



Health and financial risk protection benefits of expanded TB control in Ethiopia: an extended cost-effectiveness analysis modelling study

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Abstract:

Introduction: Tuberculosis (TB) represents a large public health threat globally. The economic burden of seeking TB care places people at a high risk of financial hardship. The World Health Organization's End TB Strategy aims to end TB and fully shield TB-affected households from catastrophic costs by 2020 and beyond. We assessed the impact of enhanced TB control on reducing TB-related deaths and catastrophic costs in Ethiopia.

Methods: Three TB control strategies were investigated: active case finding, enhancing directly observed therapy, short course (DOTS) implementation for drug susceptible TB (DS-TB), and improving multidrug-resistant tuberculosis (MDR-TB) care. Using modelled TB incidence, mortality, and costs borne by patients, we projected reductions in TB-associated deaths and catastrophic costs due to scale up of those interventions between 2018-35. TB-related catastrophic costs were defined as total out-of-pocket costs (both direct and indirect costs) exceeding 20% of household annual income. Intervention effects were quantified by income quintile as changes in the number of households incurring deaths and catastrophic costs relative to the baseline (no intervention).

Results: Active case finding could reduce TB related deaths and catastrophic costs by 27% and 32%; enhancing DOTS for DS-TB would avert 25% of deaths and 15% of catastrophic costs; and improvements in MDR-TB care would avert up to 1% and 6% of all deaths and catastrophic costs, respectively, in Ethiopia over 2018-35. Both the health and financial risk benefits would be greatest for the poorest two income quintiles.

Conclusions: Improvement in the delivery of TB services may reduce substantially the deaths and financial ruin on affected households. In combating TB, there is an urgent need to ensure that TB patients and affected households



are given universal access to person-centred care and adequate financial risk protection measures.

Keywords: tuberculosis; equity; financial risk protection; catastrophic health expenditures; extended cost-effectiveness analysis; Ethiopia.

Biography:

Lelisa Fekadu Assebe is a health officer by profession and works in Ministry of Health, Ethiopia. He holds a BSc in public health, MSc Biostatistics and Health informatics and currently pursuing a PhD Global Public Health and Primary Care and Health economics, at university of Bergen. Lelisa has 10 years of public practice with different organizations. He has also been involved disease prevention and control related to HIV, TB and malaria in Ethiopia. He has coordinated national TB research initiatives for the past three years. Lelisa grew up in one of the towns near Ethiopia's main city and is enthusiastic about controlling communicable diseases and carrying out operational research.

Publication of speakers:

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