

## TECHNICAL BRIEF

# Multiple Micronutrient Supplementation (MMS) Implementation Research in Pakistan



**Nutrition Wing**  
Ministry of National Health Services,  
Regulations and Coordination  
Government of Pakistan



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## BACKGROUND

Antenatal multiple micronutrient supplementation (MMS) is more effective and cost-effective than iron and folic acid (IFA) supplementation in improving birth outcomes, has equivalent benefits in preventing maternal anaemia, and is safe for mothers and babies (1,2). In 2020, the World Health Organization (WHO) recommended that implementation research (IR) be conducted in settings where the transition from IFA to MMS is being considered in low- and middle-income countries (3). IR is useful to understand *how* to effectively implement proven interventions, such as antenatal MMS, in real-life settings (4) and can be used to identify and investigate issues and challenges that prevent effective implementation of interventions like antenatal MMS and to develop and test solutions to these issues (5).

Based on the recent WHO recommendation and the maternal and newborn needs in the country, the Government of Pakistan is planning to introduce MMS for pregnant and lactating women through antenatal care (ANC) in selected areas, including this IR project for pregnant women with Nutrition International. The Nutrition Wing of the Ministry of National Health Services, Regulations & Coordination (MoNHSR&C) has established an MMS Technical Working Group (TWG) to advise and oversee the IR on antenatal MMS (see Annex A).





## SUMMARY OF THE MMS IR PROJECT

The overall objective of the project is to support the introduction of antenatal MMS<sup>1</sup> to replace IFA supplementation through ANC, along with IR to identify effective implementation approaches, to inform sustainable transition and scale up, and to ensure maximum impact of MMS in the target area of Pakistan. The project will take place in Swabi district, Khyber Pakhtunkhwa province, and builds on Nutrition International's ongoing collaboration with federal, provincial and district health officials to support their maternal nutrition program.

During the one-year implementation period, all newly enrolled pregnant women accessing public ANC services will be provided with MMS instead of IFA supplements – whether at a government health facility or in the community from a lady health worker or community midwife. A 'standard' implementation package to support the transition will be rolled out across the district, including training and conducting supportive supervision for healthcare providers, a behaviour change intervention strategy and materials, program monitoring, and a strengthened supply chain system from district to facility or community service delivery platforms. Existing protocols for anaemia screening, testing and treatment will be followed.

## IMPLEMENTATION RESEARCH

Recognizing there are many important IR questions related to the introduction of MMS in Pakistan, this project used the Child Health and Nutrition Research Institute (CHNRI) method (4) and engaged the TWG to identify and prioritize questions for this particular study. Through this process, a list of 28 priority MMS IR questions were generated which will continue to serve as a resource for others to use. However, the primary IR questions selected for this one-year study are as follows:

1. **What implementation approach(es)\* could be used to enhance the delivery of ANC nutrition services and introduce antenatal MMS to replace IFA for pregnant women in Pakistan?**
2. **Does implementation of the enhanced approaches increase pregnant women's adherence to MMS? If so, how?**

