

Consulting with caregivers

Formative research to determine the barriers and facilitators to optimal infant and young child feeding in three regions of Malawi



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INTRODUCTION

Nearly half of Malawian children younger than 5 years of age are chronically malnourished, a condition that is largely caused by inadequate feeding practices during the first two years of life. The Infant & Young Child Nutrition (IYCN) project conducted a joint research project with the Bunda College of Agriculture and the World Bank to generate information that can be used to improve infant and young child nutrition activities within Malawi's existing programs. This information will also be used to design new programs that take into account the social, economic, and cultural contexts affecting feeding practices. Although the study highlights a significant gap between national and international recommendations for the nutritional content of children's foods and what children actually eat, the findings also demonstrate feasible actions that families in Malawi can take to close this gap—particularly with foods to which they already have access and currently prepare.

METHODS

Study participants lived in three regions, four climatic zones, and represented Malawi's major tribal groups. The study was conducted in two phases.



Phase one was exploratory, and gathered information from 60 mothers with children 6–23 months of age and 18 key informants, including health workers and other community members, about how children are fed, perceptions of child health, nutrition, food availability, and their sources of nutrition information through:

- In-depth interviews using structured, open-ended questionnaires.
- Household observation.
- Dietary recall about what children were fed in the past 24 hours.

Phase two, or the trials of improved practices (TIPs) phase, entailed three visits with 100 mothers of children 0–23 months of age:

- The first, to determine mothers' current feeding practices.
- The second, to offer mothers counseling and one to three improved feeding practices that they could try for about one week.
- The third, to gather the results of the trial.

FINDINGS

Breastfeeding practices (infants 0–5 months)

Exclusive breastfeeding. Only half of mothers interviewed during phase two of the study said they exclusively breastfed during the first six months postpartum. Believing their infants to be hungry or thirsty, they gave their babies water or watery porridge in addition to breastmilk.

Length and style of breastfeeding sessions. Many of the mothers surveyed breastfed for extremely abbreviated periods and only from one breast, which does not satisfy the baby and compromises the mother's breastmilk supply.

TIPs results

Mothers lengthened their breastfeeding sessions during the TIPs, noting that this improved practice produced more milk, and that their children were more satiated and happy.

“My baby takes more milk and does not cry frequently and diarrhea has stopped.”

After being informed, mothers practiced exclusive breastfeeding, a practice they were interested in continuing.

TABLE 1. Summary of TIPs recommendations and outcomes for infants 0–5 months

Recommendation	Offered	Accepted	Tried	Succeeded*	Modified
Refrain from giving liquids and foods other than breastmilk to your baby; breastfeed when baby cries.	10	10	10	10	0
Take more time to breastfeed at each feeding, use both breasts at each feeding, and feed until the breasts are soft and empty.	9	9	9	9	0
Support the breast in c-shaped form so that the baby gets more milk; hold the baby and be relaxed while breastfeeding.	4	4	4	4	0

* Mothers were successful in adopting the recommended practice without modification.

Recommendations for promoting improved breastfeeding practices

Table 1 shows that all mothers in the study were able to practice exclusive breastfeeding, to prolong breastfeeds, and to improve their breastfeeding technique. These findings suggest that promoting specific issues with mothers and family members can result in changed practices:

- That breastmilk provides enough water and fluid when babies are fed on demand with full feeds.
- That crying is not always caused by hunger.
- That when crying is caused by hunger, mothers can increase breastmilk supply by allowing their babies to breastfeed for a longer duration and more frequently.
- That giving the child water or watery porridge will fail to satisfy hunger and will reduce the amount of breastmilk the mother produces.

Mothers who stop breastfeeding before their children reach 2 years of age do so either because they are HIV positive and fear transmitting HIV to their infants, or they become pregnant and believe that they should no longer breastfeed. On the other hand, many mothers also cited the prevention of pregnancy as a reason to *continue* breastfeeding up to 2 years. To encourage improved breastfeeding practices among these two groups, two things need to happen:

- HIV-positive women need infant feeding advice aligned with national recommendations.
- Women need to know that exclusive breastfeeding can prevent pregnancy *for only six months* and a modern contraceptive method is necessary to delay their next pregnancy thereafter.

