HEALTHY MOTHERS HEALTHY BABIES

Micronutrient FORUM

2nd Africa Maternal Nutrition and Multiple Micronutrient Supplementation (MMS) Technical Meeting

A Unified Path to MMS Success in Africa

REPORT

#EmpowerHer

Acknowledgements

This report summarizes the main discussion points, key takeaways and recommended priority actions of the 2nd regional Maternal Nutrition and MMS meeting in Africa. This meeting is a collective effort of the members and partners of the Healthy Mothers Healthy Babies (HMHB) Consortium who are passionate about advancing maternal nutrition and especially the provision of Multiple Micronutrient Supplements to pregnant women in Low- and Middle-Income Countries (LMICs).

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Contents

Abbreviations

AAU	Addis Ababa University
AfDB	African Development Bank
AFD	Agence Française de Développement
ALNI	African Leaders for Nutrition Initiative
ANC	Antenatal Care
APHRC	African Population & Health Research Centre
AUC	African Union Commission
BMGF	Bill & Melinda Gates Foundation
CECM	Chief Executive Committee Member
CHAI	Clinton Health Access Initiative
CIFF	Children's Investment Fund Foundation
CNAS	Continental Nutrition Accountability Scorecard
CNDN	National Council for Nutrition Development
DHIS	District Health Information System
DSME	Direction de la Santé de la Mère et de l'Enfant
ECF	Eleanor Crook Foundation
EML	Essential Medicines List
EPHI	Ethiopian Public Health Institute
ESARO	Eastern and Southern Africa Regional Office
FAO	Food and Agriculture Organization
FAQ	Frequently Asked Questions
FCDO	Foreign, Commonwealth and Development Office
FDA	Food and Drug Administration
FDS	Food and Drug Services
FHI	Family Health International
FUM	Farmers Union of Malawi
GAIN	Global Alliance for Improved Nutrition
GHS	Ghana Health Service
GNC	Global Nutrition Cluster
HMIS	Health Management Information System
HMHB	Healthy Mothers Healthy Babies
HKI	Helen Keller International
HPT	Health Products and Technologies
IASP	African Institute of Public Health
IFA	Iron and Folic Acid
IR	Implementation Research
IRC	International Rescue Committee
IS	Implementation science
JHU	Johns Hopkins University
KEMRI	Kenya Medical Research Institute
KEMSA	Kenya Medical Supplies Agency
KMTC	Kenya Medical Training College
LMICs	Low- and Middle-Income Countries
LSHTM	London School of Hygiene and Tropical Medicine

MIYCN	Maternal, Infant, and Young Child Nutrition
MMS	Multiple Micronutrient Supplementation
MMS TAG	Multiple Micronutrient Supplementation Technical Advisory Group
MNF	Micronutrient Forum
MOH	Ministry of Health
N4G	Nutrition for Growth
NCDA	National Child Development Agency
NGO	Non-governmental organization
NPHCDA	National Primary Health Care Development Agency
PARN	Projet d'Amélioration des Résultats Nutritionnels
PRSS/ASN	Projet de Renforcement de Soins de Santé primaires pour l'Amélioration de la Santé et de la Nutrition
Q&A	Question and Answer
R4D	Results for Development
RBC	Rwanda Biomedical Centre
SABED	Social and Behavioral Insights Design
SBCC	Social and behavior change communication
SDGs	Sustainable Development Goals
SOGON	Society for Obstetrics and Gynecologists of Nigeria
SUN	Scaling Up Nutrition
TFNC	Tanzania Food and Nutrition Centre
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UNIMMAP	United Nations International Multiple Micronutrient Antenatal Preparation
USAID	United States Agency for International Development
USIU	United States International University
USP	United States Pharmacopeia
WFP	World Food Program
WHA	World Health Assembly
WHO	World Health Organization

Executive Summary: Call to Action

Multiple micronutrient supplementation (MMS)* is widely recognized as a transformative, cost-effective intervention that enhances maternal health and birth outcomes. There is growing momentum to commit to improving the nutrition, health, and lives of mothers and babies in Africa by adopting and scaling up MMS. Its widespread adoption is an urgent priority for advancing health equity and improving lives across the continent. Since the 2023 Regional Meeting in Addis Ababa, which kickstarted the implementation of MMS on the ground, significant progress has been achieved.

> *"It's from the 2023 meeting in Ethiopia that we kickstarted implementing MMS on the ground...from the evidence presented and discussed at the meeting, we gained a lot of buy-in from stakeholders."*
>
> **Phoster Chimbizgani Kachali, Deputy Director Nutrition, Ministry of Health, Malawi**

The 2nd Africa Maternal | Nutrition and MMS Technical Meeting, held in Nairobi, Kenya, in October 2024, marked a pivotal milestone as African countries increasingly took ownership of MMS agendas, driving forward their implementation efforts and fostering peer learning through a vibrant community of practice.

Key stakeholders, including the African Union Commission, the African Development Bank, philanthropic donors, non-governmental organizations, and country representatives, have demonstrated unwavering commitment to maternal nutrition and MMS. These partnerships, alongside new tools, resources, and supply chain capacity, underscore the momentum to scale-up MMS across the continent.

> *"MMS is a game-changer in reducing undernutrition, and given its low cost and high impact, countries should move quickly to adopt MMS."*
>
> **Sir Christopher Hohn, Co-founder, Children's Investment Fund Foundation**

Many countries are transitioning to integrate and scale-up MMS within maternal health services, recognizing its benefits and leveraging available resources. **Access to financial resources, technical assistance, and product supply are increasingly available to governments striving to develop long-term, sustainable plans to improve maternal nutrition.** This growing momentum offers an unparalleled opportunity for African nations to strengthen maternal health services, improve birth outcomes, and ensure that women and children thrive.

Reflecting on collective expertise, experiences, and recommendations of delegates from across Africa, the Nairobi meeting resulted in a Call to Action, which charts a shared path for accelerating the adoption and scale-up of maternal nutrition interventions, notably MMS as a part of essential ANC services to improve maternal and child health outcomes in Africa.

*MMS refers to the United Nations International Multiple Micronutrient Antenatal Preparation (UNIMMAP) MMS, which is an internationally accepted and standardized formulation that contains 15 essential vitamins and minerals, including iron and folic acid in recommended doses.

Key Recommendations

1. Adopting Context-Specific Approaches

The scale-up of MMS is an iterative, non-linear process that must be tailored to each country's unique context, including delivery methods, production capacity, and policy requirements while adhering to global best practices.

2. Building Government Ownership and Advocacy

The foundation for MMS success lies in government ownership, strategic partnerships, and advocacy from start to scale-up. Early-stage efforts, such as establishing a Technical Advisory Group and including MMS in national Essential Medicines Lists (EMLs) are critical for sustained scale-up. High-level advocacy from regional leaders can amplify these efforts, creating the political will necessary for long-term integration.

3. Integrating MMS into ANC Services and Community-Based Delivery Platforms

MMS is an opportunity to improve maternal nutrition services within ANC, complementing existing frameworks rather than introduced as a stand-alone intervention. Delivery strategies should leverage both health center- and community-based platforms to maximize reach, particularly in underserved areas. Experiences and lessons learned must be documented on an ongoing basis.

4. Strengthening Supply Chain

Since the July 2023 meeting in Addis, MMS supply chain capacity has increased significantly. Today, the global production capacity for MMS is sufficient to meet the current demand for MMS product, and efforts to boost regional and local manufacturing to meet anticipated future demand are ongoing. Continued investment in local manufacturing and logistics infrastructure is critical. Strengthening regional supply chains will ensure that MMS availability aligns with national strategies and demand forecasts.

5. Sharing Knowledge and Resources

Comprehensive tools and funding mechanisms for MMS programming, such as UNICEF's Maternal Nutrition Acceleration Plan, the Child Nutrition Fund, the Global Investment Roadmap, R4D's MMS Roadmap Costing Tool, Nutrition International's MMS Cost-Benefit Tool and Cost of Inaction Tool, are now available to provide critical support for countries navigating scale-up challenges. A growing array of resources, including evidence-based advocacy materials by HMHB and FurtherWith15, can accelerate learning among countries by exchanging evidence and implementation science research, delivery strategies, and insights on demand generation.

6. Leveraging Global Advocacy Opportunities

The African Union Regional Nutrition Strategy and the upcoming Nutrition for Growth Summit (N4G) offer important opportunities to elevate maternal nutrition and MMS on global and national policy agendas and increase financial investments towards improving maternal health. The SUN Global Gathering in 2025 will serve as an important moment to reflect on the commitments to MMS and maternal nutrition made at N4G while assessing areas that may require course correction.

The undeniable benefits of MMS, combined with strong global and regional commitment, present a unique window to transform maternal and child health across Africa.

> *"MMS is not just a supplement it is a statement of our values. It affirms our commitment to giving every child the best start in life."*
>
> **George Ouma, Coordinator, African Leaders for Nutrition, African, Development Bank Group**

#EmpowerHer #EmpowerAfrica

Introduction

Good maternal nutrition is critical for the health and wellbeing of women and their children, and the foundation for education, equality, and economic prosperity of families, communities, and nations. Pregnant women are particularly vulnerable to micronutrient deficiencies, with serious consequences for the mother and the baby. Currently, malnutrition disproportionately affects women and girls, and micronutrient deficiencies affect two in three women of reproductive age, with the prevalence being even higher in Sub-Saharan Africa.[1]

To break the intergenerational cycles of poverty and inequality, proven maternal nutrition interventions are essential. A **comprehensive essential package** – including nutrition counseling, monitoring of maternal weight gain, antenatal MMS, deworming and malaria prevention, nutritional status screening, and balanced energy-protein (BEP) supplementation – plays a critical role in addressing maternal malnutrition and associated risks. Such an integrated approach aligns with global frameworks like UNICEF's Maternal Nutrition Acceleration Plan, emphasizing the need for evidence-based solutions to ensure the health and well-being of mothers and their babies.

