HEALTHY MOTHERS HEALTHY BABIES

Country Profile: Bangladesh

Introduction

Bangladesh, one of the most densely populated countries in the world, continues to face significant maternal and child health challenges linked to micronutrient deficiencies, especially among pregnant and breastfeeding women, adolescent girls, and children under five years of age.[1] Anemia remains a significant public health concern, with prevalence among pregnant women at 38.6% (845,400) in 2023 and reaching as high as 56.6% in some subgroups.[2] Likewise, 11.22% of women were underweight in 2022.[3]

According to the World Health Organization (WHO) Global Health Observatory, stillbirth rates remain high at 20.37 per 1,000 total births (2023).[4] The prevalence of pre-term birth was 16.16% in 2020.[5] Low birthweight (LBW) affected 23% of newborns in 2020[6] in Bangladesh, which has the highest prevalence of LBW in the world.[7] Likewise, the infant mortality rate was 24.3 per 1,000 live births in 2023. Although Bangladesh has made progress in reducing childhood stunting and wasting, the prevalence of maternal anemia has shown no improvement or worsening situation, signaling gaps in current nutrition interventions.[8] In response to the pressing need for comprehensive strategies to combat micronutrient deficiencies among women, Bangladesh has effectively incorporated Multiple Micronutrient Supplementation (MMS) for pregnant women into its national public health policies and programs.[9]

Nutrition International's comprehensive cost-effectiveness analysis for Bangladesh indicates that transitioning from IFA to MMS would avert approximately 1.27 million disability-adjusted life years (DALYs)[1] and prevent 12,640 additional child deaths over 10 years, yielding benefits estimated to be 294 times the implementation cost.[10] Operational cost modeling suggests that switching to MMS, despite a slightly higher per-tablet cost, remains highly cost-effective: estimates place it at $39 per case of low-birthweight averted, $85 per case of preterm birth averted, $62–104 per case of Small for Gestational Age (SGA) case averted, and $239 per case of infant mortality averted (at 50% coverage).[11] Together, this evidence makes a compelling case for Bangladesh to continue scaling up MMS at the national level to achieve substantial improvements in maternal and neonatal health, given that other basic and underlying determinants of malnutrition also improve in tandem.

[1] A Disability Adjusted Life Year (DALY) represents one lost year of perfect health, calculated by aggregating the effect of a health issue on mortality and morbidity. Interventions seek to avert DALYs.

This country profile presents a concise overview of Bangladesh's status in transitioning from IFA supplementation to MMS for pregnant women. This document aims to inform policymakers, partners, and stakeholders of the current progress, challenges, and opportunities for further implementation of MMS as a part of maternal nutrition and health strategies.

MMS Policy and Regulatory Status

Bangladesh has been an early mover on MMS policy dialogue. The details of the development of the policy environment for MMS have been well documented by the Healthy Mothers Healthy Babies (HMHB) Consortium in "An enabling policy environment for multiple micronutrient supplementation: Lessons from Bangladesh, July 2024".[9]

The Government has endorsed or included MMS in:

a. National Strategy on Prevention and Control of Micronutrient Deficiencies 2015-2024,[12]
b. Second National Plan of Action for Nutrition 2016-2025,[13]
c. National Strategy for Adolescent Health 2017-2030,[14]
d. Operational Plan of National Nutrition Services, Ministry of Health and Family Welfare, through 2023.[15]

Global Alliance for Improved Nutrition (GAIN) is working in Bangladesh to scale up MMS anticipated that national policies, including the National Plan of Action on Nutrition (NPAN3), the 2nd National Nutrition Program (NNP), and the Essential Medicines List (EML), will include MMS and ensure long-term impact and sustainability.[16] Partners in Bangladesh working to implement and scale up MMS have identified opportunities to integrate MMS into nutrition policies and strategies by enabling a policy environment through successful collaboration and dialogue.[9] However, a costed operational plan for MMS implementation and scale-up for Bangladesh has not yet been developed.[17]

