

# Improving maternal health outcomes by increasing access to preventative maternal nutrition products

RHSC GMM, MHS Caucus

October 17, 2023

Results for Development (R4D), Market Shaping Practice

# Agenda

- Introductions (of R4D team) – 5min
- Importance of preventative maternal nutrition commodities in the care continuum (5min)
- ANC Supplementation – barriers to access (20 mins)
- Moderated discussion (15 mins)





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# Introducing Our Speakers

# R4D's Market Shaping Practice strengthens systems and markets to *increase access to* and *catalyze appropriate use of* essential health and nutrition products, which are key building blocks to ensure effective program coverage

## We do this by:

*Solving immediate challenges*



- Engage in product / product class areas **prioritized by change agents**
- Take a **holistic and analytical approach** to identify barriers to introduction and scale-up
- **Catalyze alignment of priorities and incentives** of key market actors, across regulatory, financing, supply and demand aspects, at global, regional and country levels.

*Stronger systems*

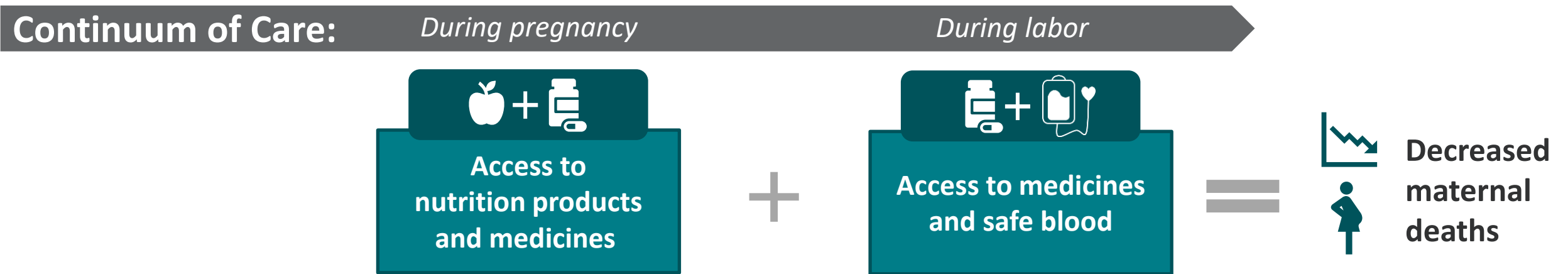


- Support systems to move towards **country-led introduction** of new products and **ongoing optimization** of lifesaving commodity markets
- Ensuring practical knowledge gained from individual markets are **appropriately adapted to strengthen other systems and markets** across the globe.

Product access is essential to effective program coverage:



# Expanding the MHS Caucus's focus to include a full continuum of care of products for maternal health can reduce preventable maternal deaths



**MHS Caucus historically has focused on medicines** for prevention and treatment of pre/eclampsia and PPH. However, there are **opportunities to expand product focus** to include the full continuum of care for maternal health:

- **Maternal nutrition** for prevention of micronutrient deficiencies, which increases PPH risk
- **Safe blood** for treatment of most severe PPH cases

*Focus of this discussion*



# The Opportunity

- Micronutrient deficiencies are linked to **adverse maternal health outcomes**, like anemia and postpartum hemorrhage (PPH).
- **Micronutrient supplementation is one of the key interventions** for improving maternal nutritional status.
- Yet, maternal nutrition has been **siloed and under-prioritized** in maternal health supplies dialogue.



# Micronutrient deficiencies are a leading cause of maternal anemia, which in turn is linked to PPH, a leading cause of maternal mortality

