

Resources for Scale-up



Multiple Micronutrient Supplementation Cost-Benefit Tool to Guide Decision-Making

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Key messages

- Launched in October 2019, the Nutrition International Multiple Micronutrient Supplementation (MMS) Cost-Benefit Tool is a free, online tool to help governments determine whether antenatal MMS is better value for money than iron and folic acid (IFA) for their maternal nutrition programs.
- The tool has been used to conduct cost-effectiveness analyses for 12 countries in Africa and Asia. In all cases, the findings showed with high certainty that MMS is very cost-effective, has a high return on investment and leads to additional significant positive health outcomes for newborns compared with IFA.
- Countries can input their data to generate a customized analysis and adjust parameters such as population of pregnant women, coverage and supplement cost to build context-specific investment cases.
- The tool is designed to be deployed widely as a public resource to facilitate the strategic use of data for policy decisions and investments concerning the introduction of MMS.
- The transition to, and scale-up of, MMS is an opportunity not only to accelerate progress toward the World Health Assembly Global Nutrition Targets 2025 but also to prioritize women's nutrition and empowerment as part of national nutrition and health programs, and to strengthen maternal nutrition globally.

Background

The World Health Organization 2016 antenatal care (ANC) guidelines¹ state that: “Policy-makers in populations with a high prevalence of nutritional deficiencies might consider the benefits of MMN [multiple micronutrient] supplements on maternal health to outweigh the disadvantages, and may choose to give MMN supplements that include iron and folic acid.” Yet there is no global guidance on when and how to introduce MMS. Given the more recent evidence indicating that MMS provides additional



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Mother in Touba Toul, Senegal

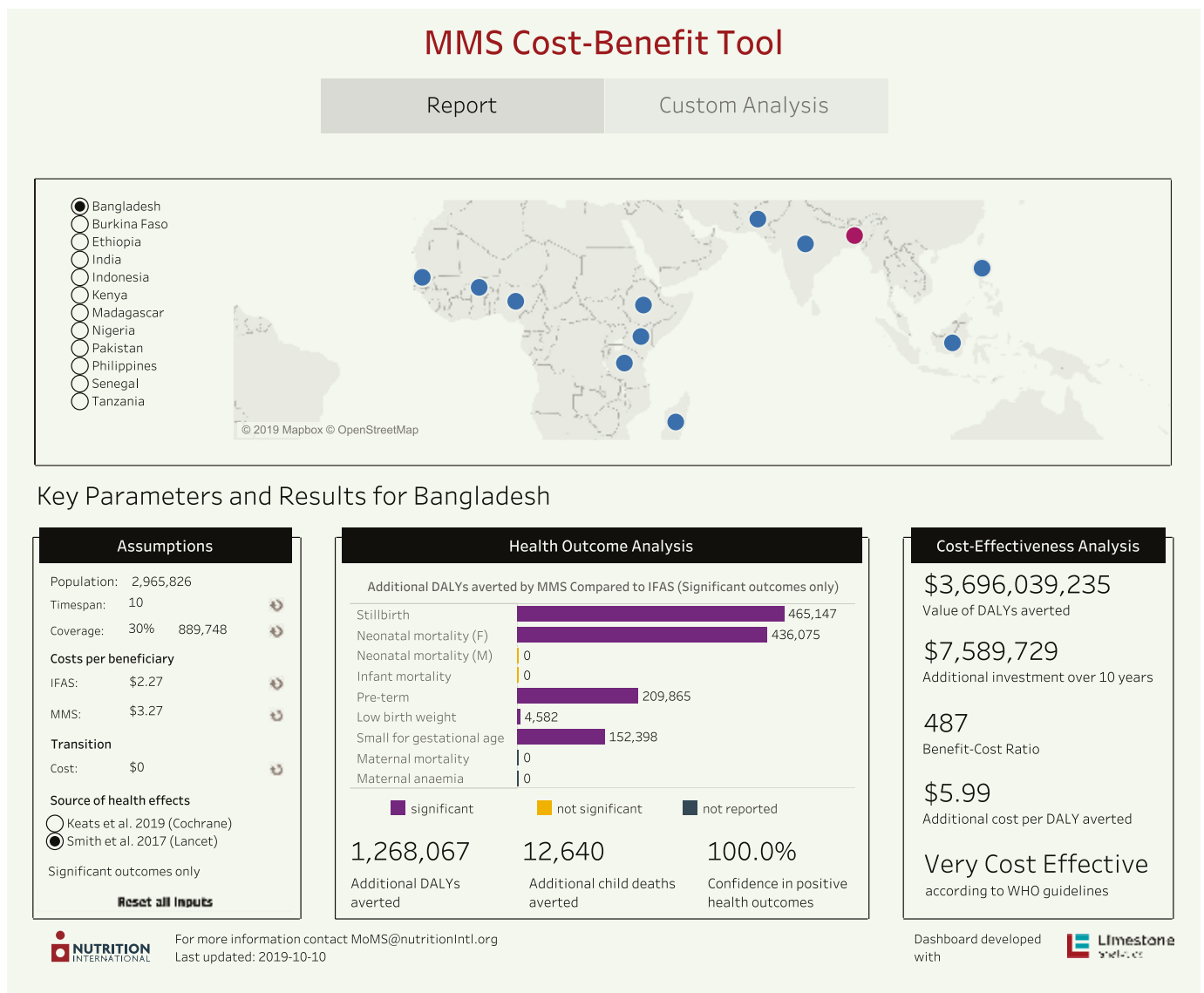
health benefits for newborns compared to IFA supplementation, and with no adverse health effects,^{2–5} many countries are now exploring the costs, feasibility and value-for-money of transitioning from IFA to MMS for pregnant women.

