NUTRITION: Provision of food to children in poverty
(DCP4 ID: NUTR02-05)
Cluster: Nutrition

FairChoices
DCP Analytic Tool

Provision of food to children living in insecure households

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Description of condition and intervention

Poverty predisposes children to all forms of malnutrition including stunting and wasting. Furthermore, a child's learning ability and brain development also gets affected by inadequacy of minimum recommended diverse and good-quality food. Only 1 in every 5 children (aged 6-23 months) from poorest households get to have the minimum acceptable diet defined by WHO. Provision of nutritious and adequate food to children living in poorest households may help to break the vicious perpetuating cycle of malnutrition-poverty-malnutrition. This evidence brief details on the assessment of intervention-provision of food to children in poverty. (*Source: Keeley 2019)*. This evidence brief assesses effects and costs for one intervention being analyzed in FairChoices: DCP analytical tool (For an overview of other interventions, see appendix below and the separate evidence briefs for these):

NUTR01-02-05	Food to children in insecure households

International guidelines

Organization	Indications/recommendations	Applicability in LIC & Lower MIC settings
Intervention included as part of the DCP3 third edition	The Community Based Management of Moderate Acute Malnutrition (CMAM) forum published a brief in 2014 that echoed the WHO guidelines and discussed the recommendations for diets suitable for children with Moderate Acute Malnutrition, which included a decision-making framework for selecting appropriate Supplementary feeding program (SFP) approaches. In food insecure households, SFP are used to reduce mortality and prevent worsening of children`s nutritional status. SFPs are classified as target or blanket SFPs, depending on the population. A blanket approach provides supplementary foods to everyone within a specific population while target approach provides supplementary foods only to specific malnutrition criteria. The standard	**YES**

	practice for SFPs is to provide nutritious food, commonly Super cereal Plus and a growing range of different Ready-To-Use-Therapeutic-Foods (RUFs)	

Source: DCP3, Management of Severe Acute Malnutrition and Moderate Malnutrition in Children, chapter 11.

Intervention attributes

Type of interventions & delivery platform

Table 1: Type of interventions & delivery platform

Intervention	Type	Delivery platform
Provision of food to children in insecure households	Prevention	Community

Equity

In addition to considerations like cost-effectiveness and health systems factors, dimensions of equity can be relevant for priority setting. The opportunity for a long and healthy life varies according to the severity of a health condition that individuals might have, so there are inequities in individuals' opportunities for long and healthy lives based on the health conditions they face. Metrics used to estimate the severity of illness at an individual level can be used to help prioritize those with less opportunity for lifetime health. FairChoices: DCP Analytics Tool uses Health adjusted age of death (HAAD), which is a metric that estimates the number of years lived from birth to death, discounting years lived with disability. A high HAAD thus represents a disease less severe in terms of lifetime health loss, while a low HAAD represents a disease that is severe on average, causing early death or a long period of severe disability. It is also possible to estimate the distribution of HAAD across individuals with a health condition. FairChoices shows for each intervention an average HAAD value of the conditions that are affected by respective interventions that have health effects. Additionally, a plot shows HAAD values for around 290 conditions (Johansson KA et al 2020).

Time dependence

Moderate level of urgency. Treatment outcomes may varies dependent of the setting and condition of the child.

Population in need of interventions

Table 2: Population in need of interventions

Intervention	Treated population		Affected population		Disease state addressed
	Treated age	Treated fraction	Affected age	Affected fraction	
Food to children in insecure households	0 to 5 years (children from 6 months up to five years dependent of condition)	Prevalence cases, both genders: According to Henriksen et al. Affected fraction is 0,429 (Unpublished work in progress)	0 to 5 years (children from 6 months up to five years dependent of condition)	Those with the condition, both genders: According to Henriksen et al. Affected fraction is 0,429 (Unpublished work in progress)	Nutritional deficiencies

Disease state addressed

This intervention delays or prevent development of nutritional deficiencies which may cause growth failure such as stunting, wasting and underweight or Moderate Acute Malnutrition (Or a combination of these terms).