Implementation Status

Multiple formative research studies have been conducted in the last decade on MMS. Sight and Life (SAL) conducted supply readiness assessments in 2015 and 2019, and formative research for UNICEF in 2019.[15] SAL has also conducted consumer research to improve acceptability and adherence, as well as to support the deployment and refinement of digital tools to enable monitoring and course correction.[17] Various studies on barriers and enablers of MMS acceptability (e.g., social norms, product attributes), MMS uptake, adherence, and the exploration of delivery platforms have been conducted.[18] Thus, the introduction of MMS in Bangladesh follows a comprehensive systems approach and is supported by extensive implementation research, which began in October 2020.[15]

The government of Bangladesh supported two demonstration models for MMS to identify their feasibility in the Bangladesh context. Thus, MMS is being introduced through two platforms:

1. Pro Poor Public Sector Model

The first platform was through the Government of Bangladesh, supported by UNICEF, the Gates Foundation, and other nutrition partners. This model used a systems approach to freely distribute MMS through strengthened antenatal care services in two districts.[15]

2. Market-Based Private Sector Model

Whilst the second approach was the market-based, private-sector model, with MMS sales through private-sector pharmacies. GAIN coordinated this platform in partnership with Social Marketing Company and SAL, with the support of Children's Investment Fund Foundation (CIFF), and other nutrition partners. This model used a market-based approach, making MMS available through a nationwide network of pharmacies.[9] SMC currently sources MMS from a local manufacturer and is assessing additional manufacturing partners to strengthen supply security and foster a competitive procurement environment. This approach aims to enhance cost efficiency and support the long-term affordability and sustainability of MMS distributed through market-based models. SMC is also bundling MMS sales with calcium supplements (branded as Forbon) to ensure a comprehensive, aligned maternal nutrition offering throughout the antenatal period.

Both projects are ongoing and address implementation research outcomes, including adherence, coverage, feasibility, programmatic efficiencies, and cost differentials.[9] Both implementation research and major pharma companies producing MMS have adopted the United Nations International Multiple Micronutrient Antenatal Preparation (UNIMMAP) MMS formulation.[19]

In Bangladesh, several strategies have been implemented to optimize MMS outcomes as the program scales up.

- Development and prototyping of delivery approaches, including targeted social and behavior change communication (SBCC) strategies,
- Strengthening the MMS supply chain and distribution systems,
- Reinforcement of delivery platforms through health care workers' training,
- Integration of MMS distribution with other maternal nutrition interventions, such as balanced energy–protein (BEP) supplementation,
- Ongoing monitoring systems track program performance, while implementation outcome evaluations assess acceptability, feasibility, and sustainability.
- Active engagement of community health workers and midwives in MMS promotion.[15]

In addition to training health workers, initial training (pre-service) has also been provided to healthcare students.[17]

MMS Coverage and Utilization

Initially, the implementation research reported MMS coverage in two districts (3% of 64). In March 2021, the Directorate General of Drug Administration approved the UNIMMAP-MMS. Following this, Renate Ltd. began production of UNIMMAP MMS called "Full Care" in July 2021. The coverage and outcomes of the two implementation models, the pro-poor public sector and market-based approach, are different. MMS coverage was 90% under the pro-poor public-sector model, while IFA coverage was 52%. The adherence to MMS was 30%, and IFA was 12% (more than 180 tablets). The introduction of MMS has increased 4+ ANC visits from 23% to 37%.[9]

For the market-based private sector model, SMC distributed Full Care MMS to 64 districts in Bangladesh via over 76,000 unique pharmacies, selling more than 100 million tablets and reaching

around 710,851 pregnant women. The product is sold in blister packs at BDT 4 per tablet or BDT 720 for a 180-tablet course (US$6.80). As advertising is not allowed for this product, demand generation relies on pharmacist and provider training. Since 2022, 5,118 sessions have provided pregnancy care and nutrition counseling for 25,518 women nationwide.[9] In addition, door-to-door communication and campaigning, individual and group counseling in the communities have been conducted to improve MMS uptake.

