Costs of Hybrid Mobile Multi-Disease Testing with High HIV Testing Coverage, East Africa

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Background

To meet the UNAIDS 90-90-90 target, sub-Saharan African countries need to identify the most efficient and affordable HIV testing approaches for rapid scale-up. In 2013-14, the SEARCH Trial achieved 89% adult HIV testing coverage using a hybrid mobile HIV testing approach in 32 communities in Uganda and Kenya, including:

- Door-to-door baseline census
- Multi-disease community health campaign (CHC)
- Home-based testing (HBT) of CHC non-attendees

Objectives

- To determine the overall costs of the hybrid multi-disease testing approach and the costs associated with point-of-care (POC) CD4 testing and multi-disease services
- To compare our results with previously reported costs of community-based HIV testing and counseling strategies in sub-Saharan Africa

Methods

Micro-costing methods were applied to quantify resources used for population-wide HIV testing in 12 of 32 SEARCH Trial communities. Data were obtained from expenditure records and study logs (e.g., costs for salaries, rapid HIV antibody and POC CD4 tests, transportation, and mobilization).

Interviews with study staff and time and motion exercises were conducted to determine staff time allocation to various activities.

Results

- The mean cost per adult tested for HIV was $20.5 (range: $17.1 – 32.1) [2014 US$], incl. a POC CD4 test at $16/HIV+ person identified.
- Cost per adult tested for HIV was $13.8 at CHC vs. $31.7 via HBT.
- The cost per HIV+ adult identified was $231 (range: $87 – 1,245), with variability due mainly to HIV prevalence.
- The marginal costs of providing multi-disease testing at CHCs were $1.16/person for hypertension and diabetes, and $0.90 for malaria.
- Community mobilization constituted 15.3% of total costs.

Conclusions

- The hybrid mobile testing approach achieved near-universal HIV testing coverage at a cost similar to previously reported community-based mobile, home-based, or venue-based HIV testing implementations in sub-Saharan Africa.
- Multi-disease services could be offered at low marginal costs by leveraging HIV testing infrastructure.
- Community mobilization was a significant component both in costs and for the success of this community-based approach.

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