

# Little evidence to support TB interventions in real-world, low-resource settings

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There is little evidence from real world situations in low-and-middle income countries to support the effectiveness and financial value of five interventions\* recommended by the World Health Organization (WHO) to control tuberculosis, which may be a reason why these interventions have not been implemented in many countries, according to a study by international experts published in this week's *PLOS Medicine*.

Over the past few years, WHO has recommended that countries implement several interventions to help control the spread of tuberculosis through measures to improve prevention, diagnosis, and treatment. The authors led by Frank Cobelens from the Amsterdam Institute of [Global Health](#) and Development in the Netherlands reviewed 208 appropriate studies to investigate the evidence for the effectiveness of each of these interventions and also for additional information on the setting and conditions of implemented interventions, which might be useful to other countries.

The authors found that there were very few real-world studies reporting on the effectiveness of interventions in program settings (rather than in optimal conditions under research settings). Few studies evaluated the methods used to implement the intervention or addressed delivery and operational issues (such as adherence to treatment) and there were few economic evaluations of the recommended interventions.

The authors say: "There are substantial gaps in published evidence for scale-up for five WHO-recommended TB interventions settings at

country level, which for many countries possibly precludes program-wide implementation of these interventions."

They continue: "This lack of "evidence for scale-up" may be an important cause of the shortfall in implementation of these interventions in many countries."

The authors add: "There is a strong need for rigorous operational research studies to be carried out in programmatic settings to inform on best of existing and new interventions in [TB control](#)."

**More information:** \* Five key interventions currently recommended by WHO guidelines are: treatment with isoniazid to prevent TB among people who are HIV positive, and also among household contacts of people infected with TB; the use of clinical pathways (algorithms) for diagnosing TB in people accessing health care who have a negative smear test—the most commonly used diagnostic test, which relies on sputum samples—"rule-in algorithms"); screening algorithms for excluding TB in people who have HIV ("rule-out algorithms"); and finally, provision of second-line treatment for multidrug-resistant tuberculosis (a form of TB that does not respond to the most commonly used drugs).

Cobelens F, van Kampen S, Ochodo E, Atun R, Lienhardt C (2012) Research on Implementation of Interventions in Tuberculosis Control in Low- and Middle-Income Countries: A Systematic Review. *PLoS Med* 9(12): e1001358. [doi:10.1371/journal.pmed.1001358](https://doi.org/10.1371/journal.pmed.1001358)

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