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Reference

Title: Comparing the effectiveness and cost-effectiveness of facility- versus community-based distribution of micronutrient powders in rural Uganda

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Background and Objectives:

The efficacy of micronutrient powders (MNP) in reducing anemia and iron deficiency is well established, but cost-effectiveness studies are needed to inform MNP distribution.

Methods:

- Six sub-counties in Namutumba district, Uganda were randomly assigned to either distribute MNP via health facilities or community health workers.
- Cost data collected covered initial investments, start-up and on-going activities, and opportunity costs
- An endline cross-sectional analysis was used to obtain point estimates for current consumption and adherence to protocol.
- The project calculated the cost and cost-effectiveness of hypothetical scale-up and integration scenarios.

Results:

- Coverage, intake adherence, and adherence to protocol were higher in areas where community health workers distributed MNP (Figure 4).
- Capacity building was the most expensive part of the intervention, followed by the MNP product (Figure 5).
- Community health worker distribution was costlier than via health facilities, but it was more cost-effective (Figure 5, 6).
- Integrating MNP distribution with other programs improved cost-effectiveness (Figure 6).

Conclusions:

- Community-based MNP delivery was more effective and more cost-effective at producing desired program outcomes.
- The substantial cost of the MNP intervention would make it difficult for countries to sustain. Integrating the intervention with other programs would be necessary to keep costs down.

Figure 1. Vitamin and mineral power SBCC sticker



Figure 2. Data outputs

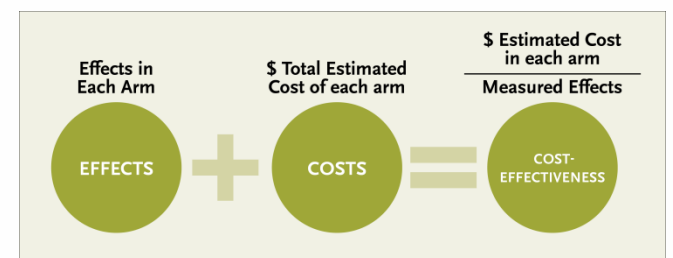


Figure 3. A community health worker distributes MNP



Figure 4. Program outcomes

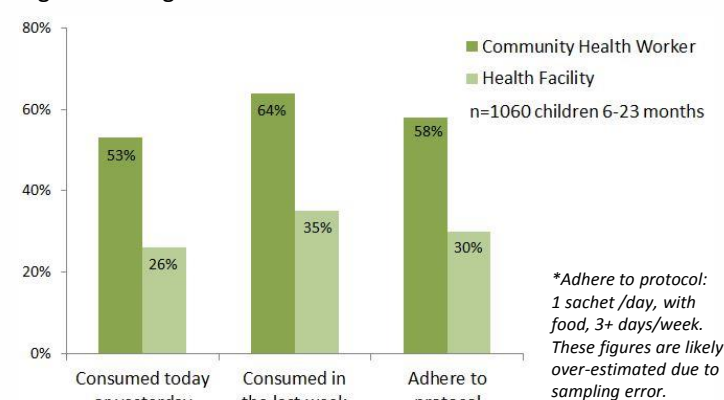


Figure 6. Cost-Effectiveness Changes with Measures of Effect

Scale up Scenario	Total Cost	Percent Budgetary	Cost per Child Currently Consumed	Cost per Child Adhered to Protocol
Implementing partner scale up	\$1,797,532	66%	\$40.34	\$60.54
Implementing partner scale up + paid community health workers	\$1,680,226	82%	\$51.87	\$56.59
Implementing partner integrated scale up	\$1,230,519	71%	\$27.61	\$41.44
Ministry of Health takeover	\$1,617,804	65%	\$49.94	\$54.48
Ministry of Health takeover + paid community health workers	\$1,508,228	83%	\$46.56	\$50.79

Conflict of Interest:

The authors declare no conflicts of interest.

Keywords:

Micronutrient powder, nutritional supplementation, infant and young child feeding, cost-effectiveness, delivery

Further Collaborators:

Angelica Cristello, Danya Sarker, Hillary Murphy, Jacent Asimwe, Katherine Otim, Marcia Griffiths, Rose Nakiwala, Sarah Ngalombi, Namutumba district health officials and nutrition coordination committee members, health facility staff, village health teams, and the people of Namutumba district.

Figure 5. Intervention costs per distribution arm

