



INTEGRATED NUTRITION SOLUTIONS

The Micronutrient Initiative's community-based maternal and newborn health and nutrition project: Operations Research on Calcium Supplementation

Rationale for Study

Calcium supplementation has the potential to reduce adverse gestational outcomes by decreasing the risk of developing hypertensive disorders during pregnancy, which are associated with a significant number of maternal deaths and considerable risk of preterm birth.

Currently, there is little information to help policy and program planners or health professionals determine how to put the World Health Organization (WHO) recommendations on calcium into practice in communities. Many of the challenges calcium supplementation programs face, such as poorly functioning supply chains, late contact with pregnant women, and low compliance, are similar to iron and folic acid (IFA) supplementation programming challenges.

The Micronutrient Initiative (MI) is undertaking an in-depth operations research project to address these challenges. This includes addressing key programmatic issues, such as dose, duration, frequency, packaging, delivery platforms, procurement, public communication, and training of service providers.

Findings from this study will be applicable to many other countries interested in using the final calcium supplementation recommendations and for strengthening their IFA programs.

As a leader in global nutrition, MI is working to improve maternal and newborn health by improving access to antenatal, obstetric and postnatal services for pregnant women at the community level, and helping to ensure more women use these services.

Objective

Provide guidance for the operationalization of WHO's recommendation for calcium supplementation during pregnancy by determining the optimal calcium program details such as dose, duration, frequency, packaging, delivery platforms, procurement, public communication, and training for service providers.

Project Overview

Region: North Kakamega, Kenya and Oromia, Ethiopia

Participants: More than 1000 pregnant women

Partners:

- *Primary Research Partner:* Cornell University
- *Study Logistics in Kenya:* AMREF
- *Study Implementation in Ethiopia:* Ethiopian Health and Nutrition Research Institute and Jimma University
- *Advocacy, Policy and Ethics:* Kenya and Ethiopia Ministries of Health

Key components of this operations research

- Understand pregnant women and health providers' knowledge, attitudes and practices related to supplementation during pregnancy.
- Trial of Improve Practices (TIPs) to determine women's preferences for dosing regimen and type of supplement.
- Using national dietary intake data from Ethiopia, develop and pilot a screening tool to be used by health providers to determine whether to recommend calcium supplements to individual pregnant women.
- Propose adaptation to existing IFA counselling and promotion materials in Kenya to include calcium.
- In one sub-county in Kenya, pilot the implementation of calcium supplementation program.

Community-level nutrition interventions

- Promotion of calcium supplementation in pregnancy.
- Promotion of IFA supplementation in pregnancy.

Achievements to date (2014)

- Frequently Asked Questions (FAQs) on *Calcium Supplementation for prevention of pre-eclampsia in pregnancy* (www.micronutrient.org/calciumproject).
- FAQs on Lessons from *IFA supplementation and their application to potential calcium supplementation initiatives* (www.micronutrient.org/calciumproject).
- TIPs implemented in Kenya and Ethiopia.
- The demonstration project in Kenya concluded in May 2015, and includes training, behaviour change messaging and counseling, and monitoring systems.
- National dietary intake data was assessed in Ethiopia to determine sources of calcium in diet and the screening tool for calcium supplementation is being validated.
- The Kenyan and Ethiopian Ministries of Health and non-governmental organizations show interest in implementing similar pilots in other regions. Other governments, after receiving the FAQs documents, have also expressed interest in a pilot study.

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