From 2020 to 2028, SAL is supporting MMS implementation through:

- technical support to Market-based distribution of MMS: provides technical support and business development.
- consumer research for improving acceptability and adherence.
- digital strengthening: supporting the deployment and refinement of digital tools to enable monitoring and course correction[15].
- Product cost optimization for long-term affordability and sustainability.

Non-pregnant adolescents and postpartum women (e.g., first six months post-birth), independently of lactation status, are being considered as the target groups for MMS, in addition to pregnant women.[17] Furthermore, Bangladesh is one of the 15 countries that is to receive the packages of nutrition services, including MMS, within the UNICEF Maternal Nutrition Acceleration Plan[20]. The target being 200,000[2] pregnant adolescent girls and women in Bangladesh to receive nutritional services, including MMS, by the end of 2025.[20]

Key Program Actors and Partners

In 2020, the National Technical Committee (NTC) was established. It is chaired by the National Nutrition Services (NNS) and the Institute of Public Health and Nutrition (NNS-IPHN). NTC provided strategic and technical support to the government to implement and scale up MMS in the public sector. They also advocated for MMS to be included in the national standard ANC treatment guidelines and EML. NNS leads the NTC and is composed of representatives from the Ministry of Health and Family Welfare (MoHFW), the National Nutrition Council, the Obstetrical and Gynecological Society of Bangladesh, and other national and international partners. [18]

Likewise, the Children's Investment Fund Foundation funded a market-based approach. The Social Marketing Company (SMC) led nationwide implementation. SAL has been a business and technical

[2] United Nations Children's Fund (UNICEF). Improving Maternal Nutrition: An Acceleration Plan to Prevent Malnutrition and Anaemia during Pregnancy (2024–2025). UNICEF, New York, 2024 (Table 1: Target numbers of pregnant adolescent girls and women to receive the package of nutrition services, including MMS, by the end of 2025)

advisor to SMC and Global Alliance for Improved Nutrition (GAIN) as Policy Technical Advisor Group.[16] Thus, all the national and international partners working together in Bangladesh are listed *in* Table *1*:

Table 1: List of national and international partners working to scale up MMS in Bangladesh.[17]

National partners	International Partners
International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR, B)	Children's Investment Fund Foundation (CIFF)
Social Marketing Company (SMC)	GAIN (Global Alliance for Improved Nutrition)
	Nutrition International
	Sight and Life Foundation (SAL)
	UNICEF
	Vitamin Angels

Supply Chain

MMS products in Bangladesh's program were procured from international manufacturers and distributed through public procurements. In the market-based private sector model, Bangladesh is the first low- and middle-income country to produce UNIMMAP MMS locally for both domestic and export markets.[7] The major challenges for commercial supply through pharmacies are to meet the growing demand of the public health system while maintaining quality assurance and keeping prices affordable in the market.[17]

Monitoring, Evaluation, and Research

Bangladesh Demographic and Health Survey (DHS) and the routine Health Management Information System (HMIS) collect data on anemia and ANC indicators.[21]Pilot and social marketing programs used monitoring systems and evaluation surveys to capture MMS updates and birth outcomes.[22]. In July 2024, the HMHB Consortium published a case study on Bangladesh, evaluating the country's policy environment and highlighting lessons learned.

There are currently two research studies; details are below.

1. Evaluating the impact of a countrywide, market-based roll-out of multiple micronutrient supplementation on low birth weight in Bangladesh: protocol for a two-arm, quasi-experimental and mixed-methods evaluation study
2. Multiple Micronutrient Supplementation (MMS) Evaluation Among Bangladeshi Pregnant Women

Financing and Sustainability

The social marketing company's market rollout leveraged the partners' donor and technical support. Whilst for a public-sector transition, blended financing and donor bridge funding might be required.[17]

Challenges and Next Steps

In Bangladesh, scaling up of MMS requires a comprehensive package of technical and programmatic support to ensure successful scale-up. A sustainable business plan is required in Bangladesh. Integrating MMS into the National Essential Medicines List (EML) is a critical policy step, supported by implementation research to inform effective delivery models and program adaptation.[7]

The next major step is to conduct a costing analysis, develop a roadmap/plan for sustainable integration, and scale MMS programming. This can ensure consistent availability and quality that match public demand.

