



July 2020

Financial burden of HIV and TB among patients in Ethiopia: a cross-sectional survey

Summary

HIV and tuberculosis (TB) are public health burdens in Ethiopia and both can result in unexpected financial hardship for households.

This study aimed to further explore estimate the economic burden and financial hardships faced by households in Ethiopia impacted by HIV and TB. Data was collected from a nationwide household survey for HIV and a cross-sectional health facility based survey for TB. These surveys were used to estimate costs of TB and HIV as well as the incidence of catastrophic health expenditures (CHE).

The economic burden of HIV and TB treatment was estimated from a patient perspective. Total cost took in account direct costs such as medical fees and treatment as well as indirect costs such as time lost and transportation.

The cumulative costs of HIV and TB care can financially impact households, especially those that are in the lowest income quintiles. In order to adequately support households that are impacted by HIV and TB, it is critical that health policies address the high costs associated with treatment.

AUTHORS

Lelisa Fekadu Assebe^{1,2},
 Eyerusalem Kebede
 Negussie², Abdulrahman
 Jbaily³, Mieraf Tadesse
 Tolla³, Kjell Arne
 Johansson¹

AFFILIATIONS

¹ Department of Global Public Health and Primary Care, Faculty of Medicine, University of Bergen, Bergen, Norway

² Disease Prevention and Control, Ministry of Health, Addis Ababa, Ethiopia

³ Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Boston, MA, USA

LINKED ARTICLE

Assebe LF *et al.* (2020) Financial burden HIV and TB among patients in Ethiopia: a cross-sectional survey. *BMJ Open* <https://bmjopen.bmj.com/content/10/6/e036892.full>

Methods

Acknowledgements: This policy brief was prepared with support from Seblewongel Yigletu.

Data from the nationwide household survey for HIV and the cross-sectional health facility based survey for TB was summarized with descriptive statistics and aggregated by outpatient/inpatient care. A concentration index was used to assess health outcome measure inequality across income quintiles. Multivariate logistic regressions were used to identify CHE determinants. CHE incidence and impact was calculated by identifying direct costs that exceeding 10% of total household income. The final model was calculated using a stepwise regression approach.

Results

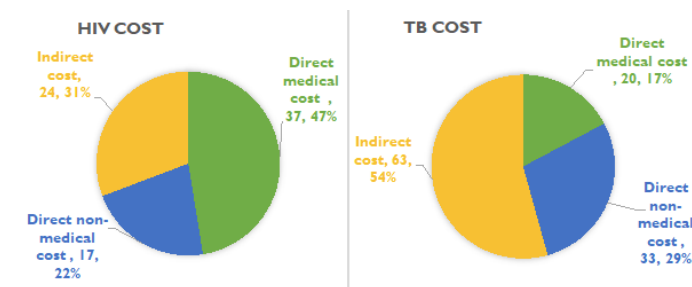


Figure 1. Distribution of TB and HIV costs (cost in \$).

The mean household annual income for TB patients was \$1188. The mean household income was \$545 for HIV. The mean hospital stay was 11 days for HIV and 10 days for TB.

The mean cumulative cost for HIV treatment (both direct and indirect costs) was \$78 and for TB it was \$115 (i.e. 4 times higher cost for drug-resistant TB). There were also additional costs associated with coping mechanisms that added to the financial burden occurred by households impacted by TB and HIV.

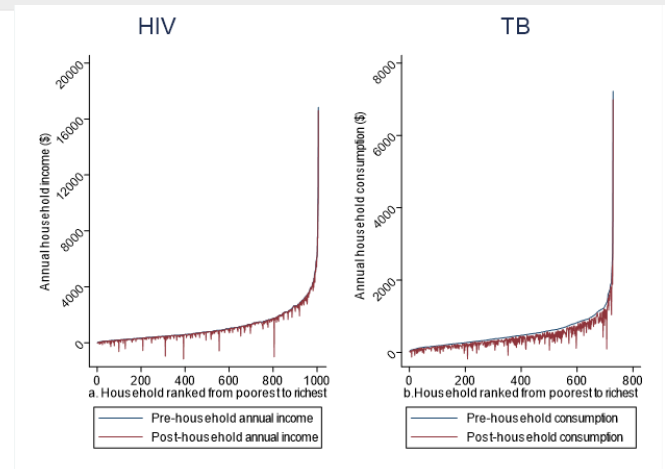


Figure 2. Household annual income and net payments per household

The overall CHE incidence of HIV was 20%. The overall CHE incidence for TB was 40%. This CHE increased for those who were co-infected with both HIV and TB. Inequality in financial risk was present amongst the different income quintiles. Those from lower income quintiles were impacted by greater financial burdens. Determinants of increased CHE were those who were diagnosed at a private facility, hospitalized, and being co-infected with TB/HIV.

Future Directions

There is currently a large gap in financial protection provided to families that are impacted by HIV and TB. It is critical that moving forward there are enhanced policy measures that ensure social and financial protection schemes for families.

References

1. Federal Democratic Republic of Ethiopia Ministry of Health. *Ethiopia health accounts, 2016/17*. Addis Ababa, Ethiopia, 2019.
2. Assebe LF, Negussie EK, Jbaily A, *et al*. Financial burden of HIV and TB among patients in Ethiopia: a cross-sectional survey *BMJ Open* 2020;10:e036892. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7265036/>