

Xpert MTB/RIF cost effective for TB diagnosis in low- and middle-income settings

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A study led by Frank Cobelens of the Amsterdam Institute of Global Health and Development, Amsterdam, The Netherlands and colleagues reports on the cost-effectiveness of implementing the Xpert MTB/RIF diagnostic test for tuberculosis (TB) in high burden countries. Based on their findings, which are published in this week's *PLoS Medicine*, the authors predict that Xpert will be a cost-effective method of TB diagnosis, compared with current standard techniques, in low- and middle-income countries.

The Xpert [diagnostic test](#) has been endorsed by the [World Health Organization](#). But there are fears that it won't be cost-effective in the low- and middle-income countries that have the highest TB burden, because the test is more expensive than current standard methods for TB diagnosis.

In this study the authors simulated the outcomes of 10,000 individuals with suspected TB as they passed through a diagnostic and treatment pathway in three countries (India, South Africa, and Uganda) using a [mathematical model](#).

The authors found that the introduction of Xpert increased the proportion of TB-infected patients who were correctly diagnosed with TB in all of the settings. However, they also found that the cost per TB case detected increased by approximately \$100. This increase in diagnostic costs was more than offset by the benefits of saving additional years of life suggesting that Xpert will be a cost-effective method of TB diagnosis in high burden countries.

The authors note that additional unknown costs associated with the scale-up of Xpert may exist but conclude that, "our results suggest that Xpert is likely to be a highly cost-effective investment," but also caution, "[roll-out should be carefully

evaluated] to validate our results before full scale-up- to ensure that Xpert implementation is done in a way that does not negatively impact TB programmes, their funding, and the health systems that support them."

More information: Vassall A, van Kampen S, Sohn H, Michael JS, John KR, et al. (2011) Rapid Diagnosis of Tuberculosis with the Xpert MTB/RIF Assay in High Burden Countries: A Cost-Effectiveness Analysis. *PLoS Med* 8(11): e1001120. [doi:10.1371/journal.pmed.1001120](https://doi.org/10.1371/journal.pmed.1001120)

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