MMS Tools and Resources

1. Costing and Economic Analysis Tools

These resources guide policymakers and health program managers considering a transition from IFA to MMS. They offer practical tools and costing aids to support effective decision-making and planning.

a. A policy brief for Bangladesh, Cost-Effectiveness of Transitioning from Iron and Folic Acid to Multiple Micronutrient Supplementation for Pregnancy, Nutritional International, October 2019
b. A tool to aid decision-making transitioning from IFAS to MMS

2. Training materials and guidance documents

a) Technical Reference Materials: The Benefits of Multiple Micronutrient Supplements in Pregnancy Technical Brief for Policy Makers: Bangladesh

3. Situation and Policy Analyses and formative research

These resources offer comprehensive insights into the procurement and production of MMS, the planning cycles for national health initiatives, and key formative research findings from MMS pilot programs in Bangladesh.

a) An enabling policy environment for multiple micronutrient supplementation: Lessons from Bangladesh
b) Formative Research: Ensuring adequate demand and compliance of MMS in Bangladesh, Burkina Faso, Madagascar, and Tanzania
c) Situation analysis of procurement and production of multiple micronutrient supplements in 12 lower and upper-middle-income countries
d) Sight and Life Special Report: One MMS a Day and a Healthy Baby is on the Way: Building a market-based approach in Bangladesh
e) Sight and Life Special Report: Supply-Side Insights from Bangladesh, Madagascar, and Tanzania
f) Replacing iron-folic acid with multiple micronutrient supplements among pregnant women in Bangladesh and Burkina Faso: costs, impacts, and cost-effectiveness
g) Knowledge Byte 17: Multiple Micronutrient Supplementation (MMS) Policy and Program Experience of Bangladesh

h) Formative Research for the Introduction of Multiple Micronutrient Supplements in Bangladesh
i) A formative study of the sociocultural influences on dietary behaviors during pregnancy in rural Bangladesh

4. Clinical research on MMS

These papers detail the impact of maternal micronutrient supplementation during pregnancy in Bangladesh. They explore outcomes such as infant mortality, birthweight, gestational duration, and child development. Collectively, the research highlights the long-term benefits of MMS on the health and growth of mothers and children.

a) Effects of Prenatal Micronutrient and Early Food Supplementation on Maternal Hemoglobin, Birth Weight, and Infant Mortality Among Children in Bangladesh – The MINIMat Randomized Trial
b) Effects of prenatal micronutrient and early food supplementation on metabolic status of the offspring at 4.5 years of age. The MINIMat randomized trial in rural Bangladesh
c) Equity in adherence to and effect of prenatal food and micronutrient supplementation on child mortality: results from the MINIMat randomized trial, Bangladesh
d) Effect of Maternal Multiple Micronutrient vs Iron–Folic Acid Supplementation on Infant Mortality and Adverse Birth Outcomes in Rural Bangladesh: The JiVitA-3 Randomized Trial

5. Other resources in Bangladesh

These are videos and interviews exploring the implementation of MMS in Bangladesh.

a) Women's Voices from Bangladesh
b) Coffee and Chai Chat: MMS Experience in Bangladesh
c) Knowledge Byte 8: Country Experience from Bangladesh – Market-Based Approach

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The information and country-level data provided herein were received from our partners as of 2025 and are shared with permission for public dissemination. This profile will be updated periodically. If you have updates or additional information to share, please fill out this feedback form. For questions, contact us at HMHB@micronutrientforum.org.

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