Feeding practices (infants and children 6–23 months)

TABLE 2. Nutritional status of children 6–23 months

Region	Percent children stunted
North	8.5
Central	53.3
Southern	43.4
All children	47.5

Feeding children more. While children 6–11 months generally ate frequently enough, some children 12–23 months did not. In addition, most infants and children 6–23 months of age were not fed large enough quantities.

Diversifying the diet. Children in this age group are often fed watery, starchy porridge, seldom enriched with oil, vegetables, or animal-source foods, and occasionally with groundnuts or beans, a practice that was targeted for improvement. The study also found that offering healthier snacks to children—fruits as opposed to the expensive sugary biscuits commonly fed—could help to curb malnutrition.

“Indeed biscuits are expensive... and with the same amount of money, I can buy eight bananas.”

Finishing meals. Many mothers of children 12–23 months of age did not stay with their children while they ate to encourage children to finish their meals.

Beliefs that motivate problematic practices

- Watery foods are easy to swallow.
- Child's intestines are not ready for solid food.
- Solid foods cause constipation, stomach pains, vomiting.
- Larger portions cause constipation or stomach pains.

TIPs results

- While no mothers in phase two of the study could increase the quantity of food fed to their children by more than three tablespoons per meal, many modestly increased meal quantities and, as a result, said their children were crying less and were sleeping better.
- “ Before I did not know how many spoons, but now I know how much to serve my child. ”
- There was also a marked increase among children who met the recommended nutritional intake for protein, zinc, vitamin C, and vitamin A; overall caloric intake increased by 160 kilocalories.
 - While carbohydrates eaten by the children fell—from 61 percent of foods consumed to 49 percent of foods consumed—the consumption of healthier foods, such as vegetables, milk, eggs, beans, and groundnuts, increased by small amounts.

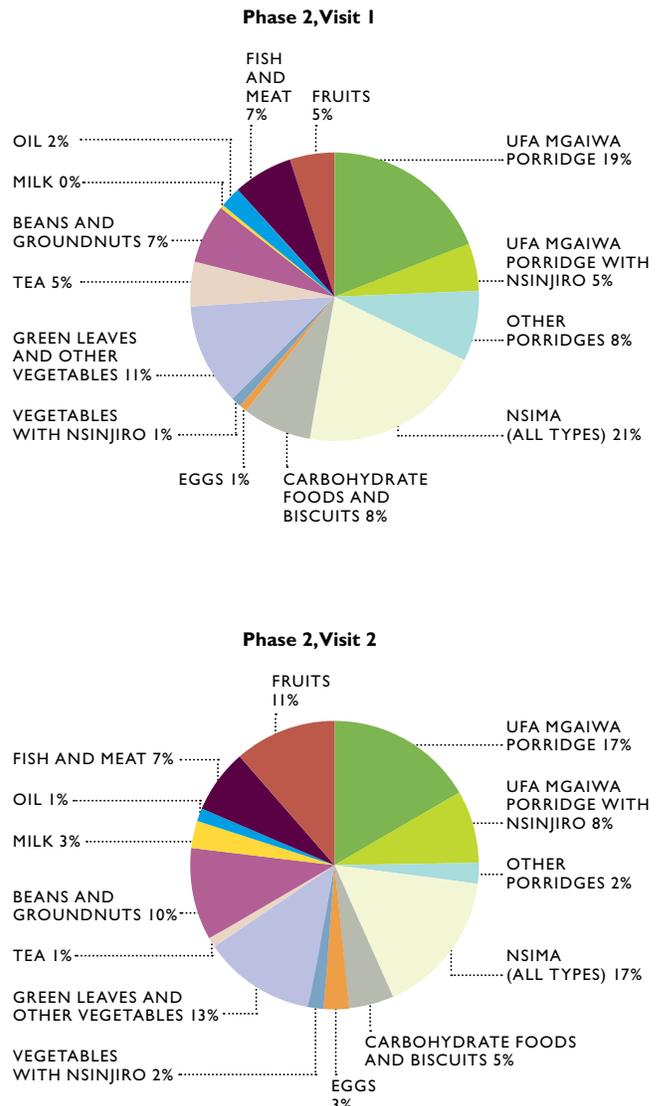
Recommendations for promoting improved feeding practices

Most families can better meet their children's nutritional needs with foods to which they already have access and currently prepare. Vitamin A, iron, zinc, and calcium, however, are deficient in diets even when food availability is at its highest. Special supplements or foods may therefore be needed to correct those deficiencies, and mothers may need to be taught how to prepare a more nutritious soft food for their children. In all age groups, mothers can stop spending money on sugary snacks and provide inexpensive, yet nutritious snacks, like fruit or sweet potatoes. Some specific recommendations by age group follow.

