EFFECTIVENESS AND COST-EFFECTIVENESS FOR THE PREVENTION OF MAM AND STUNTING

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A summary of a field study by the Food Aid Quality Review

BACKGROUND

Tufts University completed a review of Title II commodities and their uses under the Food Aid Quality Review (FAQR) in October 2011 (see www.foodaidquality.pbworks.com for more information). The FAQR report recommended improvements in the formulation of existing Fortified Blended Food (FBF) products used in Title II programming by including a dairy ingredient, improving the micronutrient premix and preparing CSB consistently with fortified vegetable oil in the recommended ratio of 30 g oil to 100 g CSB. The FAQR Report also recommended strengthening the evidence base for innovations in products and programming and testing the effectiveness and cost-effectiveness of any recommended program or commodity modifications.

Tufts University is collaborating with ACDI/VOCA and Save the Children in Burkina Faso, District of Sanmatenga to conduct an assessment of the effectiveness, cost, and cost-effectiveness of these recommended changes to CSB. Institut de Recherche en Sciences de la Santé (**IRSS**) is working with Tufts University to carry out data collection. The study compares isocaloric amounts of the following foods:

1) Corn Soy Blend 14 (CSB14), with whey protein concentrate and enhanced micronutrient profile, prepared with fortified vegetable oil (FVO)
2) Ready-to Use Supplementary Food 1(RUSF1), a generic Lipid-Based Nutrient Supplement (LNS) product aligned with WHO recommendations for treatment and prevention of moderate acute malnutrition
3) Supercereal Plus (CSB++/SC+), the FBF used by WFP, which has an enhanced nutrient profile, dairy ingredient (non-fat dry milk), and oil already embedded into the CSB
4) Supercereal (CSB+/SC) prepared with FVO

Type of study: Prospective, cluster-randomized, effectiveness trial

Problem to be studied: Prevention of moderate acute malnutrition (MAM) and stunting in children.

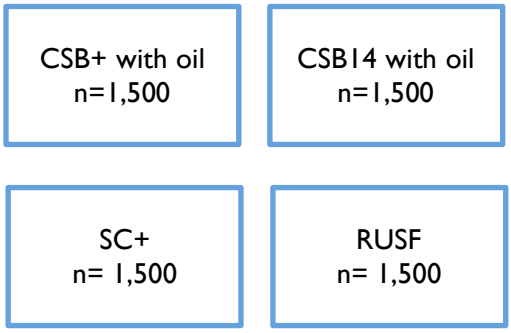
Objective: To test the relative effectiveness and cost effectiveness of four supplementary foods in the prevention of MAM and stunting in normal programmatic settings.

Study Design: The study is cluster-randomized collecting information on participating children. We assigned Food Distribution Points (FDPs) to one of the four arms. Enrollment of children was done on a rolling basis, from August 2014-June 2015. We enrolled children continuously until the required sample size was reached. The study is an effectiveness trial, meaning that we will study the programs' operation and the beneficiary households' compliance with recommendations regarding preparation and consumption of the supplementary food.

PREVENTION OF MAM AND STUNTING

The comparison is based on the preventive model: distribution of the food supplement to at-risk children 6-23 months. All study arms deliver the same services to children and their households, except for the difference in the food supplement and the messages that go along with that particular supplement. The subjects in this study are children 6 – 23 months of age whose mothers are enrolled in the supplementary feeding program operated by Save the Children, coordinated by ACDI/VOCA in the District of Sanmatenga. ACDI/VOCA and Save the Children are responsible for delivering and distributing the food supplements. IRSS, along with the Tufts University team, are responsible for screening and enrolling children into the supplementary feeding program, and collecting data. The total number of children is approximately 6,000 (1,500 per arm).

Research Study Arms



The study follows children from age six months (when distribution of food supplement intended for children's consumption is initiated) to 24 months. We follow up with children monthly up to four months post intervention to assess their growth and health status.

The study collects data on effectiveness and cost-effectiveness through growth measurements, individual interviews, focus group discussions, and observations. The study also collects water samples and CSB porridge samples to further validate results.

Primary outcomes to be measured are incidence of acute malnutrition and incidence of stunting. Secondary outcomes include rate of recovery, time to recovery, compliance with recommended methods of preparation and allocation of the food supplement.

Cost effectiveness will assess differences among the four study arms in cost per case of MAM, per case of stunting, and per case of linear growth faltering averted (that is, relative to the intervention with the highest rates).

IRSS is conducting anthropometric measurements, individual interviews, focus group discussions, and observations. Tufts University worked with IRSS to train enumerators in data collection (qualitative and quantitative) and data analysis. Tufts University also trained enumerators to measure length, weight, and MUAC of children enrolled in the research study. These skills are valuable assets in any future nutrition and maternal and child health research activities. Tufts works collaboratively with the IRSS senior researchers on the design and implementation of the study.

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