommendation is to use stool in lieu of smear microscopy/culture and phenotypic drug susceptibility testing, for initial diagnostic TB tests using Xpert Ultra, in children up to 10 years old. These tests provide information not only on whether a TB infection is present, but if so, whether the disease strain is resistant to rifampicin (the most common first-line antibiotic treatment).

Petra de Haas, laboratory expert at KNCV Tuberculosis Foundation, said: “We are happy that stool is now recommended by WHO as a primary sample in the diagnosis of TB in children and that we contributed to this by the development of the Simple-One-Step Stool Method. Stool testing will provide access to many

children worldwide getting a painless, quick and accurate TB diagnosis. Right now, 170,000 children die of TB every year. Unnecessary, because with a timely diagnosis and good treatment, TB can be cured.”

David Alland, Director of the Public Health Research Institute at Rutgers University, said: “Until now, the standard of care for diagnosing TB in children has included uncomfortable and invasive sampling of stomach contents. We are delighted to see that our work with FIND and Cepheid to develop the Xpert Ultra test and our work with FIND, 42T and the University of Cape Town investigating the utility of stool samples in TB diagnosis has helped offer an alternative non-invasive method of diagnosis.”

Mark Nicol, from the Universities of Cape Town and Western Australia, said: “Confirming the diagnosis of TB in children has always been very difficult, with a major challenge being the difficulty in obtaining respiratory samples for testing. Since stool is relatively easily obtained, implementation of this recommendation should enhance our ability to diagnose TB, particularly in poorly resourced settings, where other samples are difficult to collect.”

Sarah Knight, head of healthcare technology at 42T, said: “42T and Rutgers University have worked together to develop an innovative stool sample processing kit. Large-scale trials have shown the device kit is both effective and easy to use in a variety of settings. We’re also pleased that it has helped to amass sufficient data to inform the WHO Guideline Development Group, resulting in their ground-breaking policy update on diagnosing childhood TB.”

Morten Ruhwald, Head of TB at FIND, said: “Too many young children with TB have gone undiagnosed for too long because the testing methods relied on samples that are very difficult to obtain. The update to the WHO guidelines will facilitate greatly expanded TB testing – enabling early treatment that can improve outcomes and save lives, and ultimately help us beat this deadly disease.”

Beyond stool, FIND is also continuing to work with partners to explore other sample innovations, including saliva and urine, which could further expand access to TB testing in many different populations.

FIND’s work on stool as a sample for TB diagnosis has been supported by multiple funders since 2017, including the Bill & Melinda Gates Foundation, ELMA Foundation, the South African Medical Research Council, the government of Germany through the KfW Development Bank, Australian Aid, and UK aid from the British people.

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About FIND

FIND, the global alliance for diagnostics, seeks to ensure equitable access to reliable diagnosis around the world. We connect countries and communities, funders, decision-makers, healthcare providers and developers to spur diagnostic innovation and make testing an integral part of sustainable, resilient health systems. We are working to save 1 million lives through accessible, quality diagnosis, and save US\$1 billion in healthcare costs to patients and health systems. We are co-convener of the Access to COVID-19 Tools (ACT) Accelerator diagnostics pillar, and a WHO Collaborating Centre for Laboratory Strengthening and Diagnostic Technology Evaluation. For more information, please visit www.finddx.org

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