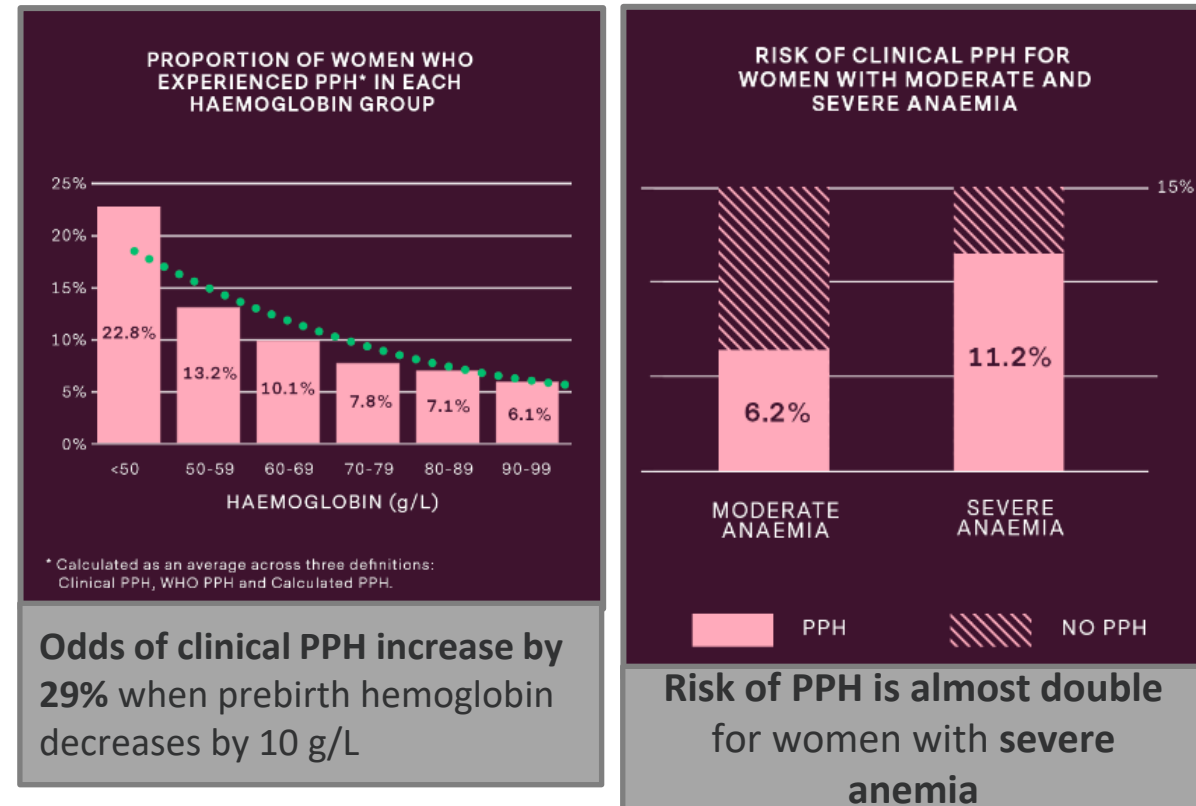
## 1 in 5 pregnant women are iron deficient, the leading cause of anemia<sup>1</sup>

- Iron deficiency underlies 60% of anemia cases<sup>1</sup>
- More than 1 in 3 pregnant women worldwide are anemic<sup>2</sup>

## Anemia, and other micronutrient deficiencies, are associated with poor maternal health outcomes, including PPH

- Results from the *WOMAN-2 trial*<sup>3</sup> suggest that:
  - Lower prebirth hemoglobin levels increase risk of PPH
  - Women with severe anemia are **7 times more likely to die or nearly die** as a result of PPH
- **Other micronutrient deficiencies** including folate, zinc, iodine, calcium, and vitamins A, D, and B12 are also **associated with adverse maternal health outcomes**<sup>2</sup>

## Link between Anemia and PPH



1. Derman, R. & Patted, A. (2023). Overview of iron deficiency and iron deficiency anemia in women and girls of reproductive age. *Int J Gynaecol Obstet*, 162(52), pp. 78-82.  
2. WHO. Anaemia fact sheet. 2023. <https://www.who.int/news-room/fact-sheets/detail/anaemia#:~:text=Globally%2C%20it%20is%20estimated%20that,age%20are%20affected%20by%20anaemia>.  
3. WOMAN-2 trial collaborators. (2023). Maternal anaemia and the risk of postpartum haemorrhage: a cohort analysis of data from the WOMAN-2 trial. *Lancet Global Health*, 11(8), pp. E1249-E1259. (Figures are from WOMAN-2 Trial website "Resources" page: <https://woman2.lshtm.ac.uk/resources/#infographics>)

## Preventative ANC supplementation products that target micronutrient deficiencies can improve nutritional status and reduce adverse maternal health outcomes...