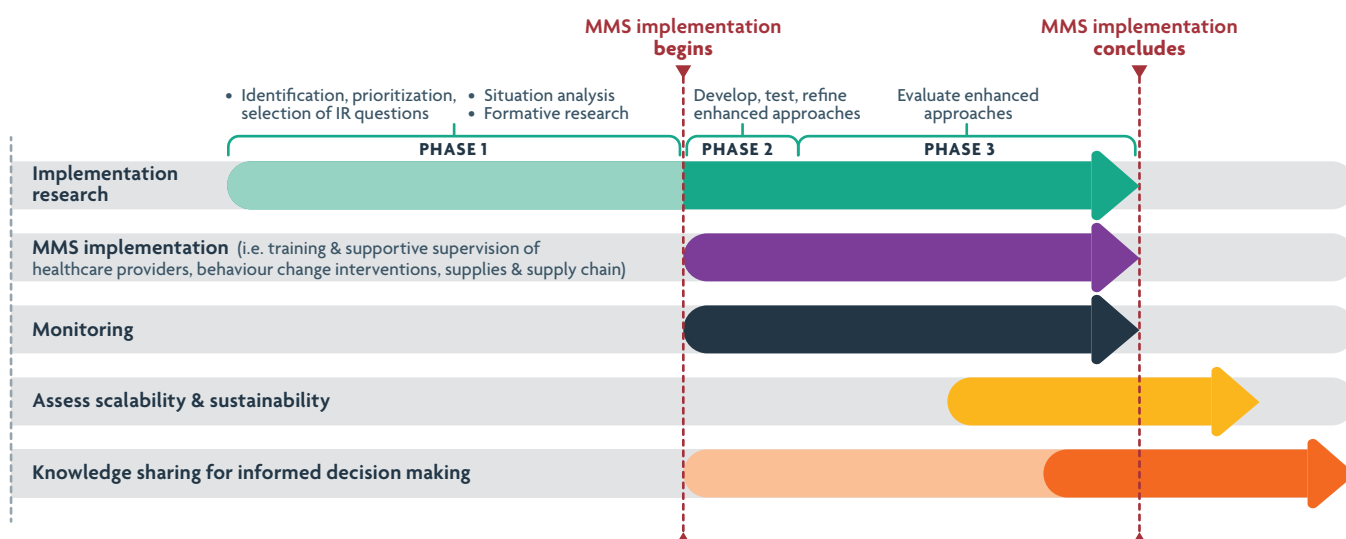
\*Focused on:

- ✓ capacity-building and supportive supervision of healthcare providers, with emphasis on MMS and nutrition counselling
- ✓ improved nutrition content and nutrition counselling tools and techniques integrated into ANC delivery
- ✓ engagement of pregnant women's family members in ANC

Secondary IR questions focus on fidelity, acceptability, feasibility, and cost-effectiveness of the enhanced approaches, MMS coverage, quality of care/nutrition counselling, and enablers and barriers to successful implementation.

<sup>1</sup> Using the UNIMMAP formulation (Vitamin A: 800 mg RE, Vitamin C: 70 mg, Vitamin D3: 5 mg, Vitamin E: 10 mg, Vitamin B1: 1.4 mg, Vitamin B2: 1.4 mg, Vitamin B3: 18.0 mg, Vitamin B6: 1.9 mg, folic acid: 400 mg, Vitamin B12: 2.6 mg, Iron: 30 mg, Iodine: 150.0 mg, Zinc: 15.0 mg, Selenium 65.0 mg, Copper 2.0 mg)

## Process for implementing the MMS IR project in Pakistan



Developed by Nutrition International

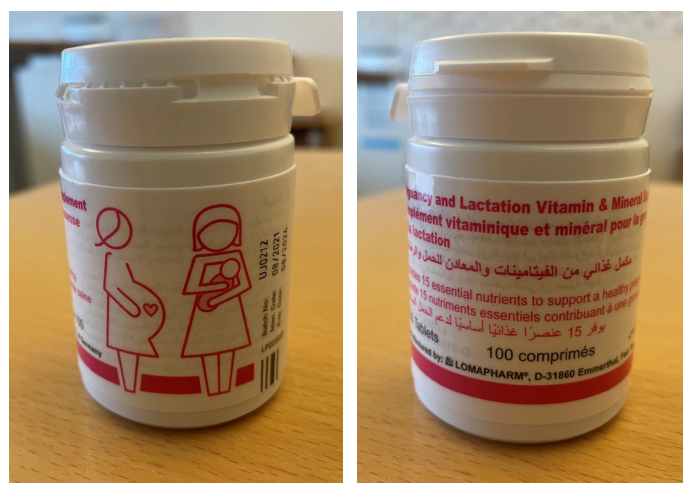
The figure above provides an overview of the phases for the MMS IR project. Phase 1 of the IR includes (a) the identification, prioritization, and selection of IR questions, (b) a situational analysis of the existing ANC service delivery programming, platforms, stakeholders, and supply of IFA supplements and MMS in Pakistan, and (c) formative research in the district to better understand the perspectives, experiences and practices of key stakeholders including pregnant women, their family members, and healthcare providers and supervisors. This information informs program implementation throughout the district and the subsequent IR phases.

