Treatment coverage and reducing the tuberculosis burden in low-income and middle-income counties

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Tuberculosis incidence has been reducing at the global level from 164 cases per 100 000 population in 1990 to 109 cases per 100 000 population in 2019, while the mortality rate has also decreased from 33 deaths per 100 000 population to 15 deaths per 100 000 population in the same period.[1] These decreasing trends were also seen in low-income and middle-income countries (LMICs).[2] However, less is known about the role of disease-specific spending on disease outcomes.[3] Therefore, Gerard Joseph Abou Jaoude and colleagues[4] did a data envelopment and stochastic frontier analysis, published in *The Lancet Global Health*, to examine how tuberculosis spending efficiency could improve health outcome (ie, treatment coverage) in a sample of 121 LMICs from 2010 to 2019. Abou Jaoude and colleagues found a positive association between spending efficiency and tuberculosis treatment coverage while maintaining the same level of spending allocation.

This study has some uniqueness that makes it a valuable addition to the literature. First, the application of advanced econometric models that include data envelopment analysis and stochastic frontier analysis provides an average value of spending efficiency in LMICs. Second, the adoption of government commitment and universal health coverage indicators provides a new parameter for the evaluation of the efficiency of the health system. Third, it provides a framework for efficiency analyses of other disease-specific spending and to assist governments in prioritising spending for disease-specific programmes. Finally, a similar analysis could be possible at the individual country and subnational level for the successful implementation of tuberculosis programmes.

Despite the uniqueness, a few issues have not been addressed in the study. First, the study did not include government commitment or prioritised health spending indicators[5] (ie, government health expenditure as a proportion of general government expenditure and government health expenditure as a proportion of total health expenditure). Second, this study has found a positive association between tuberculosis disease outcome and public health spending efficiency by using aggregate data in LMICs. However, the authors have not done any tests of robustness of the empirical results by using disaggregate data that includes country classification per income or disease prevalences. Disaggregated analysis could provide improved insights on this aspect by controlling country-specific effects.[6]

Abou Jaoude and colleagues[4] also suggest that alternative sources of revenue and spending efficiency can improve health outcomes and achieve health-related Sustainable Development Goals by 2030. This study offers suggestions on how a country with restricted fiscal space for health might minimise use of resources through efficient use of existing funds and resources. Because limited fiscal space is a major issue in LMICs to mobilise increased funds to health-care services, methods to generate alternative resources to reduce the fiscal gap among countries is a new policy discourse in health financing literature.[7] Therefore, Abou Jaoude and colleagues' study has practical implications for resource-poor economies to achieve health-related goals and targets using a cost-effective spending strategy.

This study delivers an important message to undertake a similar type of health efficiency analysis in the future. The inclusion of governance, demographic, socioeconomic, and fiscal spending parameters provides a selection of confounding factors through which countries could achieve improved efficiency scores. Additionally, the application of advanced statistical models by controlling multicollinearity, heteroscedasticity, and unobserved heterogeneity among countries can provide an improved estimate for resource allocation for health.

I declare no competing interests.

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