

# TIP SHEET: COST-EFFECTIVENESS ANALYSIS IN NUTRITION PROGRAMMING

## What is Cost-Effectiveness Analysis (CEA)?

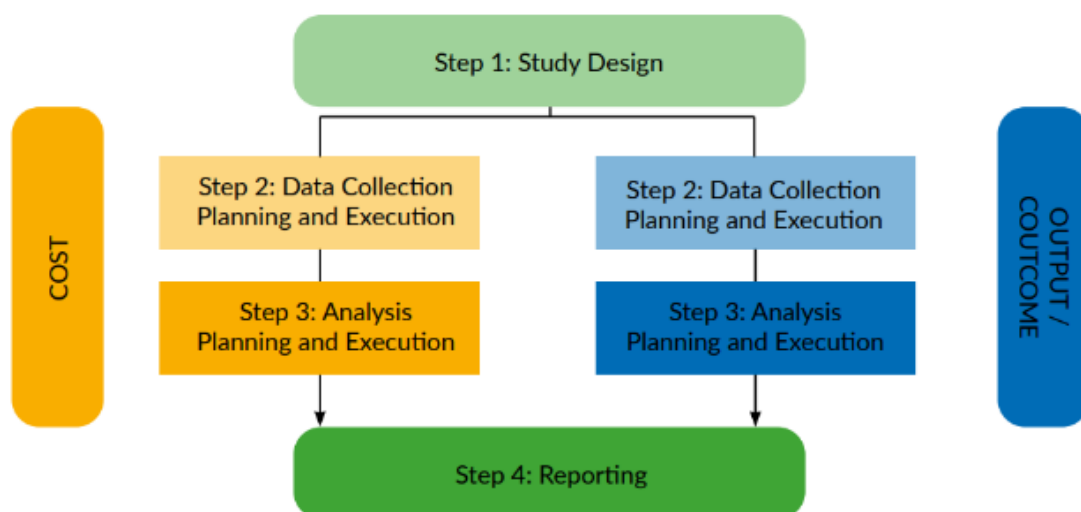
CEA is a method used to compare the costs and outcomes of different interventions. It helps policymakers and program managers determine the most efficient way to allocate resources for maximum impact. Unlike Cost-Benefit Analysis (CBA), which converts outcomes into monetary terms, CEA measures effectiveness in natural units such as cases treated, lives saved, or Disability-Adjusted Life Years (DALYs) averted.

## Why use CEA in nutrition programming?

- **Maximises resource use:** ensures limited funds achieve the highest possible impact
- **Supports decision-making:** provides evidence for prioritising interventions
- **Facilitates comparability:** assesses cost-effectiveness across different approaches
- **Aids scalability:** guides the expansion of efficient strategies

## Best practices for CEA in nutrition

Standardized methods:



**Context-Specific Analysis:** Adjust for local cost variations.

**Maintain Quality:** Ensure effectiveness while optimizing costs.

**Transparent Reporting:** Clearly document cost categories and assumptions.

**Consider Indirect Benefits:** Account for long-term economic and health gains.

## **Common problems to avoid**

**Ensure effectiveness is proven:** Cost effectiveness is only possible with effectiveness (otherwise no basis for comparison)