Intervention effect and safety

Table 3: Effect and safety of food to children in poverty

Effect of intervention	Certainty of evidence
Mortality Lassi et al 2020. Estimated a relative risk of 0.65 when supplementary food interventions was implemented compared with the control group (95 CI 0.38 to 0.97)	⊕⊕⊕⊖ High level of evidence

Model assumptions

Table 4: Summary of model parameters and values used in FairChoices – DCP Analytical Tool

Category	Model parameter	Notes
Intervention	**Food to children in insecure households**	
Cost parameter		
Treated population	See table 2	Epidemiological data from Global Burden of Disease study
Effect parameter		
Affected Population	See table 2	
Affected gender	See table 2	
Affected fraction age	See table 2	
Affected fraction	See table 2	
Comparison	Control group	
Mortality Reduction (RRR)	0.39	

Intervention Cost

The total unit cost is estimated to be **USD 183.03** (Year: 2020) per child per case for the provision of food to children in insecure households according to *Henriksen et al. (Work in progress)*

References

Keeley 2019: Keeley B, Little C, Zuehlke E. The State of the World's Children 2019: Children, Food and Nutrition--Growing Well in a Changing World. UNICEF. 2019 Oct.

Lenters L, Wazny K, Bhutta ZA. Management of Severe and Moderate Acute Malnutrition in Children. In: Black RE, Laxminarayan R, Temmerman M, Walker N, editors. Reproductive, Maternal, Newborn, and Child Health: Disease Control Priorities, Third Edition (Volume 2). Washington (DC)2016.

Lassi, Z. S., Rind, F., Irfan, O., Hadi, R., Das, J. K., & Bhutta, Z. A. (2020). Impact of infant and young child feeding (IYCF) nutrition interventions on breastfeeding practices, growth and mortality in low-and middle-income countries: systematic review. Nutrients, 12(3), 722.

Henriksen ES, Økeland J, Malawim O, Said S, Kaur G, Rava` MS, et al. Economic evaluation of nutritional interventions in Zanzibar: An analysis using FairChoices – DCP analytic tool.(Work in progress)

Appendix

Literature Review for effectiveness & safety

This literature search is an example of level 4 evidence(metaanlysis) for intervention inputs taken from DCP3. (Despite low significant level for efficacy)

Level of evidence of efficacy studies:
1. Low (expert opinions, case series, reports, low-quality case control studies)

2. Moderate (high quality case control studies, low quality cohort studies)

3. High (high quality cohort studies, individual RCTs)

4. Very high (Multiple RCTs, metaanalysis, systematic reviews, clinical practice guidelines)

An overview of all NUTR interventions in FairChoices-DCP analytical tool (Interventions assessed in this evidence brief are marked in bold)

NUTR01-01	Daily Iron Folic acid supplementation (pregnant women)
NUTR01-02	Calcium supplementation, pregnancy
NUTR01-03 households	Food and caloric supplementation to pregnant women in insecure
NUTR01-04-02	**Promotion of breastfeeding and/ or complementary feeding**
NUTR01-05	Intermittent Iron-folic acid supplementation (Menstruating women)
NUTR01-06	Food to non-pregnant women in insecure households
NUTR01-02-01-01	Daily iron supplementation for children 6 to 23 months
NUTR01-02-01-02	Daily iron supplementation in children health center
NUTR01-02-02	Intermittent iron supplementation in children (24 -59 months)
NUTR01-02-03	Vitamin A supplementation to children 6 to 59 months
NUTR01-02-04	Zink to children 6 to 59 months

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NUTR01-02-05	**Food to children in insecure households**
NUTR01-03-01	Management of severe acute malnutrition without medical complications
NUTR01-03-02	Management of severe acute malnutrition associated with medical complications