The 2nd Africa maternal nutrition and MMS technical meeting specifically discussed MMS, which is a proven, evidence-based intervention that improves maternal health and birth outcomes. Transitioning from iron and folic acid (IFA) to MMS in ANC is increasingly recognized as transformative in helping mothers and babies to thrive.

The technical meeting had the following objectives:

1. To assess country readiness for MMS adoption/ scale-up and share high-level updates across countries.
2. To build multi-country consensus and alignment to galvanize the momentum, including forming communities of practice.
3. To identify barriers/enablers to MMS scale-up and strategic next steps by country and region.
4. To promote women's empowerment, equity, and inclusion in implementation of maternal nutrition policies and programs, ensuring that gender considerations are integrated into all aspects of (MMS) policy, advocacy, and implementation.

Previously, the Healthy Mothers Healthy Babies Consortium (HMHB) and partners organized regional meetings on maternal nutrition and MMS in Asia (Indonesia, 2022) and Africa (Ethiopia, 2023). These meetings have generated tremendous momentum, placing MMS programming on the national nutrition agendas of multiple countries.

> *"If we don't improve the nutritional status of women during pregnancy, we set their children on the wrong trajectory for the rest of their lives."*
>
> **Saskia Osendarp, Executive Director, Micronutrient Forum**

1 **Source:** Lancet Glob Health. 2022. Micronutrient deficiencies among preschool-aged children and women of reproductive age worldwide: a pooled analysis of individual-level data from population-representative surveys. Nov;10(11):e1590-e1599

The 2nd Africa Maternal Nutrition and MMS Technical Meeting was held in Nairobi, Kenya from 16-18 October 2024. It was organized by HMHB in collaboration with the Kenyan Ministry of Health. Themed, #EmpowerHer: A Unified Path to MMS Success in Africa, the invite-only event gathered over 130 nutrition and reproductive health leaders from 18 African countries, accompanied by their implementation or development partners including UNICEF, and funders (See **Annex A for the complete list of participants**).

Adopting a country-centric, solutions-focused approach, delegates focused on assessing country readiness for MMS introduction and scale-up, building (multi) country consensus and alignment for collective action. Technical working groups and communities of practice were formed to empower countries to drive their MMS agenda within the broader framework of improving maternal health and nutrition and promoting women's empowerment, equity, and inclusion in the implementation of policies and programs (See **Annex B – Meeting Program**).

Key institutions and funders, such as the African Union Commission, the African Leaders for Nutrition Initiative, and the African Development Bank, expressed strong support for maternal nutrition and MMS programming. Initiatives like **UNICEF's Maternal Nutrition Acceleration Plan**, the Child Nutrition Fund, and the World Bank's updated Investment Framework for Nutrition 2024 alongside new advocacy and implementation tools and resources reinforced momentum.

Many countries are building upon pilot projects and leveraging implementation science to scale-up MMS programming, marking a key milestone in fulfilling the Abidjan Declaration (December 8, 2022) to improve maternal and child nutrition in Africa. With financial and technical support increasingly available, countries are equipped to overcome barriers to sustainable MMS programming success.

This report outlines the country-specific, MMS-related progress, challenges and strategies reported by countries. Further, this report, presents outcomes of discussions by participants of the meeting regarding financing opportunities, strategies to enhance adherence and acceptability, evidence-based advocacy for supportive policies, and tools to accelerate MMS adoption and scale-up in Africa.

> *"No woman should suffer from micronutrient deficiencies because of where she lives, and no child should be born underweight."*
>
> **Richard Matikanya, Deputy Executive Director, CIFF Africa**

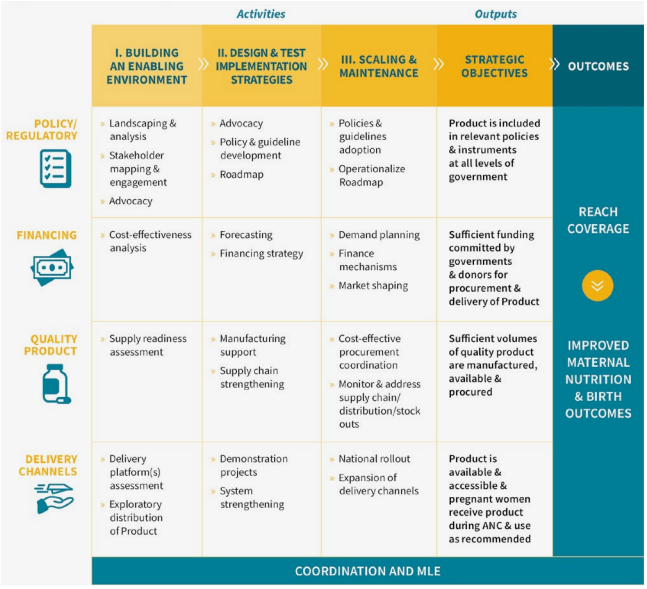
Mapping Country Progress

A Framework for MMS Introduction and Scale-up

A framework for transitioning from IFA to MMS at country level[2] has been developed based on previous experience introducing nutrition supplements and maternal health products in select countries. The framework identifies three phases of the country's progress:

1. Building an Enabling Environment;
2. Design & Test Implementation Strategies; and
3. Scaling and Maintenance.

Further, it details four pillars of enablers, objectives, and activities for governments, donors, and implementing partners to consider, fund, and adapt.



- **Appropriate Policy and Regulation environment:** to support the procurement and distribution of MMS in health systems as the standard of care. Includes the inclusion of MMS in national Essential Medicines Lists and ANC guidelines and developing costed roadmaps for scaling and securing support.
- **Financing:** Create phased strategies with decreasing donor funding and increasing domestic funding and using access to the Child Nutrition Fund to help support MMS product financing to achieve long-term sustainability.
- **Quality Product:** Ensure quality MMS through supply chain assessments, reliable manufacturers, demand forecasting, and stock monitoring.
- **Delivery Channels:** Strengthen ANC systems by improving coverage, training health workers, and integrating MMS into ANC services.

Considerable progress has been made in several countries since the first Africa Meeting in Addis Ababa in 2023. Country progress profiles (**Annex D: Country Profiles**) based on this framework showcase readiness for scale-up and outline the next steps for each country. The key challenges for each of the four framework pillars and proposed solutions, identified by country stakeholders, are summarized below.

Key Challenges and Proposed Solutions

1. **Policy and Financing:** The primary challenge identified in country readiness assessments is the lack of clarity in WHO's recommendation on MMS; addressing this requires not only advocacy but also robust evidence generation, as undertaken by the MMS-TAG, alongside ongoing dialogue with WHO to support informed decision-making. Additionally, the reliance on short-term external funding hampers long-term planning and scaling of MMS programs. To address these issues, it is crucial to advocate for MMS to be included within universal healthcare packages and develop sustainable financing mechanisms. This could involve leveraging domestic resource mobilization, building partnerships, and aligning MMS programs with health insurance schemes.

2 Healthier Pregnancies and Brighter Futures for Mothers and Babies: A global investment roadmap for multiple micronutrient supplementation; MAY 2024.

Multi-year financing strategies that gradually reduce reliance on donors while increasing domestic contributions are essential for ensuring long-term success.

2. **Supply Chain and Delivery:** Logistical challenges, particularly in decentralized or remote healthcare settings with limited infrastructure, impede the distribution of MMS. Inconsistent supply chains, gaps in healthcare worker training, and inadequate monitoring systems further complicate delivery, reducing the effectiveness of MMS programs and threatening continuity of care. To improve this, regional production hubs should be developed to enhance cost-effectiveness and ensure timely distribution. Additionally, healthcare workers must receive training in MMS delivery as part of broader maternal nutrition programs, and logistics and stock monitoring systems need to be strengthened to prevent stock-outs and maintain consistent product availability.
3. **Demand Generation:** Misconceptions about MMS, such as concerns over potential adverse side effects, create significant barriers to adherence, while infrequent ANC visits and low attendance rates further hinder its effective delivery.

To increase demand, human-centered research design can help address these misconceptions and cultural resistance. Integrating MMS promotion into maternal health education and ANC services, along with emphasizing the importance of regular ANC visits, will help normalize MMS use and increase uptake. Educating health workers and communities about the health benefits of MMS and fostering behavior change will be key to overcoming demand-related barriers and ensuring that pregnant women benefit from this critical intervention.

Stakeholders emphasized the importance of cross-country learning, multi-sector partnerships, and sustained support from global donors and national governments. These strategies collectively aim to create an enabling environment for MMS implementation, ensuring that it can be scaled effectively and sustainably to improve maternal and child health outcomes.

Building Supportive Policy and Regulatory Environments Through Evidence-based Advocacy

The Landscape of Maternal Nutrition Policies in Africa

Africa's maternal nutrition strategies are framed within the African Union Nutrition Agenda, which promotes multisectoral collaboration, knowledge sharing, and resource mobilization. This policy landscape offers good opportunities to introduce and scale MMS. Key initiatives from this discussion are included below:

- **Malabo Commitment (2014):** Targeting reductions in stunting and underweight
- **Africa Regional Nutrition Strategy (2016-2025):** A guiding framework for regional nutrition efforts
- **Continental Scorecard for Nutrition (2019):** Tracking progress on nutrition goals
- **African Leaders for Nutrition Initiative (2018):** Advocating for high-level leadership in nutrition

Aligned with Agenda 2063, these efforts aim to address anemia, adolescent nutrition, and the humanitarian-development nexus. However, progress toward the Malabo and World Health Assembly (WHA) nutrition targets remains insufficient, requiring increased political leadership, multisectoral action, and domestic investment in nutrition.