*Examples of preventative maternal nutrition products that need more direct attention to increase access:*

### Iron Folic Acid (IFA)\*

- **Current standard of care for ANC supplementation** to prevent and treat anemia and reduce risk of poor birth outcomes

*WHO recommends: IFA containing 30-60 mg elemental iron – 60 mg in contexts with  $\geq 40\%$  prevalence of anemia among pregnant women – and 400 mcg folic acid daily throughout pregnancy*

### Multiple Micronutrient Supplements (MMS)\*\*

- **More efficacious and cost-effective alternative to IFA** to prevent anemia and reduce risk of poor birth outcomes
- Recommended by the WHO for use in “contexts of rigorous research”

*UNIMMAP formulation (gold standard, backed by global actors) contains 30 mg iron, 400 mcg folic acid, and 13 additional micronutrients*

### Balanced Energy Protein (BEP)\*\*

- **Ready-to-use food supplements for underweight pregnant and lactating women** to promote gestational weight gain and reduce risk of poor birth outcomes
- **WHO recommends BEP** for underweight women during pregnancy

*Includes multiple micronutrients, energy, and protein*

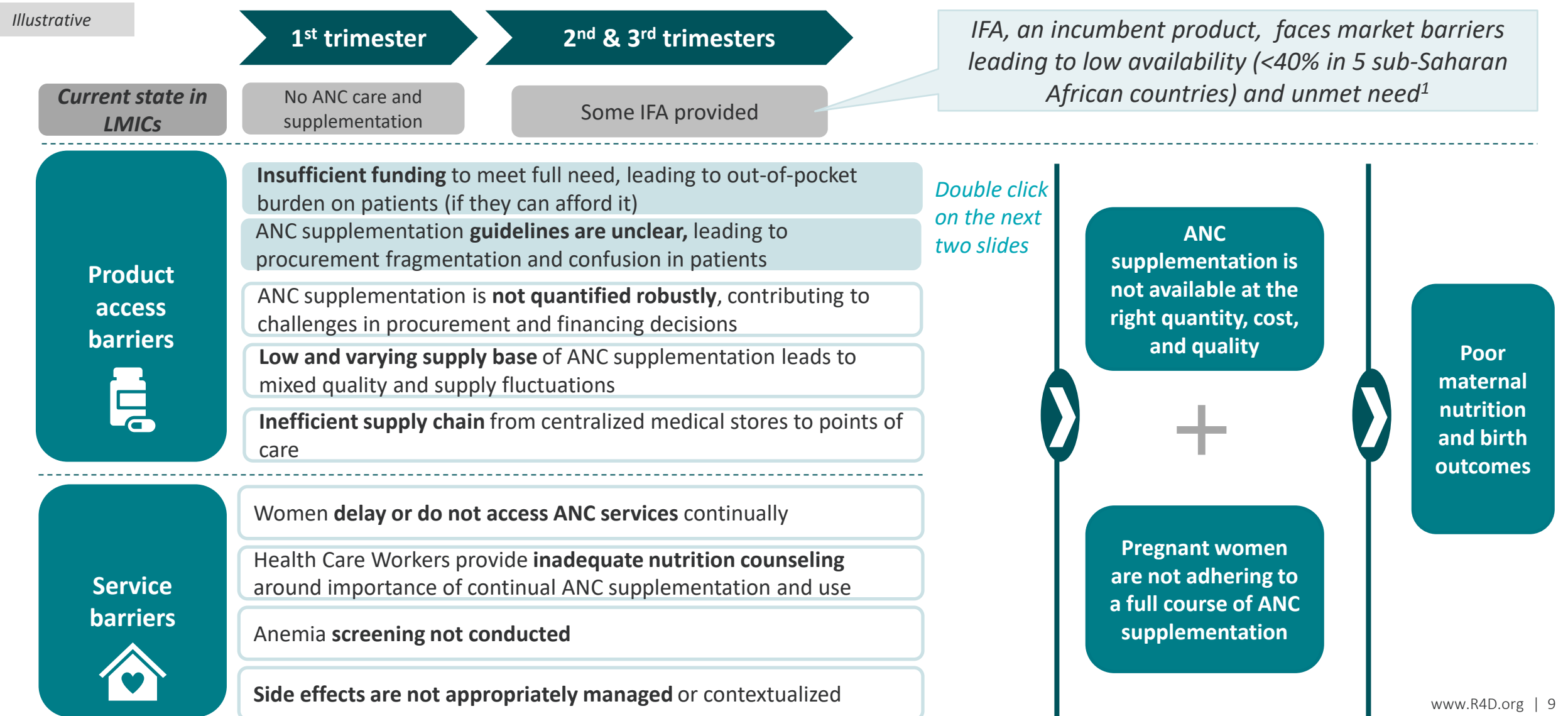


*\*In the LEAP Report as a Priority Maternal Health Drug; included in MNCHN asset tracker; included as a part of the R4D MNCH project to identify market barriers and co-create solutions*

