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Monitoring Evaluation Research & Quality Improvement

Economic Evaluation of Health Extension Program Packages in Ethiopia

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Background

Ethiopia's Health Extension Program (HEP) was established in 2004 by the Federal Ministry of Health to reach universal healthcare coverage by reducing inequities in access to healthcare across communities. It is a community health program that aims to provide accessible primary healthcare services delivered through Health Extension Workers at community level. This research, conducted by Assebe et al. aimed to estimate the cost and cost-effectiveness of selected HEP interventions in Ethiopia that can be used by policymakers when making decisions regarding priority setting and resource allocation for health.

Methods

The authors assessed 21 healthcare interventions related to HEP components including hygiene and sanitation, family health services, and disease prevention and control using both an ingredients-based bottom-up approach, as well as a top-down costing method. The authors estimated the costs of services provided by HEP. The cost-effectiveness of the program was estimated by using Lives Year Gained (LYG) as outcome measure estimated over the period 2005/10-2018 using the Lives Saved Tool (LiST). All cost were reported in 2018 USD.

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Results

Hygiene and sanitation, family health, and disease prevention and control interventions were found to have an average unit cost of US$0.70, US$4.90, and US$7.40, respectively.

Table 1: Unit costs (USD) of selected HEP interventions by ingredients in Ethiopia, 2018.

Package	Service Type	Unit cost (US$)
Family health services	Average cost of family health services	4.9
	Iron folate	0.7
	Family planning (FP) -Implant	10.5
	Pentavalent vaccination	15.2
Disease control and prevention (DPC)	Average cost of DPC services	7.4
	Diarrheal disease management	2.0
	Malaria prevention - IRS	3.4
	TB treatment (DOTs)	43.1
Hygiene and sanitation	Utilization of latrine	0.8
	Hand washing with soap	0.7

Drugs and supplies accounted for a substantial proportion of overall costs, comprising 53% of hygiene and sanitation and 68% of family health interventions costs. The cost-effectiveness of the HEP was estimated at $77 for every additional LYG.

Table 2: Cost-effectiveness of the selected HEP interventions in Ethiopia, 2005/10-2018.

Family health service		DPC, Hygiene and sanitation	
Intervention	**ICER per LYG**	**Intervention**	**ICER per LYG**
Measles vaccination	31	Oral rehydration solution (ORS)	81
Tetanus toxoid vaccination	43	Malaria case management	81
Antenatal care	47	Oral antibiotics for pneumonia	67
Iron supplementation	58	TB treatment (DOTs)	114
Pentavalent vaccination	65	Long lasting insecticide net	163
Pneumococcal vaccination	104	Improved water source	22
Family planning services	295	Hand wash with soap	34
Diarrheal disease management (Zinc and ORS)	78	Overall, selected HEP intervention	77

Each individual intervention was also found to be cost-effective, with average unit-costs being all less than the GDP per capita per LYG.

Conclusion

Moving forward, costing of HEP interventions is important for setting priorities, mobilizing resources, advocacy as well as for the different program planning and budgeting activities. The cost-effectiveness analysis will make the case for investment in HEP stronger and will aid in priority-setting by identifying the most cost-effective packages of interventions

References

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