A Smart Investment in Maternal Health: The Case for Antenatal Multiple Micronutrient Supplements (MMS)

MAY 2026 **PUBLICATION BRIEF**

Multiple micronutrient supplementation (MMS) during pregnancy offers greater benefits for pregnancy outcomes and early infant growth than iron and folic acid supplementation (IFA), although both are used as preventive antenatal care (ANC) interventions. Several low- and middle-income countries (LMICs) have begun introducing MMS. However, concerns about higher costs have slowed wider adoption. This study, "Costs and benefits of replacing preventive antenatal iron and folic acid with multiple micronutrients in 25 low- and middle-income countries," published in The British Medical Journal Global Health, examined what would happen if 25 LMICs with the highest burden of low birthweight (LBW) replaced preventive IFA supplements with MMS under different costing and coverage scenarios. The researchers found that switching from IFA to MMS would not only prevent millions of adverse birth outcomes over five years but also generate substantial economic benefits, with returns at least ten times the cost. These findings provide a compelling case for LMICs to transition from preventive IFA to MMS.

THE STUDY

Using updated 2025 procurement cost data, researchers modeled the health and economic impact of replacing preventive ANC IFA with MMS across 25 LMICs with the highest burden of LBW (87% of all LBW births). The study used a seven-year timeframe: two transition years followed by five years of full MMS implementation. Health benefit estimates were drawn from the Smith et al. meta-analysis of 17 randomized controlled trials comparing MMS (containing IFA) versus IFA alone.

Two coverage scenarios were analyzed: replacing IFA at current coverage levels (averaging 32.9% across all 25 LMICs) and providing MMS to all women attending at least one ANC visit (averaging 84% across all 25 LMICs). Costs included the difference in tablet procurement price between MMS and IFA, one-time transition costs (about US$6 per current IFA user), and optional ANC strengthening costs. The assessment covered both health outcomes (averted LBWs, stillbirths, female newborn deaths) and economic outcomes (monetary value, cost–benefit ratios).

KEY FINDINGS

Health Impact

At **existing IFA coverage levels** (32.9%), switching to MMS over five years in 25 LMICs could prevent:

- 3,514,594 LBW births
- 186,369 stillbirths
- 218,914 newborn deaths

If MMS reached **all pregnant women with at least one antenatal care (ANC) visit** (84% coverage), the impact increases to:

- 7,272,320 LBW births prevented
- 473,471 stillbirths prevented
- 541,591 newborn deaths prevented

Economic Impact

Even under the most conservative cost scenario, replacing IFA with MMS yields US$7.19 billion in economic gains, with returns at least ten times the cost.

- The cost of switching from preventive IFA to MMS ranges from US$201.8 million to US$1.326 billion over seven years, representing only 0.5% to 3% of the current annual spending to reduce undernutrition across LMICs.
- At current ANC coverage, economic benefits range from US$7.19 billion to US$48.13 billion, depending on valuation assumptions. These benefits increase to US$14.67-US$107.67 billion if we consider all women who make at least one antenatal care visit.
- Benefit-cost ratios range from 11.1 to over 200, depending on the coverage scenario and the value of statistical life applied.
- The cost of averting a stillbirth or neonatal death ranges from US$497 to US$1,306. This is 82% lower than the cost of averting a death through the scale-up of COVID-19 vaccinations in LMICs, 87% lower than the cost of averting a death through the provision of ready-to-use therapeutic foods (RUTFs) for moderate acute malnutrition, 57% lower than the cost of averting a death through the provision of the rotavirus vaccine, and 53% lower than the cost of averting a death through the provision of insecticide-treated bed nets and malaria prevention activities.

WHY IT MATTERS

Replacing preventive IFA with MMS is highly cost-effective, yielding substantial health and economic returns and providing strong policy support for MMS rollout in LMICs to improve maternal and newborn outcomes.

- **Reduced Cost-Barrier:** With commitments made in advance to purchase at scale, MMS costs are in line with IFA (when procured through UNICEF supply), with only a US$0.17 increase per woman (US$2.23 vs. US$2.06). The primary cost drivers are transition activities and ANC strengthening, not the difference in supplement price.
- **High Returns on Low Investment:** After the transition, switching to MMS costs just US$5.0–19.1 million annually across 25 LMICs, with substantial additional health gains.
- **Exceptional Value Compared to Other Interventions:** The cost of averting a death through MMS provision is significantly lower than that of comparable maternal and child health interventions, including RUTFs for moderate acute malnutrition, insecticide-treated bed nets and malaria prevention activities, rotavirus vaccines, and COVID-19 vaccination scale-up in LMICs.