Cost-Effectiveness and Cost of Inaction

Cost-benefit analyses revealed that undernutrition costs Africa $153 billion annually (5.3% of gross national income) while achieving WHA nutrition targets could yield $70 billion in annual economic benefits. Specific findings from this discussion are included below:

- Scaling MMS in Nigeria to 30% coverage over 10 years could avert 41,000 child deaths and 2.8 million disability-adjusted life years.
- The 2023 Copenhagen Consensus ranked MMS as the top nutrition intervention for achieving Sustainable Development Goals.
- A Harvard-Nutrition International study found MMS could reduce non-communicable diseases and malnutrition's double burden globally.

These findings offer strong supportive arguments in favor of MMS and can be leveraged for advocacy at national and regional level.

New UNICEF/GNC Guidelines for Humanitarian Settings

The new UNICEF/GNC Guidance to Protect the Nutrition of Women and Adolescent Girls in Humanitarian Settings focuses on six nutrition intervention programs: Nutrition Screening, Macronutrient Supplementation, Micronutrient Supplementation, Nutrition Education and Counselling, Nutrition-responsive Social Protection, and Women's Empowerment and Gender Transformative Program. The guidance recommends providing MMS to all pregnant and breastfeeding women, as well as adolescent girls, in humanitarian settings; alternatively, if MMS is not available, IFA should be used.

Evidence-based Advocacy and Tools

The Global MMS Technical Advisory Group (MMS TAG), comprising 18 experts, hosted by HMHB supports ANC programs, addresses research gaps, and offers technical guidance, e.g., on the continued use of MMS during anemia treatment in pregnant women. Recent findings show that MMS with 30 mg iron is as effective as IFA with 60 mg in preventing anemia and neonatal deaths as well as improved birth outcomes across gestational age assessment methods.

The scientific evidence synthesized by the MMS-TAG supports the use of MMS and provides concrete answers to questions raised by national decision makers such as, FAQ Brief on MMS.

A range of advocacy tools are available for national decision-makers, implementers, funders, and partners:

- HMHB Website
- Knowledge Hub
- Advocacy Resource Center
- Knowledge Bytes
- Women's Voices Films
- Coffee and Chai Chats Registration
- MMS World Map of Activities

The new campaign, "Further with 15," promotes MMS's benefits, emphasizing its 15 essential micronutrients compared to IFA's two, with resources aimed at national decision-makers.

Including MMS in National Essential Medicines List: Nigeria Case Study

The inclusion of MMS into the WHO Model List of Essential Medicines (EML) was a milestone that encouraged many countries to include it in their national EMLs. Using Nigeria's example, the process of including MMS in the Essential Medicines List (EML) was illustrated. The process begins with an application letter addressed to the Coordinating Minister of Health and Social Welfare, directed to the Director of Food and Drug Services (FDS), accompanied by the product profile and relevant information. The FDS reviews the application for completeness and forwards it to the National Drug Formulary/Essential Medicines List Review Committee. The applicant may then be invited to be present at a committee meeting, where a decision is made on whether to include the medicine or not. Other countries can use this as an example to include MMS in their own EMLs.

Financing MMS Programming

Global Support for Country Initiatives

UNICEF presented its Improving Maternal Nutrition Acceleration Plan which focuses on scaling up a package of essential maternal nutrition interventions with MMS programming at the center of its strategy. This initiative targets 16 priority countries (*Afghanistan, Bangladesh, the Bolivarian Republic of Venezuela, Burkina Faso, Ethiopia, Madagascar, Mongolia, Myanmar, Nepal, Nigeria, Pakistan, the Philippines, Rwanda, Somalia, Sri Lanka, and the United Republic of Tanzania*), aiming to reach 16 million pregnant women by 2025. The plan is designed to serve as a proof of concept for taking MMS programming to scale in diverse contexts, including humanitarian settings. It emphasizes integrating MMS with broader ANC services to address barriers like limited access, inconsistent counseling, and inadequate service quality that have historically hindered IFA programming. Each participating country has developed a tailored implementation plan and aspirational targets to ensure effective rollout and monitoring of MMS delivery, fostering shared learning and evidence generation for future programs.

The Child Nutrition Fund, led by UNICEF, was showcased as a coordination and financing mechanism that seeks to support maternal and child nutrition programming, including MMS. This fund pools contributions from multiple donors to ensure the sustainable procurement and distribution of MMS across targeted high-needs countries. By enabling innovative financing mechanisms, the fund helps countries transition from IFA supplements to MMS while addressing challenges related to affordability and accessibility. The fund's design emphasizes long-term viability by supporting domestic resource mobilization and encouraging local partnerships, ensuring that maternal nutrition programs remain a priority even as global funding priorities shift. The Child Nutrition Fund aims to reach at least 100 million 70 million pregnant women and girls with essential nutrition services including essential micronutrients every year by 2030.

Global partnerships have aligned to enhance maternal nutrition and support MMS adoption as a standard intervention. The Healthier Pregnancies and Brighter Futures Framework, developed by the Gates Foundation, CIFF, Kirk Humanitarian and Eleanor Crook Foundation, provides strategic guidance for scaling up MMS programming. Additionally, the World Bank's updated Investment Framework for Nutrition emphasizes MMS as a cost-effective, high-impact solution for improving maternal and child health.

CIFF has demonstrated a strong commitment to supporting MMS implementation, including financing the meeting and openly inviting countries to seek investment for their programs. The MMS Roadmap Costing Tool, developed by Results for Development, helps countries estimate the costs of introducing and scaling up MMS over a 5-year period or shorter. This flexible, user-friendly tool organizes implementation activities into standard cost categories and provides detailed outputs, including total costs by year, cost category, type of cost, and cost per pregnant woman reached annually. Users can input variables such as target population and MMS coverage to estimate the number of pregnant women reached. The tool also includes areas like research and pilots, product development, supply chain, training and service delivery, demand generation, coordination and advocacy, local market shaping, and monitoring and evaluation. Costs are categorized as one-time or recurrent. The tool is intended to be part of an ongoing process, helping countries model different scenarios for implementation and financing plans. The tool is accompanied by user instructions and support resources available on the Results for Development website, including a demo, webinar recording, and contact details for further assistance.

These initiatives collectively aim to institutionalize MMS programming within national health systems, ensuring that its benefits extend to all women regardless of context or economic conditions.

Increasing Domestic Financing for MMS Scale-up

The following strategies and actions were shared for increasing domestic financing for MMS scale-up:

1. **Leveraging the Government System:** To ensure sustainable access to MMS, it is critical for central and local governments to increase domestic financing and prioritize nutrition, including access to MMS in their national and subnational health plans and budgets.

   The first step involves making state/county officials, including those in agriculture, environment, and education, aware of the interconnectedness of nutrition with broader health outcomes. Encouraging cross-sector collaboration at the state/county level can help pool resources from multiple departments (e.g., agriculture, water, education) into a single, integrated nutrition funding basket. This approach would enable the state/county to allocate resources more effectively and ensure the sustainability of MMS programs.

2. **Involving Elected Local Government Officials:** Local elected representatives control the allocation of the state's/county's budget and must be engaged in the process of advocating for nutrition-related funding. Educating the state/county assembly on the importance of MMS for reducing maternal anemia, improving infant health, and preventing long-term developmental issues will be key to securing their support for increased financing. Actively involving local government officials in decision-making about nutrition policies can help drive financial commitment for MMS programming at the county level.

3. **Demonstrating Clear Outcomes and Accountability:** To secure ongoing and increased funding for MMS programming, it is essential to establish clear, measurable outcomes from the start and ensure that these results are communicated effectively. Monitoring the outcomes of MMS programs, such as coverage, acceptability, and adherence can help build the case for continued investment. Integrating MMS into existing systems rather than creating parallel systems is critical for ensuring long-term sustainability and efficiency in resource utilization. Ensuring that outcomes are measurable and documented will demonstrate the effectiveness of MMS in improving health and incentivize further domestic investment.

4. **Aligning with Broader Health and Development Goals:** Addressing nutrition requires a broad, integrated approach. MMS can be positioned as a key intervention in broader national and sub-national health priorities, such as reducing maternal mortality, improving child health, and addressing food insecurity. By aligning MMS with national and sub-national development goals and frameworks, counties are more likely to allocate funding for MMS within existing budgetary frameworks.

   This strategy would involve presenting MMS as not just a health issue, but a multi-sectoral challenge that touches on agriculture, education, and water, making it easier to mobilize a wide range of funding sources.

5. **Strengthening Partnerships for Resource Mobilization:** To increase domestic financing for MMS, it is important to strengthen and expand partnerships with both local and international non-government organizations, development partners, and the private sector. These partnerships can provide technical expertise, funding support, and advocacy to help secure more domestic resources for MMS scale-up.