Over the past decade, Nutrition International has worked in partnership with governments in Africa and Asia to strengthen IFA programming and maternal nutrition services. This work has provided an opportunity to better understand what is needed to overcome barriers affecting IFA coverage and adherence, and to foster sustainable scale-up of maternal health programs.⁶ Building on this experience and responding to requests from countries for more MMS guidance particularly around the cost-effectiveness of transitioning to MMS, Nutrition International, with the support of Limestone Analytics, developed the MMS Cost-Benefit Tool.⁷

What is the MMS Cost-Benefit Tool?

Launched in October 2019, the MMS Cost-Benefit Tool is an open-access, user-friendly, online analytical tool that supports governments' use of country-specific data in their decision-making on whether investing in antenatal MMS rather than IFA is better value for money. The tool is available on the Nutrition International

FIGURE 1: Report interface of the MMS Cost-Benefit Tool, featuring 12 preset country reports



website, alongside preset analyses for 12 countries (Figure 1) and a User Interface and Interpretation Guide.⁷

A recent study by Nutrition International and Limestone Analytics showed MMS is more cost-effective than IFA in three high-burden Asian countries that informed the model for the tool.³

“The tool estimates the health impact and cost-effectiveness of transitioning from IFA to MMS”

The tool estimates the impact of MMS compared with IFA on maternal and newborn health outcomes for a defined coverage rate of the population of pregnant women in each country using health effect sizes from the most recent systematic reviews.^{2,3} In addition, it computes the budget impact of switching to MMS, and the cost-effectiveness and cost-benefit ratio, which is critical

information to inform government investment. It offers the user flexibility to modify population, supplement costs (to reflect price declines) and coverage for preset country reports. The tool also has a ‘custom interface’ to allow countries to input their data or modify existing data and generate a customized report (Figure 2). The hope is to expand the number of quality-assured preset reports for low- and middle-income countries (LMICs).

The tool calculates:

- Effectiveness:** An aggregate of the number of additional disability-adjusted life years (DALY) and child deaths averted by transitioning from IFA to MMS across significant health outcomes.
- Cost:** The additional costs or budget impact (in US\$) of providing MMS if there is an existing IFA program or ANC platform in the country (considers supplement and program transition costs).

