

Adherence and acceptability of multiple micro-nutrient supplementation among pregnant and lactating women in Nepal



Context

Pregnant women with micronutrient deficiencies face a higher risk of maternal mortality and their children are more likely to suffer from poor birth outcomes and greater risk of impaired cognitive and physical development¹. In Nepal, 12% of newborns are born with low-birth weight and 9% are born prematurely². Furthermore, maternal mortality is 151 per 100,000 live births and the neonatal mortality rate stands at 21 per 1000 live births³. Nepal continues to grapple with micronutrient deficiencies, which if reversed, has a potential to significantly improve birth outcomes and health of the pregnant and lactating woman.

Recent research has shown that multiple micronutrient supplements (MMS) offer better perinatal and infant health outcomes compared to iron and folic acid (IFA). Currently, Nepali women receive iron and folic acid (IFA) supplements during pregnancy and post-natal periods. Nepal's Ministry of Health and Population (MoHP) is considering a shift from IFA to MMS.

Helen Keller Intl, with the financial and technical support from Vitamin Angles, conducted a landscape

analysis in 2023 to assess the enabling environment for MMS and explore the local evidence on maternal nutritional status, including micronutrient deficiencies, maternal health seeking behavior, national policies, and MMS; generate an understanding of key perceived issues that may hinder a national transition from IFA to MMS and build consensus on the way forward for MMS. This study concluded on the need for implementation research on the feasibility of transitioning from IFA to MMS in the context of Nepal's healthcare system. Therefore, Helen Keller, with support from the Eleanor Crook Foundation, is conducting four studies to explore the acceptability and adherence of MMS among pregnant and lactating women in Nepal, and operational feasibility, cost-effectiveness and supply readiness of the transition to MMS.

Research Plan:

This project has four sub-studies:

1. Randomized controlled trial (RCT): In Lumbini province, MMS adherence and accessibility will be assessed through a three-arm study in

1 Gernand AD, Schulze KJ, Stewart CP, West KP Jr, Christian P. Micronutrient deficiencies in pregnancy worldwide: health effects and prevention. *Nat Rev Endocrinol.* 2016 May;12(5): 274-89.

2 Nepal Demographic Health Survey, 2022

3 National Population and Housing Census, 2021



Goal: To create an evidence-based framework for potential transition from IFA to MMS in Nepal

Intended Results:

1. Evidence Generation through Implementation Research: Assessing MMS product acceptability, adherence, and barriers/opportunities for integration into antenatal care package.

2. Policy Engagement for MMS: Engagement with stakeholders for MMS inclusion in the national essential medicines list, forming a technical committee, and obtaining ministerial approval through evidence review and stakeholder consultations.

3. Improved Knowledge of MMS Benefits: Creating awareness and understanding of MMS advantages to foster a supportive environment for transition through research briefs, awareness-raising sessions, and IEC materials.

which pregnant women will receive IFA in blister packaging or MMS in blister packaging or MMS in bottle packaging.

2. Demonstration study: MMS adherence and acceptability will be quantitatively assessed in selected health facilities of Nepal's other six provinces.

3. Household qualitative study: Factors affecting adherence and acceptability will be qualitatively assessed through discussions and interviews with high and low adherers to supplements during pregnancy as well as their key family members in all seven provinces.

4. Feasibility qualitative study: Enablers and barriers to the potential transition to MMS will be explored with ANC healthcare providers and female community health volunteers and national, provincial, and local policymakers in all seven provinces.

Expected Outcomes:

The findings of these four sub-studies will generate evidence on MMS adherence and acceptability in Nepal, a comprehensive supply chain roadmap including demand and supply analysis, as well as the challenges and opportunities that may come with integrating MMS into antenatal and postnatal care packages. This information will be used to support Nepal in developing its strategies for transitioning from IFA to MMS. The findings will also be shared with relevant global stakeholders.

For further information:

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