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April 2020

## Public financing of malaria interventions in Ethiopia: health gains and financial risk protection

### Summary

Malaria is a public health burden in Ethiopia and a major cause of financial burden on families and government finances.

Extended cost-effectiveness analyses were undertaken in order to assess the potential benefits of a 10% coverage increase in public financing of four different malaria interventions: artemisinin combination therapy, long-lasting insecticide-treated bed nets, indoor residual spraying and malaria vaccination.

Total government costs, household out-of-pocket expenditures averted, deaths averted, and catastrophic health expenditures averted were measured across different socio-economic groups. All four interventions save more lives among those who were in low-income quintile than among the high-income quintile.

Artemisinin based combination therapy and long-lasting insecticide-treated bed nets have the biggest impact on averted malaria deaths and financial risk protection, mainly concentrated amongst the lowest two income quintiles.

Nearly 50% of averted deaths would occur among children below five years of age.

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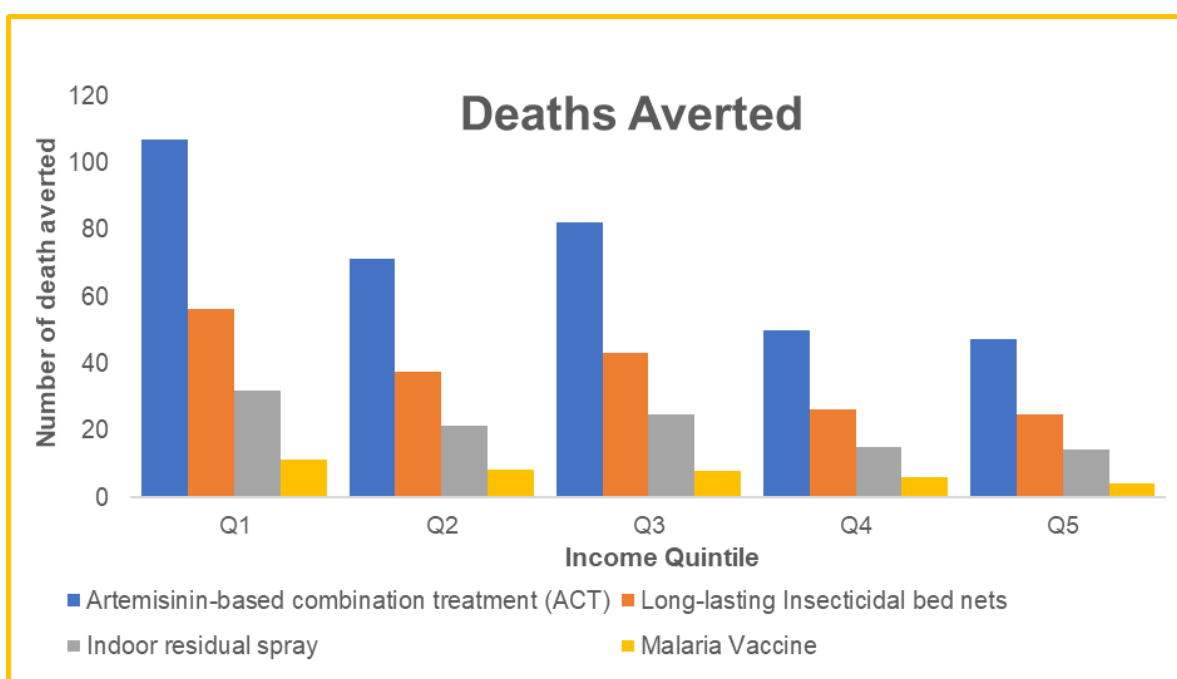
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### LINKED ARTICLE

Assebe, L.F. *et al.* (2020) Health gains and financial risk protection afforded by public financing of selected malaria interventions in Ethiopia: an extended cost-effectiveness analysis. **Malaria Journal**  
<https://rdcu.be/b1wLf>

### Disease Control Priorities-Ethiopia (DCP-E)

This policy brief is based on preliminary work from the DCP-E project funded by the Bill & Melinda Gates Foundation. DCP-E is a partnership between Ethiopia's Federal Ministry of Health, the Harvard T.H. Chan School of Public Health and the University of Bergen.



## Key Findings

### Health Benefits

Increasing coverage (by 10%) of artemisinin combination therapy, long-lasting insecticide-treated bed nets, indoor residual spraying and malaria vaccination among the population at risk would avert 358, 188, 107 and 38 deaths of malaria per year in Ethiopia, respectively.

The poorest two quintiles accounted nearly half of deaths averted, as compared to 27% in the richest two quintiles. All the four malaria interventions save more lives among the poor.

### Financial Risk Protection

The four interventions - artemisinin combination therapy, long-lasting insecticide-treated bed nets, indoor residual spraying and malaria vaccination - would avert 440 (10%), 220 (5%), 125 (3%) and 18 (2%) cases of catastrophic healthcare expenditure annually, respectively.

Those people in the poorest income quintiles received the largest benefit.

### Government Expenditures

A 10% increase in coverage of artemisinin combination therapy, long-lasting insecticide-treated bed nets, indoor residual spraying and the malaria vaccine costs \$5.7, 16.5, 32.6, and 5.1 million, respectively.

### Implications for policy

Artemisinin combination therapy, long-lasting insecticide-treated bed nets, have the largest impact on malaria-related deaths averted and financial risk protection.

Preventing and treating malaria provides substantial health benefits and financial risk protection, especially among the poor.

The effect of malaria vaccine was minimal for malaria control and elimination in Ethiopia.