

FOOD AID QUALITY REVIEW

MOTHERS IN MALAWI IMPROVE THE NUTRITION IN PORRIDGE BY ADDING MORE FORTIFIED OIL

Using Social Behavior Change Communication, delivered through a Care Group model, Caregivers in Southern Malawi add more oil to their child's corn soy blend porridge.



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Deep pots of fortified porridge simmered in villages across Southern Malawi where the United States Agency for International Development's (USAID) efforts to prevent and treat moderate acute malnutrition (MAM) rely on nutritionally fortified supplementary foods. Globally, an estimated 33 million children suffer from MAM, a low body weight level which puts them at a 3 times higher risk of death than a well-nourished child.^[1,2] The Food Aid Quality Review (FAQR) is a USAID funded project of Tufts University Friedman School of Nutrition Science and Policy.

Adding more fortified oil. The FAQR team worked with caregivers of children under 5 years of age in a USAID supplementary feeding program for MAM in Southern Malawi. The goal of the intervention was to provide an increased oil ration (fortified with Vitamin A and D) along with targeted education and communication to encourage caregivers to prepare corn soy blend (CSB) porridge with more oil than is customary: a recommended ratio of 30 grams (g) of oil to

every 100 g of CSB. The study investigated the effectiveness of the intervention in getting caregivers to prepare the porridge as instructed and the determinants of effectiveness when caregivers were able to prepare the porridge at the recommended ratio.

Why add more oil? Fortified oil increases the nutritional value of the porridge both by adding vitamins A and D and by helping children absorb fat soluble vitamins in the CSB: vitamins A, D, E, and K. Adding oil also increases the calorie density of the porridge, so that each spoonful contains more energy. In a population where malnutrition is high, improved nutrition is critical for child survival.

How do you get caregivers to add more oil? The FAQR project's education and communication intervention was successful. Providing intensive education through a Care Group model, along with increased oil, resulted in caregivers preparing porridge with significantly more oil with a much higher percentage of caregivers meeting the target of 30 g per 100 g of CSB when receiving the intervention. The education messages and visual aids were delivered through a Care Group model where information is shared between healthcare workers, community volunteers and caregivers in the program. Messages focused on a variety of topics including the amount of ingredients to use when preparing the CSB and gave information on preparation and feeding to the beneficiary child only, which are essential in order for the child to receive the full nutritional benefit of the supplement and, therefore, for program effectiveness. Reported delivery and reception of key messages was 80% or more among healthcare workers, community volunteers and caregivers in the Care Group model compared to the control group who did not receive key messages. This work contributes to the growing body of literature supporting the use of the Care Group model as an effective strategy for increasing coverage of key supplementary feeding messages, and thereby the effectiveness of supplementary feeding programs and related interventions.

Do changes in CSB packaging help? Standard malnutrition interventions procure the CSB for porridge in 25 kg bags which are then delivered to distribution sites, emptied into bins, and scooped into containers that the recipients bring from home. Half of the women in the intervention group received the CSB in 2 kg re-sealable packets with pictogram instructions for preparing the CSB, while the other half of the group continued to receive CSB in the standard manner. The resealable packets did not significantly increase the amount of fortified oil added to the CSB, but distributing the individual packages had other benefits. In addition to reducing the time it took to distribute the CSB and oil ration, caregivers reported liking the resealable packets because they were easier to carry home and seen as more hygienic than scooping CSB from bins.

So what? The results of this study can improve how supplementary foods are programmed in

the future. The evidence supports the conclusion that with targeted education and communication, along with the provision of sufficient oil, it is possible to achieve a higher content in CSB porridge, improving its nutrient and calorie density. Further, the study suggests that the Care Group model is an effective method to deliver education and communicate key messages to beneficiary populations. Finally, study findings suggest that programs should consider repackaging CSB in individual bags to streamline distribution and increase proper hygiene. These changes have the potential to improve the effectiveness of programs to prevent and treat malnutrition.

READ MORE

“Program changes are effective and cost-effective in increasing the amount of oil used in preparing corn soy blend porridge for treatment of moderate acute malnutrition in Malawi,” *Maternal and Child Nutrition*, January 2017 (<https://doi.org/10.1111/mcn.12393>)

“Effective delivery of social and behavior change communication through a Care Group model in a supplementary feeding program,” *Journal of Health, Population and Nutrition*, 2017 (<http://rdcu.be/vNWe>)

“Preparation and presentation of corn-soy blend: Perceived benefits among lead mothers and caregivers of moderately malnourished children in Malawi,” July 2017 (Issue 55) *Field Exchange*, Emergency Nutrition Network (<http://www.enonline.net/fex/55/csbmalawi>)

ORGANIZATION

The Food Aid Quality Review is a project of Tufts University with collaboration and funding from United States Agency for International Development and the Office of Food for Peace, assessing the nutritional quality of food aid products used in the prevention and treatment of moderate acute malnutrition in children.

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¹ Lenters, L. M., Wazny, K., Webb, P., Ahmed, T., & Bhutta, Z. A. (2013). Treatment of severe and moderate acute malnutrition in low- and middle-income settings: a systematic review, meta-analysis and Delphi process. *BMC Public Health*, 13(Suppl 3), S23. <http://doi.org/10.1186/1471-2458-13-S3-S23>

² Black RE, Allen LH, Bhutta ZA, Caulfield LE, de Onis M, Ezzati M, Mathers C, Rivera J, for the Maternal and Child Undernutrition Study Group. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet* 2008; 371:243-60. DOI: 10.1016/S0140-6736(07)61690-0