Guidelines for Maternal Nutrition by the Society of Obstetricians and Gynaecologists of Pakistan (SOGP)

Contributions by

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Introduction

Background

The Society of Obstetricians and Gynaecologists of Pakistan (SOGP) is committed to advancing maternal and neonatal health by aligning our guidelines with global standards established by WHO and UNICEF. Our new guidelines propose transitioning from Iron and Folic Acid (IFA) supplementation to Multiple Micronutrient Supplementation (MMS) and Balanced Energy Protein (BEP) to address the broader nutritional needs during pregnancy and lactation. This transition is essential for several reasons as follows.

Recent studies indicate that MMS and BEP supplements, which contain a broader range of vitamins and minerals compared to IFA, can significantly improve pregnancy outcomes. MMS has been shown to reduce the risk of preterm birth, low birth weight, and maternal anaemia more effectively than IFA alone. Comprehensive antenatal care for pregnant women should include iron and folic acid supplementation, promotion of iodized salt consumption, screening for severe anaemia and nutrition counselling. Additionally , maternal multiple micronutrient supplementation and specialized foods that offer energy protein supplements should be targeted at risk groups.

Implementation Rationale for SOGP 's New Maternal Nutrition Guidelines:

Comprehensive Nutritional Support: MMS and BEP provide a wider range of essential nutrients compared to IFA alone, ensuring that pregnant and lactating women receive balanced nutrition critical for their health and their babies' development.

Improved Maternal and Neonatal Outcomes: Adequate nutrition before, during, and after pregnancy can significantly enhance maternal and neonatal health outcomes. Proper nutrition reduces the risk of complications during pregnancy, promotes healthy fetal development, and supports optimal birth outcomes.

Alignment with Global Standards: Adopting MMS and BEP aligns Pakistan's maternal health guidelines with international best practices recommended by WHO and UNICEF. This alignment ensures that our healthcare practices are evidence-based and reflect the latest scientific advancements in maternal nutrition.

Objectives

1. Align with Global Standards: Implement MMS & BEP guidelines that are consistent with WHO and UNICEF recommendations to ensure our practices are up-to-date and evidence-based.
2. Improve Maternal and Neonatal Health: Reduce maternal and neonatal morbidity and mortality through comprehensive nutritional support, thereby enhancing overall health outcomes.

3. Education and Awareness: Enhance understanding among healthcare providers, postgraduate students, and pregnant women about the benefits of MMS and BEP, promoting better health practices.

Guidelines for MMS and BEP Implementation

MMS Supplement Composition

MMS should include, but not be limited to, the following micronutrients in recommended daily doses:

Iron: 30 mg
Folic Acid: 400 µg
Vitamin A: 800 µg
Vitamin D: 200 IU
Vitamin E: 15 mg
Vitamin C: 70 mg

Thiamine (B1: 1.4 mg
Riboflavin (B2): 1.4 mg
Niacin (B3): 18 mg
Vitamin B6: 1.9 mg
Vitamin B12: 2.6 µg
Zinc: 11 mg
Iodine: 150 µg
Selenium: 65 µg
Copper: 1.2 mg

BEP Supplement Composition

Protein	10.5 (g)
Retinol (Vit A)	525 (mcg)
Thiamine (Vit B1)	0.75 (mg)
Riboflavin (Vit B2)	1.57 (mg)
Niacin (Vit B3)	9.75 (mg)
Pantothenic Acid (Vit B5)	3 (mg)
Pyridoxine (Vit B6)	1.35 (mg)
Biotin (Vit B7)	45 (mcg)
Folates (Vit B9) DFE	247 (mcg)
Cobalamin (Vit B12)	2 (mg)
Ascorbate (Vit C)	60 (mg)
Cholecalciferol (Vit D)	11.2 (mcg)
Tocopheryl Acetate (Vit E)	12 (mcg)
Phytomenadione (Vit K)	20.2 (mcg)
Calcium (Ca)	400 (mg)
Copper (Cu)	1 (mg)
Iodine (I)	75 (mcg)
Iron (Fe)	7.5 (mg)
Magnesium (Mg)	112 (mg)
Manganese (Mn)	0.9 (mg)
Phosphorous (P)	337 (mg)
Potassium (K)	600 (mg)
Sodium (Na)	203 (mg)
Selenium (Se)	15 (mcg)
Zinc (Zn)	8.2 (mg)

2. Target Population

Pregnant & Lactating Women: All PLW women, regardless of age or parity, should receive MMS from the first trimester or as early as possible till 6 month of lactation .

Adolescents: Special attention to adolescent pregnant women due to increased nutritional needs.

3. Dosage and Administration

Daily Intake: One MMS tablet per day, ideally starting preconception and continuing through pregnancy and postpartum.
Counselling: Educate women on the importance of daily adherence to MMS.

4. Screening and Monitoring

MUAC Measurements: Use Mid-Upper Arm Circumference (MUAC) to screen for maternal undernutrition. Women with MUAC <23 cm should be prioritized for nutritional interventions, including BEP.
Health Records: Document MUAC measurements, MMS adherence, and outcomes in maternal health records.
Regular Check-Ups: Monitor haemoglobin levels, MUAC, and overall nutritional status during antenatal visits.
Feedback Mechanism: Implement a system for healthcare provider and patient feedback to continuously improve MMS implementation.

5. Training and Capacity Building

Healthcare Providers: Conduct training for obstetricians, gynecologists,PGs,medical students midwives, and primary healthcare providers on MMS & BEP benefits and administration.

Community Health Workers: Empower community health workers with knowledge and tools to promote MMS & BEP and conduct MUAC measurements at the community level.