IMPLICATIONS FOR MATERNAL NUTRITION POLICY AND PROGRAM DESIGN

- **Integration Into National Policies:** Governments should consider replacing preventive IFA with MMS in national antenatal nutrition policies, given MMS's greater health impact at minimal additional cost.
- **Strengthening ANC Platforms:** Leveraging established ANC platforms to deliver MMS can ensure an efficient and scalable rollout. Additionally, this is an opportunity to strengthen ANC services overall, improving coverage and thereby amplifying both health and economic benefits.
- **Sustainable Financing and Investment:** Given its strong cost-effectiveness, MMS should be prioritized as a high-impact investment, with modest additional costs that can be absorbed within current nutrition budgets. Donor support can be leveraged to cover one-time transition and ANC-strengthening costs. Countries can use commitments made in advance to purchase at scale or pooled procurement mechanisms to reduce costs.
- **Advancing Equity, Gender, and Global Goals:** Expanding MMS access can help reduce the risk of anemia during pregnancy, prevent newborn deaths, and close nutrition gaps, contributing to broader equity, gender, and global health targets.

LEARN MORE

1. The Publication - Costs and benefits of replacing preventive antenatal iron and folic acid with multiple micronutrients in 25 low- and middle-income countries.
2. Modifiers of the effect of maternal multiple micronutrient supplementation on stillbirth, birth outcomes, and infant mortality: a meta-analysis of individual patient data from 17 randomised trials in low-income and middle-income countries.
3. Investing in Nutrition: A Global Best Investment Case.
4. Antenatal multiple micronutrient supplements: time for alignment to support country action.

SCAN FOR LANGUAGE TRANSLATIONS

Available in French, Spanish, Portuguese and Arabic

ABOUT HMHB

The Healthy Mothers Healthy Babies Consortium (HMHB), hosted by the **Micronutrient Forum,** is the central platform for evidence, knowledge, collaboration, and advocacy in maternal nutrition. HMHB accelerates progress by fostering collective action on critical priority interventions such as multiple micronutrient supplementation (MMS) and balanced energy and protein (BEP) dietary supplementation, proven strategies to improve maternal and newborn health outcomes, particularly in low- and middle-income countries (LMICs). Comprising over 450 individuals and organizations, HMHB also hosts Technical Advisory Groups (TAGs) on **MMS** and **BEP**, bringing together experts in nutrition, maternal health, and public health to interpret evidence, identify knowledge gaps, and provide guidance to governments, NGOs, and partners.

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A Smart Investment in Maternal Health:
The Case for Antenatal Multiple Micronutrient Supplements (MMS)

What would happen if 25 low-and middle-income countries (LMICs) with the highest burden of low birthweight (LBW) replaced preventive iron-folic acid (IFA) supplements with preventive MMS during pregnancy?

WHAT THE STUDY SHOWS

HEALTH IMPACT

	If MMS was given to pregnant women who currently receive IFA (32.9%)	If MMS was given to pregnant women with at least one ANC visit (84%)
LBW births averted	**3,514,594**	**7,272,320**
Stillbirths averted	**186,369**	**473,471**
Newborn deaths averted	**218,914**	**541,591**

ECONOMIC IMPACT

Economic benefits	**USD 7.19 - 48.13** billion	**USD 14.67 - 107.67** billion

BENEFIT-COST RATIOS

depending on the coverage scenario and the value of statistical life applied **11.1 to 200+**

COST OF SWITCHING FROM IFA TO MMS (7 YRS)

0.5% to 3% of the current annual undernutrition spending **USD 201.8 M to USD 1.326 B**

WHY IT MATTERS

REDUCED COST-BARRIER

With advance commitments to purchase at scale, MMS costs are in line with IFA (when procured through UNICEF supply), with only a US$0.17 increase per woman (US$2.23 vs. US$2.06).

HIGH RETURNS ON LOW INVESTMENT

After the transition, switching to MMS costs only US$5.0 - 19.1 million annually across 25 LMICs, with substantial additional health gains.

EXCEPTIONAL VALUE

The cost of averting a death through MMS is significantly lower than comparable maternal and child health interventions.

POLICY AND PROGRAM IMPLICATIONS

- **Integrate MMS into national antenatal policies** due to higher impact at minimal extra cost.
- **Strengthening ANC platforms** to scale MMS delivery while improving overall coverage.
- **Invest in MMS** using current budgets, donor support, and pooled procurement mechanisms.
- **Advance equity and global health targets** by expanding access to MMS for vulnerable women.

SOURCE: Hoddinott J, Ajello C, Black RE, Busch-Hallen J, Mwangi M, Walters D, et al. Costs and benefits of replacing preventive antenatal iron and folic acid with multiple micronutrients in 25 low- and middle-income countries. BMJ Global Health. 2026;11:e020597. https://doi.org/10.1136/bmjgh-2025-020597