

# USE OF A FEEDING TOOLKIT FOR IMPROVED IYCF PRACTICES IN FOOD INSECURE HOUSEHOLDS

## Operations Research Brief

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worldwide

### The Challenge

Stunting, defined as low length– or height-for-age, is a well-recognised marker of chronic undernutrition. In Mchinji district, Malawi, rates of childhood stunting (44.0%), underweight (11.5%), and wasting (3.1%) are among the highest in the country and exceed national averages.<sup>i</sup> Despite interventions aimed to improve child nutrition, programmes have traditionally focused on nutrition education and behaviour change in relation to diet quality, with little emphasis on behaviour change around other optimal infant and young child feeding practices, such as the recommended volume or consistency of complementary foods for children 6 to 23 months of age. Innovative, practical, and scalable approaches to improving complementary feeding behaviours for children are urgently needed.

### Programme Context

Concern Worldwide is implementing the Support for Nutrition Intervention Component (SNIC) programme in Mchinji district. Funded by the World Bank and led by the Ministry of Health's Department of Nutrition, HIV and AIDS (DNHA), the SNIC programme aims to enhance and scale up maternal and child nutrition service delivery at community level and strengthen sectoral policy and program development, manage and coordinate at central, district and community levels.

As part of the SNIC programme, Concern conducted an operations research project with Emory University, which aimed to improve complementary feeding practices among

families with children 6 to 23 months of age using an innovative feeding toolkit.

### Feeding Toolkit

The toolkit comprised a demarcated feeding bowl, slotted spoon, and counselling card. The bowl is designed with symbols and demarcations to denote recommended meal frequencies and quantities of food for children at 6-8 months, 9-11 months, and 12-13 months. Symbols and demarcations on the bowl also cue the extra food recommended for women during pregnancy and lactation, although this feature fell outside the scope of the study. The slotted spoon guides caregivers in preparing complementary food of appropriate consistency. A pictorial counselling card, suitable for caregivers with low literacy, provides pictorial instructions on how to use the toolkit to achieve recommended diet practices, handwashing practices, and dietary diversity.

The toolkit was designed by a team of students and faculty from Emory University, Rollins School of Public Health and the Georgia Institute of Technology for the purpose of achieving recommended meal frequency, food



Figure 1. The feeding toolkit's demarcated bowl and slotted spoon

volume (bowl), and kilocalorie density (spoon) through the first 1000 days. While qualitative testing and evaluation in India and Kenya demonstrated the toolkit's acceptability and potential to shift dietary practices, this study marked the toolkit's first quantitative evaluation.<sup>ii iii</sup>

## Objectives & Methods

The objective of the study was to evaluate the effectiveness of the feeding toolkit at increasing the volume and consistency of complementary foods offered to infants and young children 6 to 23 months of age, compared to IYCF counseling through Care Groups alone. Impacts on anthropometric indicators and caregiver knowledge were also assessed.

In July and August 2015, 1,377 households with children between the ages of 6 and 17 months of age from 53 Care Groups in three Traditional Authorities (TAs) in the Mchinji District were randomly selected and enrolled in the study. At enrollment, caregivers completed a baseline survey, with questions on household demographics, child feeding practices, and child anthropometry. Care Groups were then assigned to receive the intervention (feeding toolkit) or to act as comparisons. A total of 603 households from 25 Care Groups were assigned to the intervention group, and 759 households from 28 Care Groups were assigned to the comparison group.

In June 2016, study households were re-visited for an endline survey. In addition to the endline survey, focus group discussions were conducted with a subset of caregivers and Lead Mothers from both the intervention and

comparison groups to better understand the barriers to use of toolkit, the toolkit's acceptability, and the impact of the toolkit on infant and young child feeding knowledge and behaviour.

## Research Findings

- The toolkit was **widely used** during the 10-month implementation period, with **93%** of caregivers reporting that they still used the toolkit at endline.
- The toolkit **increased** mean estimated **meal volume** by more than **20%**.
- The toolkit **increased** the estimated **consistency** of complementary foods (porridge) offered to children.
- Lead Mothers and caregivers who received the toolkit were **better able to verbalize complementary feeding recommendations**, including the role of **meal volume** and **consistency** in assuring appropriate growth of their children.
- The toolkit **improved meal frequency** for children who were 15-17 months of age at endline, but not among older children.
- The toolkit did **not** have an impact on **dietary diversity** or **minimum acceptable diet**.
- The toolkit did **not** have an impact on **underweight** (weight-for-age) or **wasting** (weight-for-length).
- The toolkit **slowed** the rate of **stunting** among children in the intervention group.
- Lead Mothers reported that the toolkit was helped make **counselling sessions** on infant and young child feeding practices **easier**.

## Interactions with Food Insecurity

Over half (51%) of the study households surveyed at endline were severely food insecure, with only 8% classified as food secure. Despite these figures, results suggest that the feeding toolkit is a feasible intervention for households in food insecure contexts:



Figure 2. The front side of the feeding toolkit's pictorial counselling card.

- Despite caregivers commonly citing a **lack of food** as a barrier to using the feeding toolkit, there was **no evidence that food insecurity resulted in decreased use of the toolkit**.
- The toolkit **increased** the odds of meeting **minimum meal frequency** in **moderately and severely food insecure households**.
- The toolkit **improved** the **consistency** of **complementary foods** in **moderately and severely food insecure households**.
- Caregivers **continued to use** the toolkit even when they **did not have enough food** to fill the bowl to the appropriate line.

### Use of Findings

Utilizing a feeding toolkit to improve complementary feeding behaviours for children 6-23 months of age is a promising approach for increasing the volume and consistency of complementary foods. Findings from this study demonstrate that equipping caregivers with the feeding toolkit was acceptable and feasible. The feeding toolkit served as an effective aid in improving

caregivers' infant and young child feeding knowledge and behaviour.

### Recommendations:

- Nutrition programmes focused on improving infant and young child feeding practices should incorporate components focused on counselling caregivers to increase meal volume and consistency, as well as dietary diversity.
- In food insecure contexts, the feeding toolkit (or another similar locally made adaptation) should be distributed in conjunction with programmatic interventions aimed at addressing and improving food security.
- Further study, and a study of longer duration, is needed to better understand the impact of the feeding toolkit on stunting.
- To better understand the effect of the toolkit on the consistency of complementary foods, the impact of the toolkit should be evaluated in children at a younger age (6-8 months) when it is common for caregivers to provide thin and watery complementary foods

### References

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- iii Kram N, M. S. (n.d.). The Acceptability of an Innovative Feeding Toolkit to Improve Maternal and Child Nutrition in Western Kenya. Unpublished.
- iv The Economist Group. Global Food Security Index: Malawi. 2017.
- v World Food Programme. Malawi: Current issues and what the World Food Programme is doing. 2017.