Advancing Country MMS Plans Within Broader Contexts

1. **Commitments for Scaling MMS Programming:** The upcoming Nutrition for Growth Summit 2025 in Paris, France presents an opportunity to elevate critical issues on the nutrition agenda, as many countries are falling short of the 2025 and 2030 nutrition targets. Spotlighting women's nutrition, which has lagged for decades, and committing to realistic goals such as anemia reduction and improving maternal nutrition packages is critical at such key global moments. Integrating specific maternal nutrition commitments into the broader Nutrition for Growth vision and roadmap and making sure they are measurable and aligned with national priorities is also critical.
2. **Leveraging Civil Society:** Civil society particularly in East and Southern Africa can be leveraged to develop an accountability framework, create position papers with successful examples from other countries, and mobilize stakeholders to secure commitments and ensure their fulfillment.
3. **Nutrition Visibility and Policy:** Elevating nutrition's profile is challenging in a political landscape focused on visible investments, like hospitals. Using compelling visuals, such as videos, and messaging that connects maternal health, child development, and long-term economic outcomes can raise awareness and prioritize nutrition at the national level. Integrating MMS into standard ANC services is also critical.
4. **Costing Tools for Commitment:** The MMS Roadmap Costing Tool by Results for Development (R4D) supports countries in defining realistic targets by estimating the number of women that can be reached within allocated budgets. Implementation timelines vary by country, influencing the scale-up and impact of MMS programs. Harmonizing costing tools and engaging a variety of stakeholders, including obstetricians and gynecologists, to ensure comprehensive planning for maternal nutrition is recommended. Streamlined, realistic costing tools are needed to avoid over or underestimation.

Ensuring High-Quality MMS Production & Supply

The discussions highlighted the critical role of product specifications, local manufacturing, supply readiness, and regulatory frameworks in ensuring the availability and quality of UNIMMAP MMS. These efforts are essential for meeting the growing demand in LMICs while maintaining affordability, quality, and supply efficiency.

Product Specifications for Standardized UNIMMAP MMS

A standardized, interchangeable product is critical to meet the expectations of both buyers and manufacturers, particularly as demand for MMS rises in LMICs. The Consensus Specification for UNIMMAP MMS, aligned with UNICEF's technical requirements, was identified as a key enabler for facilitating product standardization. Regional manufacturing hubs were proposed as a cost-effective and efficient solution for meeting supply, quality, and cost requirements. A growing network of regional manufacturers are adopting these specifications, participating in the US Pharmacopeia verification program, and utilizing regulatory frameworks as a means to expand opportunities across both public and private markets.

Local and Regional Manufacturing: Opportunities and Barriers

Local production was presented as a strategy to support resilient healthcare systems by strengthening economies, diversifying supply, and reducing reliance on international chains. Local manufacturing is often a preference of national governments as a strategy to strengthen their economy and healthcare systems, but significant challenges persist, including cost competitiveness, high quality demands, manufacturer inexperience, inadequate capacity, regulatory hurdles, and market limitations that may hinder sustainable investment. For instance, the classification of UNIMMAP MMS as a drug or supplement varies by country, influencing manufacturing and export requirements.

DSM-firmenich has advanced local production in South Africa, supported by 24 months of stability data to facilitate technical transfers to new manufacturers. Key factors for successful national supply strategies include effective policy frameworks, stringent regulation, robust manufacturing practices, and efficient procurement and distribution systems.

UNIMMAP MMS classification varies by country (e.g., a Category A medicine in South Africa due to iron content). Exporting may require specific documentation and face tariffs or raw material restrictions. Manufacturing must meet strict quality standards, including extended stability testing, which can take up to 36 months, with production timelines influenced by local conditions.

Supply Readiness and Challenges in the African Region

The need to build a robust supplier base for MMS in Africa was underscored. Current supply, including 30-count blister packs and 100/180 tablet bottles, meet existing demand. Moreover, efforts are underway to expand manufacturing in LMICs to meet the growing demand, reduce costs and promote local economic benefits. Key requirements for MMS production include adherence to the UNIMMAP formula, qualified pharmaceutical facilities, compliance with United States Pharmacopeia (USP) dietary supplement monographs, a 24-month shelf life, and appropriate packaging.

Despite these measures, several challenges persist:

- High costs and long durations of stability studies
- Limited supplier availability
- Unpredictable demand influenced by fragmented funding and poor forecasting

Expanding local production was identified as a potential solution to enhance cost efficiency and product acceptability. However, it faces obstacles such as higher production costs, limited capacity, and stringent regulatory requirements.

Regulatory Frameworks: Drug vs. Supplement

The regulatory landscape for MMS was outlined, emphasizing the different requirements for registration as a food supplement or registration as a medicine. In Ethiopia, for example, high-risk food products such as nutritional supplements require rigorous pre-market registration to ensure quality and safety. This process involves stability studies, Certificates of Analysis, Good Manufacturing Practices certification, and other technical documentation. In contrast, lower-risk products undergo a simpler notification process.

Key regulatory challenges include:

- Issues with imported products
- Limited laboratory capacity for testing
- Inconsistent technical documentation and product standards
- Gaps in professional expertise

The classification of MMS as either a drug or supplement also affects tax exemptions, inspection protocols, and labeling requirements, further complicating the regulatory process. For instance, a representative of Ethiopia Food and Drugs Administration informed the attendees that in Ethiopia, when MMS is registered as a drug/medicine, then it is tax exempt whereas when MMS is registered as a supplement it is not.

A unified approach to MMS production and regulation is required. Broad use of the Expert Consensus Specification, investment in manufacturers on the African Continent that can join the network of regional manufacturers globally, streamlined and harmonized regulation of MMS across countries are all pivotal to addressing the growing demand for MMS. Overcoming these challenges will require coordinated efforts across stakeholders, supported by robust policies, technical expertise, and sustainable financing mechanisms.

Strengthening Delivery Platforms

Lessons from Ethiopia

Ethiopia's MMS program has expanded from an initial 21 districts (Woredas) to 70 by 2025, including urban areas such as Addis Ababa and other cities, as well as emergency settings. Their implementation offers valuable insights and lessons to strengthen delivery platforms for MMS and maternal nutrition services.

1. **Strategic Partnerships:** Strong collaboration with government leadership and sub-national health bureaus is critical from the inception of the program. Partnerships with academia, NGOs, donors, and the Ministry of Health, can foster a co-creation and co-implementation model.
2. **Demand Generation and Service Quality:** MMS adoption is not just a "pill switch" but an opportunity to strengthen maternal nutrition services within ANC platforms such as encouraging early and frequent visits. Global and local partnerships should be leveraged to integrate MMS programming into ANC as a standard practice.
3. **Social Behavior Change and Localized Messaging:** Establishing a Social and Behavioral Insights Design Lab (SABED Lab) can boost demand generation for MMS. Adapting messages to diverse communities can ensure cultural and linguistic relevance.
4. **Modeling National Scale-up:** Demonstration projects designed to mimic national scale-up scenarios, with a focus on both rural public health systems and urban social marketing approaches can help scale-up programs.
5. **Innovations:** Identifying bottlenecks in ANC services and leveraging peer support through innovative approaches such as monthly "pregnant mother conferences" and developing prototypes co-created with communities and health workers can improve adherence and service quality.
6. **Supply and Financing:** Addressing issues around MMS registration, either as medicine or supplement, considering taxation and regulatory implications is critical for scaling up MMS supply. Local production of MMS should align with national agendas on import substitution and localization. Advocacy for creating an enabling environment, including policy frameworks, training health workers, and scaling up financing mechanisms are critical steps.

Using Implementation Science to Strengthen Delivery Platforms

Implementation Science (IS) transforms global evidence into localized, actionable strategies to optimize the introduction and scale-up of MMS. A framework for strengthening delivery platforms was introduced as follows:

1. **Tools and Methods:** IS provides tools like landscape analysis, stakeholder mapping, and formative research to understand local contexts and inform intervention design. Continuous monitoring and evaluation processes are central to adapting strategies as needed.
2. **Stakeholder Engagement:** IS emphasizes the involvement of all relevant stakeholders, including beneficiaries, healthcare providers, and policymakers, from the outset. This ensures local ownership and sustainability.
3. **Process Evaluation:** IS focuses on assessing the feasibility, acceptability, and unintended consequences of strategies to make iterative improvements. IS is not about testing clinical effectiveness (already established for MMS) but about optimizing delivery and scaling up strategies.

4. **Scalability and Sustainability:** IS helps ensure interventions are scalable and sustainable by aligning with existing systems, identifying gaps, and addressing barriers proactively.

These methods ensure adaptive, community-centered MMS delivery platforms, refined through real-time data and contextual insights to drive sustainable success.

Two new complementary resources from the Global MMS in Pregnancy Technical Advisory Group (MMS TAG) were introduced for countries interested in using implementation science to inform MMS programming.

- **Resource paper for practitioners:** Using Implementation Science to Support the Introduction and Scale-up of Multiple Micronutrient Supplementation, also available in French, Arabic, Spanish, and Portuguese.
- **FAQ for national decision-makers:** Introducing and Scaling Multiple Micronutrient Supplementation Programming: Frequently Asked Questions for Decision-makers with translations available in French, Arabic, Spanish, and Portuguese.

Within the context of the Framework for MMS Implementation, IS can help address challenges such as supply chain inefficiencies and policy bottlenecks, low ANC attendance and late initiation, and poor adherence to prenatal supplements due to forgetfulness or cultural perceptions.

Improving Adherence and Acceptability of MMS

Acceptability of MMS

The acceptability of MMS especially by individual pregnant women was discussed with regards to WHO's call for rigorous implementation research on the acceptability of MMS. A comprehensive definition of acceptability developed by HMHB and endorsed by the MMS TAG, which encompasses organoleptic properties (smell, taste), ease of consumption, cultural beliefs, preferences, and socioeconomic factors was presented.

