

# Research calls for better assessment of tests for tuberculosis, HIV/AIDS and malaria

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A rapid and accurate diagnosis is the first step towards treatment in the fight against infectious disease. However, a team headed by Dr. Madhukar Pai at the Research Institute of the McGill University Health Centre (RI-MUHC) and McGill University in collaboration with researchers at the TDR and the WHO, has highlighted the poor quality of published studies that evaluate the accuracy of diagnostic tests for 3 major killer infectious diseases (TB, HIV/AIDS and malaria). The research study, published in the journal *PLoS One*, suggests that diagnostic studies on TB, malaria and HIV commercial tests had moderate to low quality and were often poorly reported.

Worldwide, TB, malaria and [HIV/AIDS](#) are responsible for approximately 3.5 million deaths annually. Early diagnosis is a vital part of controlling the spread of these diseases. However, questions have been raised in the scientific literature about the performance of these tests.

The new study suggests many of these scientific papers use poor methodologies and lack quality. Moreover sources of bias and variation were present in all the studies. "The necessary methodological elements such as patient selection criteria, recruitment methods or blinded test interpretation were poorly reported," said Dr. Pai, who is also the senior author and principal investigator of the study. "Moreover, only a small percentage of these studies accurately described the manner in which the tests were conducted and whether they are reproducible."

"Poorly designed studies can lead to premature or misguided adoption of tests that may have little or no clinical and public health relevance, resulting in incorrect diagnosis and adverse consequences for the patient," said Dr. Pai.

The challenge facing the researchers is to make a concerted effort to improve the quality of diagnostic studies during design and implementation. "Whether it is for cancer testing, TB or even the flu, we must report the study results in a clear and transparent manner in order to validate the accuracy of the test and ensure it is properly used at the clinical level," stated Dr. Pai.

Source: McGill University ([news](#) : [web](#))

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