Phase 2 of the IR takes place during the first quarter of the year, once MMS is introduced to the entire district. It uses qualitative research methods involving key stakeholders in real-life settings to develop, test and adapt “enhanced” approaches for implementing MMS, based on the formative research findings. For example, approaches to improve interpersonal nutrition counselling. In Phase 3, the “enhanced” implementation approaches will be operationalized, and the process and outcomes evaluated over the remaining three quarters of the year.

The entire district will be part of the project. For the research, areas within the district will be selected as the control sites receiving MMS and the standard implementation approaches, while other areas will be selected as the intervention sites and will receive MMS and the “enhanced” implementation approaches. As mentioned above, the primary outcome measured will be MMS adherence and secondary outcomes will include MMS coverage, quality of care/nutrition counselling, and key implementation outcomes (fidelity, acceptability, feasibility and cost-effectiveness).

## KNOWLEDGE TRANSLATION

This IR project aims to inform decision-making and practices relating to maternal nutrition services and MMS in Pakistan, within Swabi district and beyond. As such, key policy, program, and community stakeholders are actively involved throughout the process to share their input and share learnings. Outputs from each phase of the project will be disseminated on an ongoing basis to support real-time decision making.



Project supplies, UNIMAPP formulation

Photo credit: UNICEF Supply Division

## KEY PARTNERSHIPS

This project is led by Nutrition International in collaboration with the Nutrition Wing of the MoNHSR&C with the support and guidance of the Directorate General Health Services and Integrated Health Program of Khyber Pakhtunkhwa, the District Health Office of Swabi, Khyber Pakhtunkhwa and the MMS Technical Working Group.

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## FOR MORE INFORMATION, CONTACT:

### Dr. Shabina Raza

Country Director, Nutrition International Pakistan  
[sraza@nutritionintl.org](mailto:sraza@nutritionintl.org)

### Jennifer Busch-Hallen

Senior Technical Advisor, Maternal and Neonatal  
 Health & Nutrition, Nutrition International  
[jbuschhallen@nutritionintl.org](mailto:jbuschhallen@nutritionintl.org)



## REFERENCES

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## ANNEX A

### MMS Technical Working Group Membership

Chairperson: Director of Nutrition, Ministry of NHSR&C\*

Secretary: National Coordinator, Nutrition & NFA, Ministry of NHSR&C\*

### Members

Project Director/ Representative, IRMNCH & Nutrition Program, DoH, Punjab Lahore

LHW Program Director/ Dy. Director IRMNCH&N, DoH, Punjab Lahore

PC-Health, Accelerated Action Plan/ Nutrition Program Manager (DoH) Sindh, Karachi

LHW Program Manager/ Director, DoH, Sindh, Hyderabad

Director Nutrition, IHP, Khyber Pakhtunkhwa, DoH, KP Peshawar

LHW program Director/ Manager, DoH, KP Peshawar

Director Nutrition, Nutrition Directorate, DoH, Balochistan, Quetta

LHW Program Manager, DoH, Balochistan, Quetta

Nutrition Program Manager, DoH, AJ&K, Muzaffarabad

Provincial Coordinator LHW Program, DoH, AJ&K, Muzaffarabad

Nutrition Program Manager, DoH, Gilgit Baltistan, Gilgit

Provincial Coordinator LHW Program, DoH, Gilgit Baltistan, Gilgit

District Health Officer, Swabi, Khyber Pakhtunkhwa

One member each from UN Agencies (WHO, UNICEF, World Food Program, UNFPA)\*

One member each from international NGOs, including Nutrition International (Right Start Project) and the Global Alliance for Improved Nutrition and local NGOs (Shifa Foundation, Agha Khan Foundation, International Research Force)\*

*\*Members of the Core Working Group who meet on a more regular basis*