Infants 6–8 months

- Focus on full breastfeeding, emphasizing prolonged feeds.
- Promote thick but soft porridge enhanced with family vegetables as the basic complementary food through cooking demonstrations and examples.
- Encourage mothers to offer nutritive foods like eggs, fish, and fish powder every day or as often as possible.

FIGURE 1. Foods most frequently consumed by children 6–23 months



Infants 9–11 months

- Continue focus on full breastfeeding, emphasizing prolonged feeds.
- Feed vegetables every day and animal-source foods three to four times per week.
- Increase amount of food per meal.

Children 12–23 months

- Increase amount of food per meal, with inclusion of animal-source foods.
- Offer nutritive snacks.
- Carry food for child when away from home.
- Offer a separate plate to child.

Feeding sick children

All mothers participating in the study emphasized that illness is the most important factor affecting appetite. Although no TIPs were carried out with sick children, the study determined several concepts and practices that require special program emphasis:

- Maintaining the child's normal diet for as long as possible, including feeding small portions more frequently if the child is fussy or lethargic.
- Altering the diet if the child is extremely ill (breastfeeding more frequently and offering soft, but thick porridge).
- For two weeks following the illness, returning the child to a regular diet, but offering special foods (eggs, milk, fish, thick porridge, oil, etc.) for children 12–23 months, every day at each meal if possible.

Other findings

Food Security: enough food for infants and young children

Although mothers' perceptions of food security varied by region, most reported that from December through March, the period before the harvest, food is scarce. While some mothers reported replacing maize with other available food during this period, others said they take on short-term work so that they have resources to buy additional maize. Less than half said they reduced the frequency of meals given to children, and little more than half said that they did not change their feeding practices.

While being able to sustain current feeding practices during the lean season does not mean that all mothers can feed their children optimally during that time, this finding suggests that many families may be able to prevent chronic malnutrition using their own resources.

CONCLUSION

The study accomplished the following:

- Increased understanding of current feeding practices among families with children younger than 2 years of age, and the social, cultural, and economic context influencing them.
- Identified problems that impede adequate dietary intake and proposed changes in feeding practices, which that mothers tested to determine the practices that are most feasible and critical to improving children's nutrition.
- Demonstrated that it is feasible for mothers in Malawi to improve their feeding practices using available resources in ways that have the potential to positively impact their children's health and nutrition.

LOOKING AHEAD

- The results of this study create the basis for a strategy promoting improvements in specific infant and young child feeding practices.
- Results from the study were disseminated at a workshop with 90 nutrition stakeholders.
- Following the dissemination workshop, *The Nation*, Malawi's national newspaper, published an article that focused on the results of the study: *Junk food contributing to stunted growth in children*. In the article, Dr. Mary Shawa, Malawi's Secretary for Nutrition and HIV and AIDS, called for the government and other public-sector entities to work together to address information gaps that contribute to the problem of malnutrition.
- Study findings are currently influencing the World Bank's investment strategy for nutrition in Malawi.
- The Malawian government is also using the study to develop information, education, and communication messages and training materials as part of its capacity-building activities under the United Nations Scaling Up Nutrition (SUN) movement and the National Nutrition Education Strategy.

A full report of findings is available at:
www.iycn.org.

ABOUT THE INFANT & YOUNG CHILD NUTRITION PROJECT

The Infant & Young Child Nutrition Project is funded by the United States Agency for International Development. The project is led by PATH and includes three partners: CARE, the Manoff Group, and University Research Co., LLC. For more information, please contact info@iycn.org or visit www.iycn.org.