Comprehensive definition of 'acceptability' for future research and programming: "Acceptability is the (comprehensive assessment of) pregnant women's willingness and satisfaction in integrating the intervention (i.e., MMS) into their daily routine and involves evaluating factors such as sensory attributes (e.g., taste), ease of consumption, and overall patient experience (e.g., side effects), recognizing cultural nuances and individual preferences. It extends beyond adherence, encompassing cultural appropriateness, socio-economic considerations, and the overall compatibility of the MMS with individual preferences and lifestyles.

On acceptability, key findings from ongoing studies (manuscript in preparation by HMHB) comparing MMS to IFA are listed below:

- Preferred MMS characteristics include small tablet size, tasteless, easy-to-swallow, and pregnant women being provided with clear instructions and culturally sensitive education.
- In one study, women found the smell and taste of MMS slightly less appealing than IFA but reported feeling better with MMS and experiencing fewer side effects.
- Education targeting healthcare professionals, community leaders, and family members (e.g., husbands) about the benefits of antenatal interventions like MMS is essential.
- Strategies such as home delivery and free interventions are particularly beneficial for women living far from health centers.

Adherence to MMS

Potential definitions of adherence and compliance, highlighting various measurement methods, including medical provider records, patient recall, pill counts, and biochemical micronutrient analysis, each with its own strengths and limitations were discussed.

Findings from implementation research revealed:

- In Sierra Leone, adherence was higher (47% of women taking MMS up to six months before delivery), supported by monthly ANC visits and positive perceptions of MMS compared to IFA.
- In Nigeria, MMS adherence was hindered by product deterioration during distribution and low attendance at ANC visits (33% attended four or more visits).

Key recommendations include:

- Promote early ANC attendance to maximize MMS benefits
- Promote MMS adherence through ANC visits and other channels to address local challenges
- Tailor strategies to foster equitable access to MMS, addressing the needs of women, families, and healthcare providers

Adherence studies in Africa revealed a lack of standardized definitions and methods for measuring adherence. Evidence from Ethiopia's MMS Demonstration Program in 21 districts identified bottle weighing as a reliable alternative to standard pill counts, with self-reports often overestimating adherence. If bottle weighing is unavailable or programmatically impossible, recall measures can serve as a suitable alternative.

Metrics and Indicators for Maternal Nutrition

Progress in maternal nutrition metrics was reviewed, focusing on the African Union's Continental Nutrition Accountability Scorecard (CNAS), which tracks indicators such as nutrition status, service coverage, financing, and socioeconomic impact. Key points from this talk are indicated below.

- The CNAS has evolved from a paper-based system with 12 indicators to a digital format introduced in 2019, which in turn improves usability.
- Indicators align with WHA targets for 2025 and the 2030 SDGs.
- There is a need for ad hoc technical working groups to update CNAS indicators in line with current maternal and nutrition priorities.
- Planned revisions include updates to young child feeding indicators, ANC visit recommendations, WHO MMS guidance, and a multisectoral nutrition policy framework.

Conclusion

The 2nd Africa Maternal Nutrition and MMS Technical Meeting in Nairobi has underscored the collective commitment to advancing maternal nutrition and scaling up MMS across the continent. The presentations, interactive workshops, and discussions highlighted the progress made, innovative solutions identified, and persistent challenges encountered in transitioning to and scaling up MMS as a standard intervention in the region.

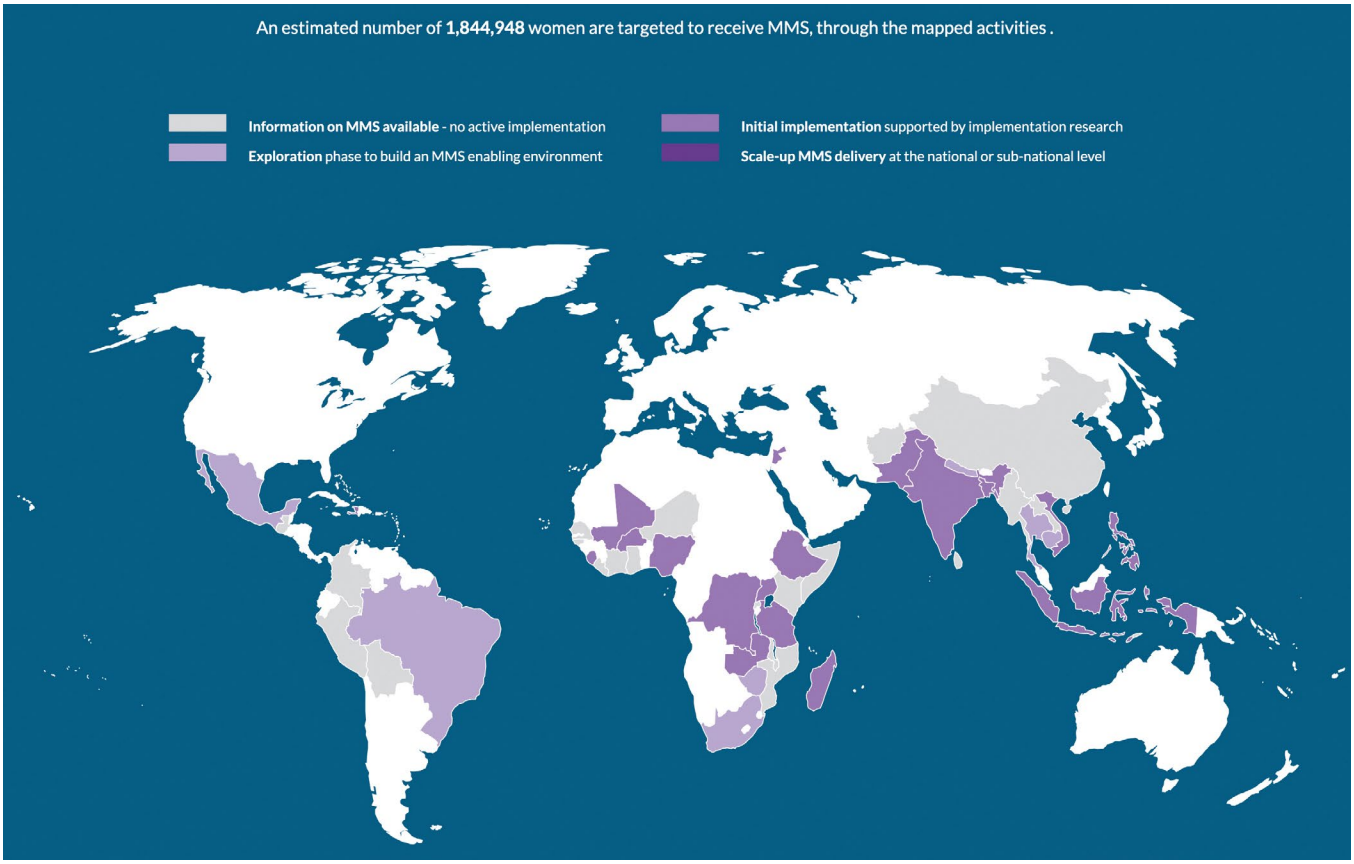
Key takeaways from the meeting emphasized the importance of fostering regional collaboration, regional knowledge and experience sharing, collective advocacy, leveraging evidence-based tools and frameworks, and mobilizing sustainable financing to ensure the success of MMS programs. Stakeholders acknowledged that achieving WHA and SDG nutrition targets requires unwavering political leadership, increased domestic and global investments, and targeted strategies tailored to local contexts.

The momentum generated during this meeting provides a strong foundation for accelerating MMS implementation and enhancing maternal and child health outcomes in Africa. By prioritizing partnerships, policy alignment, and community-driven approaches, the vision of empowering women and ensuring equitable access to MMS can become a reality, fostering healthier generations across the continent.

Implementation Resources and Tools

1. **FAQ for national decision-makers:** Introducing and Scaling Multiple Micronutrient Supplementation Programming: Frequently Asked Questions for Decision-makers with translations available in French, Arabic, Spanish, and Portuguese.
2. **Resource paper for practitioners:** Using Implementation Science to Support the Introduction and Scale-up of Multiple Micronutrient Supplementation, also available in French, Arabic, Spanish, and Portuguese.
3. R4D's MMS Roadmap Costing Tool
4. Programme Guidance to Protect the Nutrition of Women and Adolescent Girls in Humanitarian Settings
5. **Links to Online Resources:**

- HMHB Website
- Knowledge Hub
- Advocacy Resource Center
- Knowledge Bytes
- Women's Voices Films
- Coffee and Chai Chats Registration
- MMS World Map of Activities
- Further with 15
- Online Database of MMS-related Studies (trials and systematic reviews)
- Brief addressing frequently asked questions on MMS
- Interim Implementation Guidance for Concurrent MMS and Anemia Treatment in Pregnant Women
- MMS During Breastfeeding: Guidance to Interpreting the UNIMMAP MMS Product Label



Annexes

Annex A: List of Participants

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Annex B: Meeting Program

2nd AFRICA MATERNAL NUTRITION AND MMS TECHNICAL MEETING
Radisson Blu Hotel, Elgon Road, Nairobi, Kenya
October 16-18, 2024

Special note: Day one (all morning) and Day two (all afternoon) were live streamed.