- Cost-effectiveness:** The incremental cost-effectiveness ratio. The ratio of the difference in cost and the difference in effectiveness, estimated as the ‘cost per additional DALY averted’ by transitioning to MMS.
- Benefit-cost ratio:** A comparison of the value of the health benefits in monetary terms relative to the costs of transitioning to MMS.

How has the tool been applied?

To date, the MMS Cost-Benefit Tool has been used to conduct cost-effective analyses for: Bangladesh, Burkina Faso, Ethiopia, India, Indonesia, Kenya, Madagascar, Nigeria, Pakistan, the Philippines, Senegal and Tanzania. In all cases, the findings showed with high certainty that MMS is cost-effective and that it generates additional positive health outcomes for newborns compared with IFA. Policy briefs that translate the results for each country are available on the Nutrition International website (Figure 3).⁷

Nutrition International conducted cost-effectiveness analyses to complement the preliminary stages of the efforts to acquire operational experiences on MMS use in four countries: Bangladesh, Burkina Faso, Madagascar and Tanzania. The data from this analysis, which was supported by the Bill & Melinda Gates Foundation and UNICEF, was particularly instrumental in garnering the high-level political commitment from the Government of Tanzania to introduce MMS. “The results helped answer the question of whether transitioning from IFA to MMS was good value for money, and essentially served as the tipping point that moved decision makers towards the introduction of MMS in Tanzania,” said Nita Dalmiya, UNICEF. Similarly, Klaus Kraemer of *Sight and Life* states: “We are confident that the convincing data we generated with the MMS Cost-Benefit Tool will support the re-introduction of prenatal MMS to the South African health system.”

The following examples illustrate how this tool can facilitate the strategic use of data for influencing policy decisions at the global and country levels.