6. Public Awareness Campaigns

Education Programs: Develop and distribute educational materials highlighting the importance of MMS & BEP .
Media Campaigns: Utilize media platforms to raise awareness among the general public about the transition from IFA to MMS.

7. Product Categorization

Product Types: Categorize MMS & BEP products based on their composition, ensuring compliance with WHO and UNICEF recommended nutrient levels.
Quality Assurance: Ensure all MMS & BEP products meet international standards for quality and safety.
Availability: Collaborate with pharmaceutical companies and health organizations to ensure consistent availability of MMS & BEP products nationwide.

8. Research and Data Collection

Ongoing Research: Promote research on the impact of MMS & BEP on maternal and neonatal outcomes in Pakistan.
Data Collection: Collect and analyze data to inform policy decisions and refine guidelines.

Detailed Implementation Plan

A. Preparation Phase

1. Stakeholder Engagement: Collaborate with key stakeholders including government agencies, NGOs, and health organizations to support the transition.
2. Policy Development: Develop and disseminate policy documents to support the transition from IFA to MMS & BEP.

B. Training Phase

1. Develop Training Materials: Create comprehensive training materials covering MMS & BEP benefits, administration, and monitoring.
2. Conduct Workshops: Organize workshops and training sessions for healthcare providers at various levels.
3.Community Health Training: Train community health workers on promoting MMS & BEP and conducting MUAC measurements.

C. Implementation Phase

1. Rollout MMS & BEP: Begin distributing MMS & BEP to healthcare facilities and ensure all pregnant women receive MMS & BEP.
2. MUAC Screening: Implement routine MUAC screening in all antenatal care visits.
3. Monitoring and Evaluation: Establish a robust system to monitor adherence, outcomes, and feedback.

D. Public Awareness Phase

1. Educational Campaigns: Launch campaigns to educate the public about the benefits of MMS & BEP.
2. Collaborate with Media: Work with media outlets to disseminate information on MMS & BEP.

E. Evaluation Phase

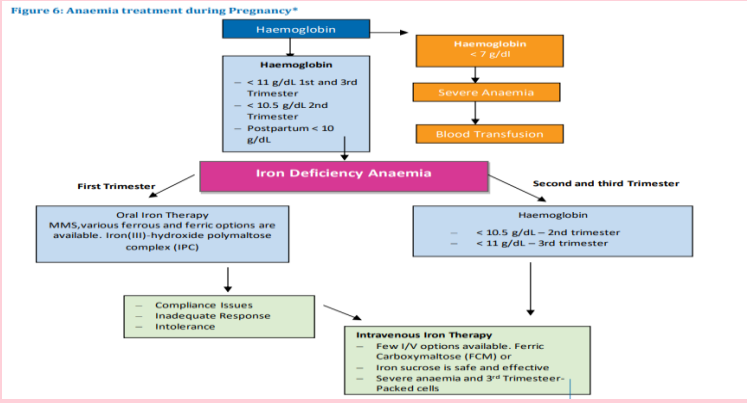
1. Data Analysis: Regularly analyze data on MMS & BEP coverage, adherence, and health outcomes.
2. Feedback Loop: Use feedback from healthcare providers and patients to make continuous improvements.

Integration into Medical Education

1. Curriculum Inclusion: Incorporate MMS & BEP guidelines into the curriculum for medical students, nurses, midwives, and postgraduate students.
2. Examinations: Include questions on MMS & BEP in exams to ensure knowledge retention.
3. Support Activities: Promote MMS & BEP at forums and events organized by SOGP to reinforce its importance.

Conclusion

The transition from IFA to MMS & BEP represents a significant advancement in maternal and neonatal healthcare. By adopting these guidelines, SOGP aims to improve pregnancy outcomes and align with global health standards. Continuous

Client Category	Client Identification	Recommended Product and duration/period
Under-nourished PLW & MWRA	PLW with MUAC less than 23 cm	BEP supplement: one sachet/day until MUAC attains ≥ (equal or greater than) 23 cm. Once MUAC measures ≥ 23 cm, MMS (once daily) will continue during the remaining period of pregnancy and lactation
PLW	All PLW irrespective of anaemia status	MMS (once daily) throughout pregnancy and first six months of lactation.
PLW	PLW with symptoms of anaemia/ Hb.<11g/dl as per the laboratory report	MMS (once daily) +IFA (once daily): IFA for anaemia treatment (additional iron should be provided while daily MMS are continued as a preventive measure throughout pregnancy, as would be done with IFA supplementation. Once haemoglobin concentration rises to normal (Hb ≥ 11g/L), MMS alone can be resumed. 
PLW	PLW with Hb less than 7g/dl as per the laboratory report	Blood transfusion recommended (packed cells)
PLW (With Calcium Deficiency)	Low level of calcium as per the laboratory report	MMS+ Calcium throughout the pregnancy period and first six months of lactation.
PLW (With Vitamin D Deficiency)	Low level of Vitamin D as per the laboratory report	MMS+ Vit D Injection
Adolescents	Girls (10-19 years of age)	Weekly IFA and six-monthly de worming (Albendazole (400mg)
Women of Reproductive Age (WRA)	Women (19-49 years of age)	IFA once daily

monitoring, education, and research will be essential to the successful implementation and sustainability of these guidelines.

According to Maternal Nutrition Strategy 2022-2027; Society for Obstetrics and Gynecology (SOGP) recommendations
Pregnant and lactating Women (PLW), Married Women of Reproductive age (MWRA), Iron Folic Acid (IFA), Mid-Upper Arm Circumference (MUAC)

These references provide a comprehensive basis for the transition from IFA to MMS and the incorporation of MUAC measurements into maternal health monitoring, aligned with global standards and recommendations.

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