Day One: Wednesday October 16		
Morning	**SESSION 1: OFFICIAL OPENING**	
	Introduction of dignitaries and attendees	Moderators
	Objectives and significance of the meeting	Martin Mwangi, Micronutrient Forum (MNF)
	Keynote speech: Micronutrient Forum	Saskia Osendarp, MNF
	Keynote speech: CIFF	Richard Matikanya, Children's Investment Fund Foundation (CIFF)
	Keynote speech: African Union	Lucy Murage, African Union Commission
	Keynote speech: African Leaders for Nutrition Initiative	George Ouma, African Leaders for Nutrition Initiative (ALNI)/AfDB
	Host country welcome remarks: Ministry of Health, Kenya	Veronica Kirogo, Ministry of Health – Department of Nutrition and Dietetics services, Government of Kenya
	Keynote speech & official opening: Ministry of Health, Kenya	Mary M. Muriuki, CBS, Principal Secretary, Ministry of Health, Kenya
Mid-Morning	**SESSION 2: COUNTRY & GLOBAL PROGRESS 2023 – 2024**	
	Panel Discussion and Q&A: Country progress/ advances made since the July 2023 Ethiopia meeting	Hiwot Darsene, Ministry of Health – Ethiopia Chris Fofie, Ministry of Health – Ghana Kondwani Mpeniuwawa, Ministry of Health – Malawi John Uruakpa, Ministry of Health – Nigeria Feimata Russell, Ministry of Health – Sierra Leone
	Film: A woman's voice from Ethiopia – Agurash's Story	MNF
	Improving Maternal Nutrition Acceleration Plan	Emily Mates, UNICEF
	Child Nutrition Fund: Match Window	Saul Guerrero, UNICEF Child Nutrition Fund (recorded)
	Panel Discussion and Q&A: Global initiatives in support of country action	Emily Mates, UNICEF Zeina Sifri, Bill & Melinda Gates Foundation (BMGF) Abeba Ayele, CIFF Yashodhara Rana, Eleanor Crook Foundation (ECF)

Day One: Wednesday October 16 Continued		
Afternoon	**SESSION 3: COUNTRY READINESS**	
	Country readiness assessment presentation; stages of readiness, data, mapping	Martin Mwangi, MNF
	Country marketplace: Poster presentations of country readiness assessment	All participants
	Country break-out session: Observations & Reflections: Innovations in MMS delivery; Adherence and acceptability of MMS; Identified Barriers; Support needed for next steps	Groups of 3-4 countries per phase
	Plenary feedback on observations and reflections	Moderator asked representatives of each group and observers to give a 3–5-minute feedback on their observations & reflections
	Launch of the IS Guidance for national actors	Martin Mwangi, MNF
	Closing the day	

Day Two: Thursday October 17		
Morning	Welcome note and recap of day 1	Marti van Liere, MNF
	Short film: MMS – A Simple Solution to Transform Prenatal Nutrition for Pregnant Women Worldwide	ECF
	SESSION 4: EVIDENCE BASED ADVOCACY TO BUILD SUPPORTIVE POLICY AND REGULATORY ENVIRONMENTS	
	Landscape of maternal nutrition policies in Africa & opportunities	Lucy Murage, African Union Commission
	Panel discussion: Country advocacy experiences	Julia Rotich, Ministry of Health – Kenya Samalie Namukose, Ministry of Health – Uganda Elhadji Thierno Mbengue, Ministry of Health – Senegal Patricia N'Goran, Ministry of Health – Côte d'Ivoire George Ouma, ALNI/AfDB
	Cost-effectiveness and cost of inaction as advocacy points	Dylan Walters, Nutrition International (recorded)
	New guidelines for humanitarian settings	Emily Mates, UNICEF
Mid-Morning	Evidence-based advocacy and tools	Filomena Gomes/Rijuta Pandav, MNF
	Nigeria: Including MMS in national essential medicine list	Uruakpa John, Ministry of Health – Nigeria
	Plenary Q&A	
	SESSION 5: STRENGTHENING DELIVERY PLATFORMS	
	Short presentations: Country experiences (Burkina Faso, Ethiopia, Rwanda, Somalia, Zambia)	Mahamadi Cissé, Ministry of Health – Burkina Faso Kidist Woldesenbet, Federal Ministry of Health – Ethiopia Samson Desie, UNICEF Rwanda Abdullahi Muse, Ministry of Health – Somalia
	Plenary Q&A	

Day Two: Thursday October 17 Continued		
Afternoon	Overview of lessons learned and best practices	Ramadhani Noor, UNICEF
	What can IS contribute to strengthening delivery platforms	Lucy Kanya, Vitamin Angels
	Plenary discussion and wrapping up	
	SESSION 6: MMS SUPPLY, QUALITY CONTROL, & CERTIFICATION	
	The role of a product specification in securing a high-quality UNIMMAP MMS Product	Clayton Ajello, Kirk Humanitarian/Vitamin Angels (recorded)
	Key issues, enablers, barriers to local or regional manufacturing of MMS	Monique Smorenburg, DSM-firmenich
	Supply readiness analyses for the African region	Alison Fleet, UNICEF Supply Division (recording)
	Regulatory issues: drug versus a supplement	Wendafrash Abera, Ethiopian Food and Drug Administration (virtual presentation)
	Plenary Q&A: Country reflections, questions and needs	
	Closing the day	

Day Three – Friday October 18		
Morning	Welcome note and recap of day 2	Marti van Liere, MNF
	Short film: A woman's voice from the Democratic Republic of Congo – Makenge Thethe's Story	MNF
	SESSION 7: ADHERENCE AND ACCEPTABILITY OF MMS	
	Acceptability of MMS: definitions and approaches	Mihaela Ciulei, MNF
	Adherence: definitions and approaches, examples from HKI	Kristine Garn, Helen Keller Intl
	Adherence experiences in Africa	Nadia Askeer, John Hopkins University – Ethiopia
	Metrics and indicators for maternal nutrition in Africa, including adherence	Geoffrey Lairumbi, ALNI/AfDB
	Plenary Q&A	
	Panel discussion: Questions and needs of countries – what do they need to move forward	Hélène Ouedraogo, Ministry of Health – Burkina Faso Dr. Ray Masumo, Tanzania Food and Nutrition Centre Genet Kiflemariam, John Hopkins University – Ethiopia
Mid-Morning	**SESSION 8: COSTING AND SCALING UP MMS PROGRAMMES ON THE ROAD TO N4G**	
	Domestic financing for MMS scale-up	Paul Musila, County Executive Committee Health Services, Makueni County Government, Kenya
	Determining the cost of MMS roadmaps	Amy Roberts, Results for Development (R4D)
	Panel Discussion and Q&A: How to mobilize maternal nutrition commitments for advancing country MMS plans	Marti van Liere, MNF (Moderator) Paul Musila, County Executive Committee Health Services – Makueni County Government, Kenya Amy Roberts, R4D Patricia N'Goran, Ministry of Health – Cote d'Ivoire Edgar Onyango, SUN Afro

Day Three – Friday October 18 Continued		
Afternoon	**SESSION 9: NEXT STEPS AT THE COUNTRY AND REGIONAL LEVEL**	
	Introduction and session overview	Martin Mwangi, MNF
	Country break-out session: Key challenges and barriers; Next steps; Needs	17 country groups (with regional bodies/partners) to discuss internally
	Draft position statement	Saskia Osendarp, MNF & working group
	Wrapping up and next steps	Martin Mwangi, MNF
	SESSION 10: CLOSING	
	Final overview of lessons learnt, key points addressed, way forward/next steps	Martin Mwangi, MNF
	Closing speech: representative of Kenya's Ministry of Health	Veronica Kirogo, Ministry of Health – Department of Nutrition and Dietetics services, Government of Kenya
	Closing speech: Director, Micronutrient Forum	Saskia Osendarp, MNF
	Closing keynote speech: First Lady of Makueni County, Kenya	Paul Musila, County Executive Committee Health Services, Makueni County Government, Kenya (representing Anita Mutula Kilonzo Jr, First Lady of Makueni County, Kenya)
	Final announcements	Martin Mwangi, MNF
	Closing the day	

Annex C: Key MMS questions and answers from the meeting

Introducing and Scaling MMS Programming – FAQ for Decision-makers

Why are micronutrients important for pregnant women in particular?

Many vitamins and minerals (collectively referred to as micronutrients) are essential for a healthy pregnancy and fetal development. During pregnancy, the required daily intake of these micronutrients increases by as much as 50%. Two in every three women of reproductive age in LMICs are already deficient in several key micronutrients, and this problem is likely to be even higher in pregnant women, who have increased nutritional requirements. That is why nutrition interventions to supplement micronutrient intake are a critical component of ANC.

What are the benefits of transitioning to MMS from IFA? Do they apply to pregnant adolescent women?

More than 20 years of research provides clear evidence that MMS is more effective than IFA supplementation in preventing adverse birth outcomes (including preterm birth, stillbirth, low birth weight, and small for gestational age births), with even greater benefits for women who are anemic or underweight (Keats, 2019; Smith, 2017). A recent review confirmed that MMS has the same benefits for birth outcomes and does not show evidence of any harm to adolescent mothers in LMIC, justifying new MMS programs in this vulnerable population group. The benefits of MMS for pregnant women include improved nutritional status and adequate weight gain during pregnancy.

Is this transition cost-effective?

Even with a small incremental cost for MMS compared with IFA because of the additional micronutrients, MMS is highly cost-effective, contributing to better health outcomes and human capital gains in the long term. For example, scaling the use of MMS up to 90% coverage is projected to result in 5 million additional school years, leading to an estimated annual increase of approximately $18 billion in lifetime income.

More recently, the 2023 Copenhagen Consensus Report identified MMS as one of the best investments for development, with a return of over $37 for each dollar spent.

If countries transition from IFA with 60 mg of iron to MMS with 30 mg of iron, is there an increased risk of maternal anemia?

No. Recent analyses showed that MMS with 30 mg of iron is comparable to IFA with 60 mg of iron in preventing maternal anemia during pregnancy.