**Ignoring indirect costs:** Leads to incomplete analysis.

**Overestimating impact:** Use robust evidence to measure effectiveness.

**Inconsistent methodology:** Standardize measurement techniques.

**No sensitivity analysis:** Key assumptions must be tested to ensure reliability.

## Key Steps in Conducting a CEA

Stage #	Stage name	Tips	Trainings and guides
1	Define the objective	<ul style="list-style-type: none"> <li>Identify intervention(s) for analysis</li> <li>Define the perspective (e.g., healthcare system, societal, donor)</li> <li>Specify the timeframe (short-term vs. long-term impact).</li> </ul>	
2	Measure costs	Identify all costs using a chart of account: <ul style="list-style-type: none"> <li><b>Direct:</b> Personnel, training, medical supplies, food supplementation</li> <li><b>Indirect:</b> Overhead, transportation, community engagement</li> <li><b>Capital:</b> Equipment, infrastructure, capacity-building investments</li> <li>Adjust for inflation and differentiate financial vs. economic costs.</li> </ul>	<a href="#">Accountancy Data Cleaning</a> <a href="#">Adjust for Inflation</a> <a href="#">Chart of account (ACF Spain)</a>
3	Measure effectiveness	Define key outcomes: <ul style="list-style-type: none"> <li>Number of children treated/cured</li> <li>Cases of malnutrition prevented</li> <li>DALYs or Quality-Adjusted Life Years (QALYs) gained.</li> </ul>	(See tools next section)
4	Calculate Cost-Effectiveness Ratio (CER)	<ul style="list-style-type: none"> <li><math>CER = \text{Total Cost} / \text{Effectiveness Outcome}</math></li> <li>Express results as cost per unit (e.g., cost per child treated, cost per DALY averted). Compare CERs across interventions.</li> </ul>	<a href="#">Cost-Effectiveness Analysis (CEA) in Health: The ICER Man Cometh</a>
5	Conduct sensitivity analysis	Test variations in key assumptions: <ul style="list-style-type: none"> <li>Discount rates, cost fluctuations, alternative effectiveness measures.</li> </ul>	<a href="#">Data Collection for CEA Analysis Training</a> <a href="#">Data Entry for CEA Analysis Training</a>
6	Interpret results and make recommendations	<ul style="list-style-type: none"> <li>Compare against cost-effectiveness thresholds (e.g., WHO standard of 1-3x GDP per capita per DALY averted).</li> <li>Highlight the most cost-effective intervention</li> <li>Provide actionable recommendations for policymakers and donors.</li> </ul>	<a href="#">Study: Cost-Effectiveness of Decentralizing Acute Malnutrition Treatment</a>

## Tools for CEA

Tools	Description
<a href="#">Dioptra</a>	A web-based cost analysis tool that enables programme staff at humanitarian and development organisations to rapidly estimate the cost-efficiency of programme interventions, using existing financial and monitoring data.
<a href="#">FACET4SNF</a>	A web-based interactive tool that estimates and compares cost-efficiency and cost-effectiveness of international nutrition programs occurring in contexts where SNF products are deemed an appropriate modality.
<a href="#">FANTA CMAM Costing Tool</a>	A Microsoft Excel-based application designed to predict the inputs required to establish and maintain CMAM. The tool processes key country-specific data to calculate resource requirements and costs of CMAM for a user-defined geographic region and time.
<a href="#">SEEMS-Nutrition</a>	Excel and Word-based templates that estimate financial and economic costs for nutrition-sensitive interventions, including cost activity tracking; data collection planning; generic key information/focus group discussion guides; time allocation forms; and financial and economic cost analysis templates.
<a href="#">Brookings Childhood Cost Calculator (C3)</a>	A costing tool for early childhood development that includes some nutrition interventions. The tool is developed in an online format housed on the Tangerine platform and is based on the earlier Brookings Standardized ECD Costing Tool (SECT).

## Further readings

- [Global Health Costing Consortium \(GHCC\) Reference Case](#): Standardized economic evaluation methodology
- [ACF CEA Guidelines \(2013\)](#): An introduction and overview of key concept for CEA analysis within ACF
- [Mapping of Guidelines and Tools for Cost Analysis and Economic Evaluation of Nutrition Programming](#): A mapping exercise of the guidelines and tools available on the design and execution of cost analyses
- [The Cost-efficiency and Cost effectiveness of the management of wasting in children](#): A review of the evidence, approaches, and lessons.

## Training Opportunities

- [Training on the Use of Cost Data for Decision Making](#): Costing child wasting treatment
- [Webinar Series: Costing Child Wasting Treatment](#): GNC Technical Alliance 2022
- [The Use of Cost Data for Decision Making in Child Wasting Treatment](#): as above
- [What Does Nutrition Cost? New Resources in Costing Complex Nutrition Interventions Webinar](#): USAID Advancing Nutrition 2023
- [Training Package](#): WHO Training on Economic Evaluation in Public Health