



The WHO Expert Committee on the Selection and Use of Essential Medicines
Department of Essential Medicines and Health Products
World Health Organization
20 Avenue Appia
CH-1211 Geneva 27
Switzerland

May 21, 2021

Re: Statement of support for the addition of antenatal multiple micronutrient supplementation (MMS) to the WHO Model List of Essential Medicines

Dear Expert Committee Members,

The Center for Human Nutrition and the Institute of International Programs in the Department of International Health at The Johns Hopkins Bloomberg School of Public Health (JHSPH) is providing this letter in support of the application for *Multiple Micronutrient Supplement – Antenatal Supplement* to be added to the WHO Model List of Essential Medicines (WHO EML).

The Center for Human Nutrition seeks to improve the public's health through research, teaching, training, and advocacy focused on improving diets and the nutritional status of vulnerable populations. The Center for Human Nutrition sits within the Program in Human Nutrition in the Department of International Health at the Johns Hopkins Bloomberg School of Public Health.

Women in low- and middle-income countries (LMICs) experience deficiencies of multiple essential vitamins and minerals that result in health consequences for pregnant women and their infants.¹ These range from maternal and perinatal mortality to complications throughout the life-course due to births that are premature or affected by fetal growth restriction or both. These are problems that must be given high priority and have been in global goals and targets.

We now have global evidence from over 20 rigorous, randomized trials demonstrating that daily supplementation with MMS in pregnancy compared with supplementation with iron and folic acid (IFA) alone improves pregnancy outcomes. Two systematic reviews and meta-analyses show that MMS reduces the risk of infants being born with a low birth weight by 12–14 percent, reduces the risk of small-for-gestational age births by 3–8 percent, and may reduce preterm birth by 5–7 percent.^{2,3} All women and children were found to benefit, but the data suggests that MMS helps undernourished women especially.³ The evidence also shows that MMS is safe and cost-effective.^{4,5} Notably, two of these trials were conducted by our Johns Hopkins micronutrient research group in Nepal⁶ and Bangladesh⁷ involving close to 50,000 pregnancies.

Implementation of MMS in place of IFA supplementation should begin immediately and be scaled up as rapidly as possible within the context of implementation research. Implementation research is being used to help policymakers and other national stakeholders understand how to integrate and strengthen the delivery of MMS within the context of antenatal care. JHSPH and

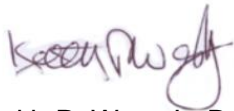
other institutions are involved in implementation research activities globally, and this work would be further facilitated with the addition of MMS on the WHO EML.

The need to introduce and scale MMS is even more urgent in the context of the COVID-19 pandemic, which has disrupted food systems in many LMICs and made it harder for many pregnant women to achieve a healthy diet. Global guidance recommends that MMS can be used to help meet the increased micronutrient needs and support healthy pregnancy outcomes during the pandemic especially in the context of fragile and food insecure contexts.⁸ The scientific evidence is clear – MMS is safe, efficacious, and cost-effective. We have global guidance to inform the transition from IFA to MMS and established delivery channels through which MMS can be delivered at scale. Adding MMS to the WHO EML is an important step in supporting the global community in moving from evidence to action.

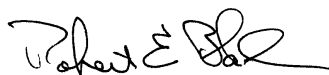
Sincerely,



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¹ Bourassa MW, Osendarp SJM, Adu-Afarwuah S, Ahmed S, Ajello C, Bergeron G, et al. Review of the evidence regarding the use of antenatal multiple micronutrient supplementation in low- and middle-income countries. *Ann N Y Acad Sci.* 2019;1444(1):6–21.

² Keats EC, Haider BA, Tam E, Bhutta ZA. Multiple-micronutrient supplementation for women during pregnancy. *Cochrane Database of Systematic Reviews* 2019, Issue 3.

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- ³ Smith, ER, Shankar, AH, Wu, LS, Aboud, S, Adu-Afarwuah, S, Ali, H, et al. 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. *Lancet Glob. Heal.* 2017, 5 (11), e1090–e1100.
- ⁴ Engle-Stone R, Kumordzie SM, Meinen-Dick L, Vosti SA. Replacing iron-folic acid with multiple micronutrient supplements among pregnant women in Bangladesh and Burkina Faso: costs, impacts, and cost-effectiveness. *Ann N Y Acad Sci.* 2019;1444(1):35–51.
- ⁵ Kashi B, M Godin C, Kurzawa ZA, Verney AMJ, Busch-Hallen JF, De-Regil LM. Multiple Micronutrient Supplements Are More Cost-effective Than Iron and Folic Acid: Modeling Results from 3 High-Burden Asian Countries. *J Nutr.* 2019;149(7):1222–9.
- ⁶ Christian P, Khatry SK, Katz J, Pradhan EK, LeClerq SC, Shrestha SR, Adhikari RK, Sommer A, West KP Jr. Effects of alternative maternal micronutrient supplements on low birth weight in rural Nepal. A double-blind randomized community trial. *BMJ* 2003; 326:571-576.
- ⁷ West KP Jr, Christian P, Labrique AB, Rashid M, Shamim AA, Klemm RDW, et al. Effects of vitamin A or beta-carotene supplementation on mortality related to pregnancy: A cluster-randomized, double-masked, placebo-controlled trial in Bangladesh. *JAMA* 2011; 305:1986-1995
- ⁸ WFP, UNICEF, Global Nutrition Cluster Technical Alliance, Protecting Maternal Diets and Nutrition Services and Practices in the Context of COVID-19. April 2020