Should MMS be used during treatment of anemia in pregnant women?

The MMS TAG developed a practical interim guidance explaining how MMS can be used during anemia treatment. MMS is a preventative intervention; if women develop anemia, additional iron should be provided while daily MMS are continued as a preventive measure throughout pregnancy, as would be done with IFA supplementation. Once hemoglobin concentration rises to normal (Hb ≥ 110 g/L), MMS alone can be resumed. This guidance applies to cases of mild to moderate anemia. The recommended treatment of severe anemia should follow the local standard of care, which may include intravenous iron or blood transfusion. Whenever possible/applicable, local guidelines should be followed as they would account for the assessment and treatment of other important determinants of anemia in a given population, such as malaria or hookworm infection, HIV, hemoglobinopathies, etc.

A more comprehensive and technical reading on the updated scientific evidence on the benefits of MMS is available at MMS TAG (2023) Update on the Scientific Evidence on the Benefits of Prenatal Multiple Micronutrient Supplements; Sight and Life Special Report "Focusing on Multiple Micronutrient Supplements in Pregnancy: Second Edition.

Annex D: Country (MMS) Profiles

Burkina Faso

Phase: III

Progress: MMS is included in the EML, ANC guidelines, and other national policies. A regulatory framework with quality standards has been established. National intervention and advisory groups have been formed. Training for providers occurred in 2 pilot districts and 5 extension districts. MMS is incorporated into health and logistics management systems, with communication strategies implemented through advocacy with community leaders, media campaigns, and reporting tools. Monitoring systems track coverage and adoption among pregnant women. Partnerships supported implementation in 7 of 70 districts.

Key Stakeholders: Family Health Directorate, Nutrition Directorate, Projet de Préparation et de Riposte au COVID-19, African Institute of Public Health (IASP), UNICEF, The Hunger Project, Projet de renforcement de soins de santé primaires pour l'amélioration de la santé et de la nutrition (PRSS/ASN).

Next Steps: Develop the scaling-up plan for the MMS program, mobilize the necessary resources, implement the plan, and monitor and evaluate its progress.

Côte d'Ivoire

Phase: Not self-attributed, likely phase I.

Progress: The country has a policy of free distribution of essential medicines like IFA, with regulations in place to ensure the quality of both locally produced and imported medicines. A preliminary study in April 2024 highlighted opportunities for expanding MMS for pregnant women. Challenges include securing adequate financing for the free distribution program and increasing ANC visits. Lessons learned include that the Universal Health Coverage currently does not fully meet treatment needs for anemia, emphasizing the need for both curative and preventive care, and the necessity to expand the Universal Health Coverage to include preventive measures for anemia.

Key Stakeholders: Various government bodies, UNICEF, WHO, UNFPA, WFP, AfDB, AFD, HKI, Action Against Hunger, FHI360, IRC, Save the Children, Universities, Research Institutes, Academic and Research Network, World Bank, USAID, Islamic Development Bank.

Next Steps: Establish a working group on MMS, build consensus among key stakeholders for the IFA to MMS transition, and develop and execute the strategic roadmap.

Democratic Republic of Congo

Phase: III

Progress: MMS is included in ANC guidelines and other policies, and a costed roadmap for transition to MMS has been completed. It is classified as a nutritional supplement and aligns with the regulatory environment. National Task Forces/Advisory Groups have been formed, although inclusion in the EML is still pending. Financing is primarily donor-supported, with no government budget allocation or investments in strengthening delivery systems. Capacity building for healthcare providers is underway, but supply chain infrastructure and MMS integration into health information systems need improvement. A social and behavior change strategy is in place to encourage uptake. Challenges include stock availability, slow policy implementation, and data gaps.

Key Stakeholders: Various government bodies, UNICEF, WHO, WFP, FAO, and Vitamin Angels.

Next Steps: Improve quality, continue scaling up, and conduct studies on adherence.

Ethiopia

Phase: II and III

Progress: MMS is included in ANC guidelines, and a costed roadmap is being developed. Efforts are underway to register the UNIMMAP formulation with the Food and Drug Authority. Financing currently relies on donors. An analysis of the local production of MMS has been completed. There are plans to address supply chain strengthening and manufacturer engagement. Health worker training has been initiated in MMS research areas. Social and behavior change communication (SBCC) is being employed. Challenges include public awareness gaps, economic constraints, data collection issues, health system limitations, and regulatory hurdles. Lessons learned include the need for community engagement, health worker training, strong supply chains, and effective monitoring.

Key Stakeholders: Various government bodies, UNICEF, R4D, Johns Hopkins Center for Communication Programs (JHU CCP), Nutrition International, World Vision Ethiopia, CHAI, Ethiopian Public Health Institute (EPHI), LSHTM, AAU, and JHU.

Next Steps: Finalize the MMS roadmap, strengthen governance, use emerging evidence, register MMS officially, and develop a sustainable financing strategy to scale MMS initiatives effectively.

Ghana

Phase: I

Progress: A TAG has been established, and the UNIMMAP-MMS formulation has been registered with the Ghana Food and Drugs Authority. Efforts are ongoing to advocate for its inclusion in national guidelines and the EML, while also addressing sustainable financing mechanisms and procurement strategies. Formative research is underway to understand the factors influencing the uptake and adherence to MMS and ANC services, alongside healthcare workers' attitudes and practices. A pilot program targeting 65,300 pregnant women across three regions is planned. Challenges include the lack of MMS integration into national policies, sustainable financing, and addressing higher costs compared to IFA. Lessons learned include that successful MMS implementation requires collaboration between stakeholders, community involvement, and integration into existing maternal health services.

Key Stakeholders: Various government bodies, UNICEF, WHO, CHAI, Ghana Health Service, Research and Development Division, University of Ghana, University of Health and Allied Sciences, and ECF.

Next Steps: Continuing advocacy efforts to embed MMS in national strategies, finalizing formative research and use findings to shape implementation research, and conducting a supply readiness assessment.

Kenya

Phase: I

Progress: An MMS task force has been established. However, MMS is yet to be included in national budgets and procurement plans. Current funding supports components like landscape analyses and MMS Task Force meetings, with plans to leverage the Social Health Insurance Fund and the sub-national government's experience in IFA procurement. Research, such as the National Micronutrient Survey and implementation research, will inform MMS quality standards. Delivery will build on Kenya's robust supply chain systems, including the Kenya Medical Supplies Authority and the Kenya Health Information System. Challenges include insufficient funds for implementation research and a lack of current data on micronutrient status. Lessons learned include that stakeholder engagement, intra-ministerial collaboration, awareness creation, and experience sharing are essential for successful implementation research.

Key Stakeholders: Various government bodies, UNICEF, WHO, USAID, World Bank, CHAI, HKI, Action Against Hunger, World Vision Kenya, Save the Children, Nutrition International, Vitamin Angels, HMHB, Scaling up Nutrition Civil Society Alliance, KEMRI, academia, Amref Health Africa, APHRC, Kirk Humanitarian, ECF, and CIFF.

Next Steps: Implementation research, targeted awareness campaigns, and addressing supply chain barriers.

Madagascar

Phase: III

Progress: MMS has been included in national guidelines, EML, and ANC guidelines. MMS is yet to be included in recurring budget allocations and procurement plans at federal/local government levels. It is currently distributed free of charge in intervention districts, with UNICEF as the sole supplier, and ongoing discussions for the supply from the World Bank Project in 13 regions. Delivery systems are in progress, with the completed integration of MMS into SBCC strategies and Health and Logistics Management Information Systems. However, supply chain strengthening and healthcare provider capacity building remain ongoing priorities. Challenges include insufficient funding for full scaling up and the absence of government coverage for duties and taxes related to MMS importation. Lessons learned include that the IMPROVING project boosted maternal nutrition, traditional birth attendants improved ANC and MMS uptake, and free MMS increased adherence.

Key Stakeholders: Various government bodies, PIVOT, PARN, UNICEF, National Institute of Public and Community Health, GRET, BMGF, and other partners.

Next Steps: Next steps include initiating MMS in emergency-affected areas and advocating for broader funding and operational support.

Malawi

Phase: II

Progress: Significant progress has been made, including the establishment of an MMS Task Force, revision of ANC guidelines to include MMS, and advanced steps toward MMS inclusion in the EML. MMS-specific social behavior change materials have been developed and pre-tested. The inclusion of MMS in the EML will support engagements within the government on co-financing, including funding for delivery system strengthening. Capacity building for healthcare providers and formative research are planned. Challenges include varying stakeholder interpretations of WHO recommendations, delays in offshore MMS supply procurement, and some confusion between MMS for pregnant women and IFA for adolescent girls. Lessons learned include that MMS rollout strengthens maternal nutrition interventions, research evidence and MMS inclusion in WHO's EML are crucial, and sustaining MMS beyond research requires ongoing advocacy.

Key Stakeholders: Various government bodies, WHO, Save the Children, FUM, Nutrition International, Kamuzu University of Health Sciences, UNICEF, Kirk Humanitarian, and the JBJ Foundation.

Next Steps: Supporting the implementation of formative research and social marketing analysis to inform SBCC strategy of the MMS scale-up, capacity building, and monitoring of the implementation research to support timely decision-making, and track progress.

Mozambique

Phase: Information available on MMS without active implementation.

Progress: The constant search for financing to purchase supplements is a significant challenge, and, despite the recognized importance of MMS, the country is struggling to move forward with its introduction due to a lack of a continuous financing line.

Key Stakeholders: Ministry of Health and the Technical Secretarial for Food and Nutritional Security, USAID, UNICEF, World Bank, WFP, Helen Keller International, GAIN, and the National Institute of Health.