FIGURE 2: Custom interface of the MMS Cost-Benefit Tool

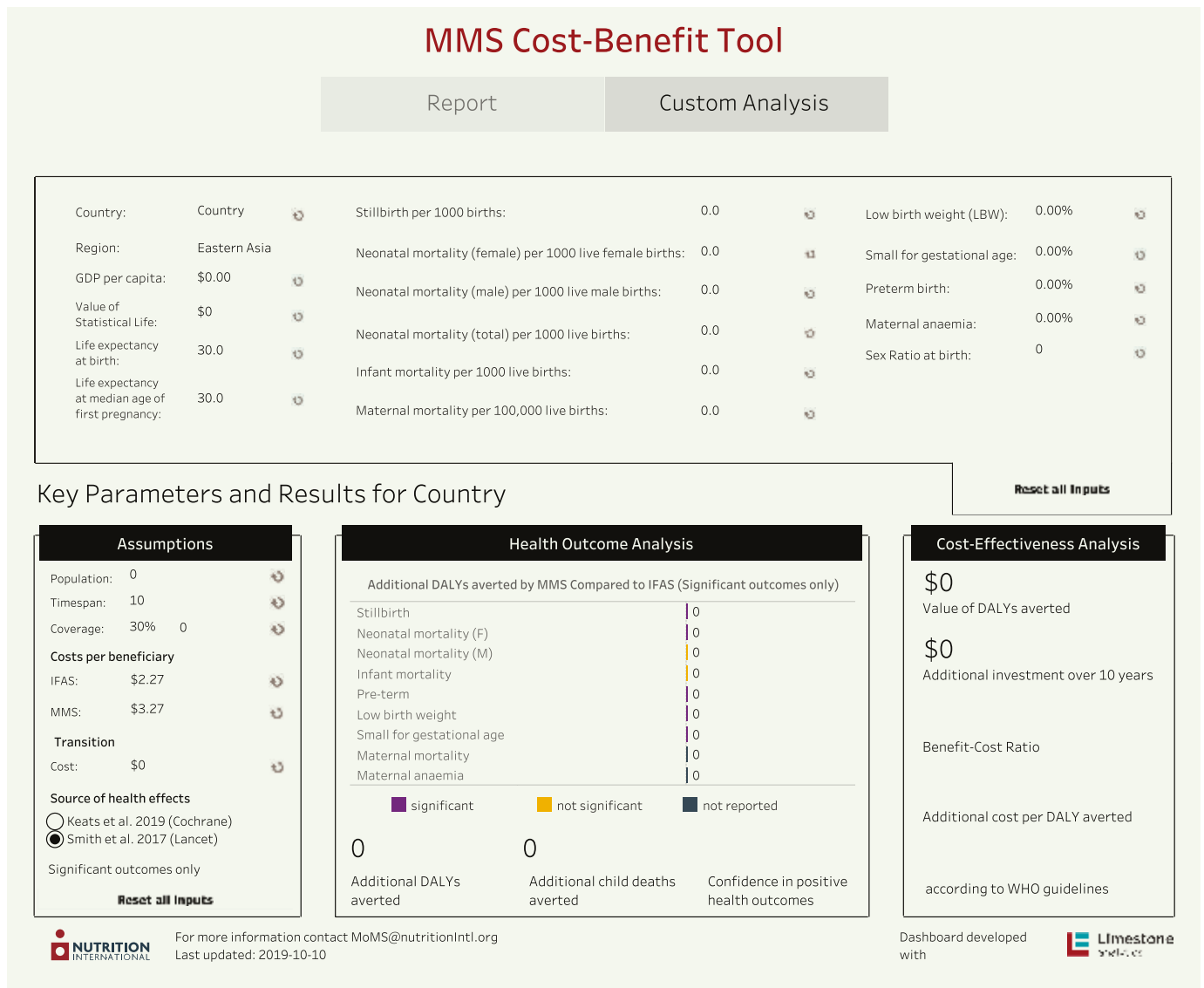


FIGURE 3: Policy briefs designed by Nutrition International accompany the tool to translate the cost-effectiveness results for policymakers

“The results served as the tipping point that moved decision makers towards the introduction of MMS in Tanzania”

At the request of WHO, the MMS Cost-Benefit tool was used to conduct additional analyses that were included in the evidence-to-decision framework for updating the WHO recommendation on the use of MMS in pregnancy.

Moving forward

The transition and scale-up of MMS presents an opportunity to increase progress toward the World Health Assembly Global Nutrition Targets 2025 on anemia, low birth weight and stunting – and also to prioritize women’s nutrition as part of national nutrition

and health programs and the universal healthcare agenda, and to broadly strengthen maternal nutrition. MMS was prioritized in the World Bank Group’s Investment Framework for Nutrition. It was estimated that it would cost US\$ 2.3 billion over 10 years to scale up MMS across LMICs.⁸

The MMS Cost-Benefit Tool was one of Nutrition International’s commitments made as a Global Goalkeepers partner under the 2019 Gates Foundation Healthy Mothers, Healthy Babies Accelerator to help advance the global sustainable development goals. By supporting governments in making informed policy decisions about the introduction of MMS, the tool leads to more efficient use of resources, improvements in birth outcomes, and better overall health, survival and equality for women (Figure 4).

“This tool supports governments in steering MMS decision-making for their country”

FIGURE 4: Women’s empowerment and gender equality are central to the discussions around maternal health and supplementation



Conclusion

The MMS Cost-Benefit Tool translates the new evidence on MMS and generates cost-effectiveness results for LMICs. It is designed to be deployed widely as a public resource for facilitating policy decisions and investments related to the introduction of MMS, and to support national governments in building evidence-informed, effective, affordable and sustainable maternal nutrition programs. “Government ownership and leadership is key to achieving scale-up and sustainability of MMS,” said Jennifer Busch-Hallen, Senior Technical Advisor, Maternal and Neonatal Health and Nutrition, Nutrition International. “This tool supports governments in steering MMS decision-making for their country.”

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