



REFANI COST-EFFECTIVENESS ANALYSIS (CEA)

Overview of Research Implementation

August 2018



BACKGROUND

A cost-effectiveness analysis (CEA) is an economic analysis to compare costs and effects of two interventions. A CEA is an important measure of programme performance, bringing valuable contributions for improved programme management and providing guidance for decision-making on resource allocation and priority setting. The results of a CEA are typically expressed as a cost-effectiveness ratio (CER), with total programme resources divided by the effectiveness or outcomes of the intervention. Incremental cost effectiveness ratios (ICER) are a comparative measure of the difference in costs and effects between an intervention and an alternative.

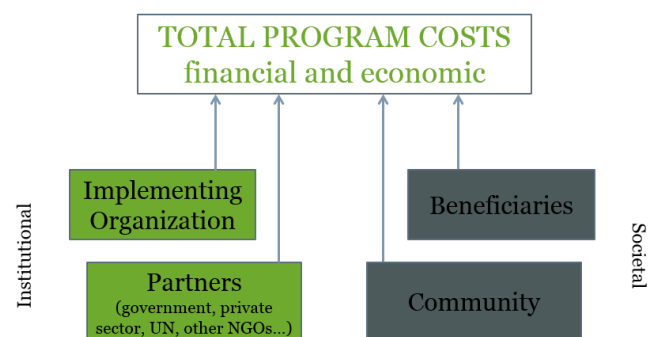
The Research on Food Assistance for Nutrition Impact (REFANI) project, led by Action Against Hunger, examined the costs associated with the achievement of nutrition-related outcomes through cash and voucher transfer interventions. REFANI CEAs were carried out in Pakistan and Niger on projects implemented in 2016.

RESEARCH QUESTIONS

The primary research questions were: which intervention is more cost-effective in preventing cases of acute malnutrition; what is the cost per case of acute malnutrition averted; and how do the cost-effectiveness results compare with evidence from other interventions aimed at preventing acute malnutrition? In addition to these overarching research questions, the study also asks the following: what are the total costs associated with each intervention? What is the cost per major activity (and its share of total costs) for each intervention? What is the cost per beneficiary? What are the cost drivers of the intervention?

STUDY DESIGN

The REFANI CEA included both institutional and societal costs to derive a holistic perspective of resource use, including both financial and economic costs.



Institutional costs were primarily assessed using accounting data wherever possible. Additional financial costs which were not included in the programme accountancy, such as any costs from other institutional partners, personnel, or additional costs which had been allocated to further programme budgets, etc. This information was identified via key informant interviews

and review of existing documentation. These costs which did not appear on accounting data were estimated using an “ingredients approach” where unit costs and quantities were estimated to build a cost calculation from the bottom up. The time spent by programme implementation staff on various activities related to the specific interventions under investigation was assessed via time allocation interviews.

Institutional costs included the following:

- The value of the **inputs** used in the study area
- **Staff costs** in terms of salary and benefits related to implementation of the programme activities, prorated according to time spent
- **Transportation** costs for both the implementation activities and a prorated share of joint transportation costs (e.g. for support staff)
- **Office and overheads** costs of both the field office and capital office, prorated according to estimated contribution to the programme

Household and community costs were assessed using qualitative and quantitative methods. A household survey was implemented alongside other impact data collection activities to get a quantitative estimate of programme costs to households in terms of direct and indirect costs. Focus group discussions were undertaken towards the end of each intervention to gather qualitative information on context and greater insight to better understand the quantitative data.

Societal costs included the following:

- **Opportunity costs** related to participation in the intervention such as time spent at the distribution site, traveling to/from distribution point, participating in beneficiary selection, organising distributions, etc.)
- **Fees** for transportation to/from distribution point, cost of snacks or drinks, etc.

DATA COLLECTION & ANALYSIS

Institutional and societal costs were collected in Pakistan and Niger via accounting data, staff interviews, key informant interviews, focus group discussions and surveys. In addition to deriving the total cost per intervention, cost data has been structured and analysed via an activity-based costing approach whereby the costs in each intervention were sub-divided by major intervention activities to better understand cost drivers. Various cost-efficiency metrics were calculated for each intervention in the two studies. Impact estimations

necessary for the calculation of the cost-effectiveness ratios were provided by the main trial study results.

STUDY RESULTS

The results of both studies demonstrated the importance of assessing the cost to program beneficiaries. Specifically, they highlight such issues as beneficiary cost being distributed disproportionately across the beneficiary population or a significant reduction in the value of the transfer retained by the recipients. Both issues could influence the resultant impact of the transfers.

The Pakistan study found that the smaller value cash transfer and fresh food voucher transfer were more cost-effective at averting child stunting than the larger value cash transfer. Yet it also found that only the larger value cash transfer was effective at averting child wasting. Meanwhile the larger cash transfer was the most cost efficient of the three interventions in terms of total cost-transfer ratio.

The six-month cash transfer program was more costly than the standard four-month program and therefore the shorter program was more cost-efficient. Since the impact of the six-month program was not found to be statistically significantly greater than the four-month program, it was not possible to calculate an ICER; however, the four-month program can be said to have been more cost-efficient since it achieved the same results at a lower cost.

ETHICAL CONSIDERATIONS

Accounting data that was provided by the implementing organisations is used exclusively for the purposes of this study and will continue to be kept confidential. The data collected from key informants and programme beneficiaries for the CEA are typically not sensitive information, however all reasonable measures will be taken to prevent the release of identifying characteristics of the beneficiaries participating in the data collection.

PUBLICATIONS

Results from the [REFANI Pakistan CEA](#) have been published and are now available.

For a complete overview of the REFANI project, the trials conducted in Niger, Pakistan, and Somalia and results, please refer to the REFANI [Synthesis Report](#) (or the abridged REFANI [Summary Report](#)).

For more information, and links to additional materials, please visit www.refani.org.