Nigeria

Phase: III

Progress: Nigeria has made significant strides in incorporating MMS into national policy, with its inclusion in key documents such as the National Plan of Action for Food and Nutrition and the EML. Financing discussions are ongoing at the national and state levels, with UNICEF mobilizing funds for MMS procurement starting in 2025. Forecasting for MMS has been done at the state and national levels, and local manufacturers are being engaged to ensure product quality and capacity. Delivery channels are being strengthened through health worker training and integration into national logistics and data systems. However, challenges include insufficient MMS supplies and limited health worker capacity, with scale-up efforts currently donor-driven. Lessons learned highlight the importance of political buy-in, strong coordination, innovative financing mechanisms, and the integration of MMS into existing maternal and child health services.

Key Stakeholders: Various government bodies, Alive and Thrive/FHI 360, Civil-Society Scaling Up Nutrition in Nigeria, CHAI, Evidence Action, HKI, Nutrition International, R4D, Sight and Life, UNICEF, Vitamin Angels, Bayero University, Kano, University of Nigeria Nsukka, Ahmadu Bello University, Zaria, SOGON, University of Ibadan, BMGF, FCDO, Kirk Humanitarian, USAID, and World Bank.

Next Steps: Scaling up MMS across all health facilities, strengthening local manufacturing, and inaugurating the MMS Task Force. The National Social Behavior Change Strategy will be launched to boost community support while ensuring government financing and procurement for MMS from 2025. Additionally, country-specific standards and regulatory frameworks will be developed.

Rwanda

Phase: Will be in Phase III by early 2025.

Progress: MMS has been integrated into maternal nutrition guidelines and national policies, with discussions ongoing to include it in the national EML. A costed roadmap is under development, and a national advisory group is operational. Current implementation research is donor-funded, with plans to explore government co-financing. Delivery systems have been strengthened through capacity building for healthcare providers and supply chain integration into Logistics Management Information Systems. An SBCC strategy is underway, focusing on community engagement. Challenges include limited counseling depth, incomplete ANC documentation, and the absence of community outreach programs. Lessons learned highlight the importance of effective counseling and partnerships for successful implementation.

Key Stakeholders: RBC, NCDA, UNICEF, WHO, Sight and Life, CHAI, University of Rwanda, BMGF, Kirk Humanitarian, Catholic Medical Mission Board Foundation.

Next Steps: Generate local evidence on coverage, adherence, and barriers, develop an SBCC strategy, conduct implementation research during scale-up, register and include MMS in the EML, integrate MMS into health insurance under universal health coverage, strengthen Health Management Information System reporting, monitoring, and evidence generation.

Senegal

Phase: I

Progress: MMS has been integrated into national strategies, supported by a technical working group and roadmap. Financing relies on development partners, with plans to include MMS in national budgets. Quality control involves regulatory bodies, while supply chains benefit from initiatives like "Jegesinaa" and Health Management Information System tracking. Strong antenatal care coverage (98.5%) and community networks aid delivery. Challenges include funding gaps and the need for better coordination. Lessons learned include the importance of early policy integration, community awareness, strong partnerships, and effective supply chain management for successful MMS implementation.

Key Stakeholders: Various government bodies, WHO Senegal Office, USAID, UNICEF, Global Affairs Canada, WFP, Nutrition International, HKI, Solthis, Counterpart International, The Hunger Project, Action Against Hunger, CHAI, Laboratory of Research in Food and Human Nutrition, Institute of Health and Development, Institute for Training and Research in Population, Development, and Reproductive Health, University of Saint-Louis, University of Thiès, University of Bambey.

Next Steps: Formulate priority research questions, share protocols and results, focus studies on key areas, work on political introduction of MMS, assess supply chains, hold MMS meetings, evaluate scaling conditions, and revise maternal nutrition guidelines.

Sierra Leone

Phase: III

Progress: MMS was included in ANC guidelines and a working group is in place. It has been added to the EML and integrated into national health systems, including DHIS2 for monitoring. Capacity building has been conducted, with over 1,400 health workers trained on transitioning from IFA to MMS. Partner funding supports procurement and distribution, but the government's commitment to allocate sufficient funding remains a challenge, as the health sector budget continues to decrease. Lessons learned include successful integration into national systems, higher acceptance of MMS among pregnant women due to its broader nutrient profile, and the need for stable government funding.

Key Stakeholders: Various government bodies, FCDO, HKI, UNICEF, Care International, Save the Children, WHO, World Vision International, Vitamin Angels, Later Days Saint, and Kirk Humanitarian.

Next Steps: Advocate for long-term funding, train central and district staff on distribution and reporting, cascade MMS training to healthcare workers, raise awareness through stakeholder engagement at district and community levels, revise health facility forms to track MMS uptake, monitor and supervise last-mile distribution, and report MMS data separately from IFA.

Somalia

Phase: Not self-attributed, likely phase I.

Progress: MMS is provided free to pregnant women, but the program relies heavily on donor funding, with no dedicated government funding. The national supply chain faces challenges, and there is a severe shortage of qualified health staff. Due to competing needs, funding for MMS programs is not prioritized. Many MMS programs are implemented as short-term interventions during emergencies, which limits their sustainability. Lessons learned include the importance of coordination among stakeholders, integrating MMS with other health services, and prepositioning MMS supplies in strategic locations. Despite challenges like funding constraints and weak nutrition data, consistent monitoring has improved service delivery and reporting.

Key Stakeholders: Various government bodies, Office of the Prime Minister – SUN Movement, State House – Special Envoy on Nutrition, Academia, national and international NGOs, UN agencies, national authorities, and donors.

Next Steps: Strengthen leadership for nutrition integration, support nutrition data audits and capacity building, improve partner performance, advocate for increased nutrition funding, enhance community involvement, and promote long-term investments in nutrition and health systems.

Tanzania

Phase: II

Progress: The National TAG has successfully led policy implementation. MMS has been integrated into the logistics system for better tracking, and its introduction has strengthened ANC nutrition services. However, challenges include the need for systems strengthening and addressing socio-cultural drivers and barriers. The continued use of IFA for anemia treatment has hindered full MMS adoption, and innovative funding mechanisms are needed to accommodate the higher costs of MMS. Lessons learned include the importance of government leadership, strategic partnerships, and building on existing systems.

Key Stakeholders: Various government bodies, African Academy of Public Health, Ifakara Health Institute, Sight and Life, Pennsylvania State University, Nutrition International, USAID, WHO, UNICEF, and BMGF.

Next Steps: Create a roadmap to improve services and advocate for a health systems-wide approach.

Uganda

Phase: II

Progress: There is very strong government interest in transitioning to MMS and an Advisory Group is in place. MMS is included in the ANC register, and a costed roadmap for scaling up is in development. However, it is not yet in national guidelines or the government budget. Local manufacturing is being explored with partners like CHAI and Vitamin Angels. Training materials are being developed, and a national roll-out is planned for January 2025. Challenges include low ANC attendance, low IFA adherence and stock-outs, knowledge gaps, and limited budget. Lessons learned include early stakeholder engagement, the importance of a costed roadmap, and strong policies for successful MMS integration.

Key Stakeholders: Various government bodies, The Hunger Project, UNICEF, CHAI, WHO, World Bank, Vitamin Angels, John Hopkins University, Makerere University/Child and Family Foundation Uganda, and Kirk Humanitarian.

Next Steps: Finalize IR study materials (MMS implementation plan, SBCC plan, training materials), begin the IR study in 8 districts (Jan-Dec 2025), use midline findings for the next scale-up phase, revise key policy documents and guidelines to include MMS, and broaden public and private partnerships for MMS scale-up.

Zambia

Phase: I

Progress: Zambia is working on creating an enabling environment for the introduction of MMS, with a TAG in place and ongoing efforts to adapt WHO recommendations for emergency distribution due to drought. National-level engagement will be guided by research studies supported by World Vision Zambia, with a feasibility study to be completed by 2026. Challenges include low adherence to IFA, supply chain shortages, and low staff levels at facilities. Lessons learned emphasize the need for innovative SBCC strategies to improve adherence and the recognition that single-dose supplements have not fully addressed anemia in pregnant women.

Key Stakeholders: Various government bodies, United Nations Agencies, Cooperating partners, Civil Society organizations, International and local NGOs, National Health Research Authority, National Institute for Scientific and Industrial Research, Tropical Disease Research Centre, Academia, UNICEF, World Bank, Power of Nutrition, CHAI, World Vision International, Kirk Humanitarian, and Vitamin Angels Alliance.

Next Steps: Finalize the feasibility report, analyze lessons from MMS drought response, incorporate MMS into national policy, create adherence guidance for pregnant women, build capacity for health workers and volunteers, and formulate SBCC strategies to promote MMS uptake.

About HMHB

The **Healthy Mothers Healthy Babies Consortium** (HMHB), hosted by the **Micronutrient Forum**, is a growing collective of more than 300 organizations and individuals dedicated to improving maternal nutrition. We work collaboratively to accelerate the availability and effective use of affordable MMS and other nutrition interventions during pregnancy in low-and middle-income countries.

HMHB hosts two technical advisory groups (TAGs): the Global MMS TAG and the Balanced Energy and Protein Dietary Supplementation (BEP) TAG.

Visit our website for the latest knowledge, evidence, guidance, and tools on maternal nutrition. Explore the World Map on MMS, Knowledge Hub, Advocacy Resource Center, Women's Voices short films, and Knowledge Byte videos. Join us and become a member.

HEALTHY MOTHERS HEALTHY BABIES

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