*\*\*Included in MNCHN Asset Tracker & projects identifying market barriers to support intro and scale-up*



# The Challenge: a mix of product access and service barriers lead to significant unmet need in ANC supplementation, which is often limited to IFA currently in best-case scenarios

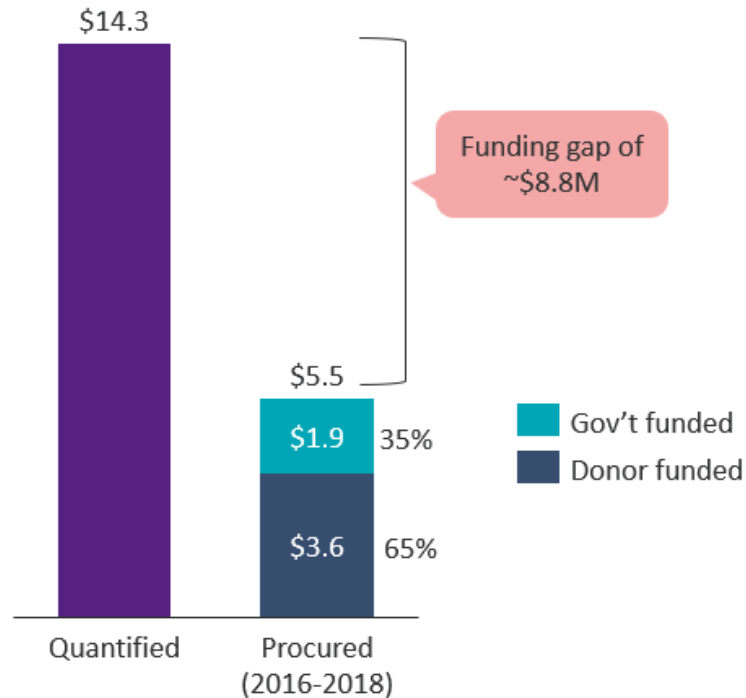


1. Data comes from available national surveys between 2016-2018 (E.g. SARA's and additional reports) [www.R4D.org](http://www.R4D.org) | 9

For example, funding for IFA is insufficient, which limits access to this life saving maternal nutrition commodity.

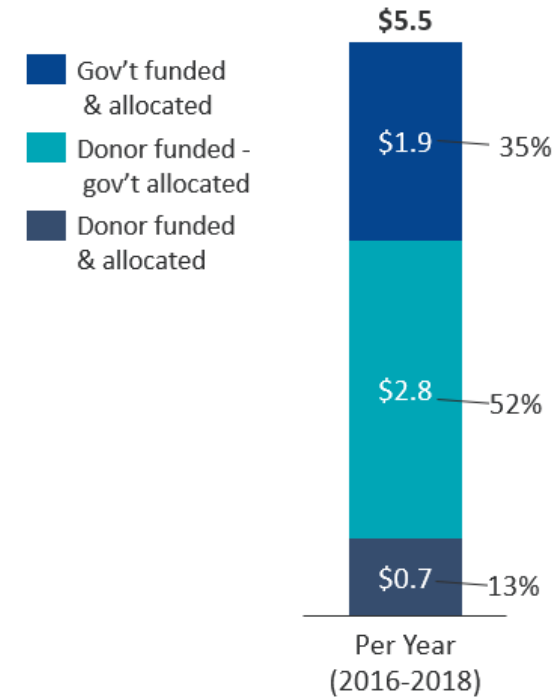
There was an estimated 62% annual funding gap across five geographies between 2016 – 2018...

Estimated Funding Needed for IFA<sup>1</sup> vs. Actual Government and Donor Spent for IFA Per Year (USD in millions, 2016-2018)<sup>2</sup>



... and donors funded more than half of IFA procurements in the public sector suggesting sustainability concerns

Government vs. Donor Average Funding of IFA Per Year (USD in millions, 2016-2018)<sup>2</sup>



**Opportunity:** Holistic resource mobilization support at federal and state level to expand financing for ANC supplementation should be prioritized

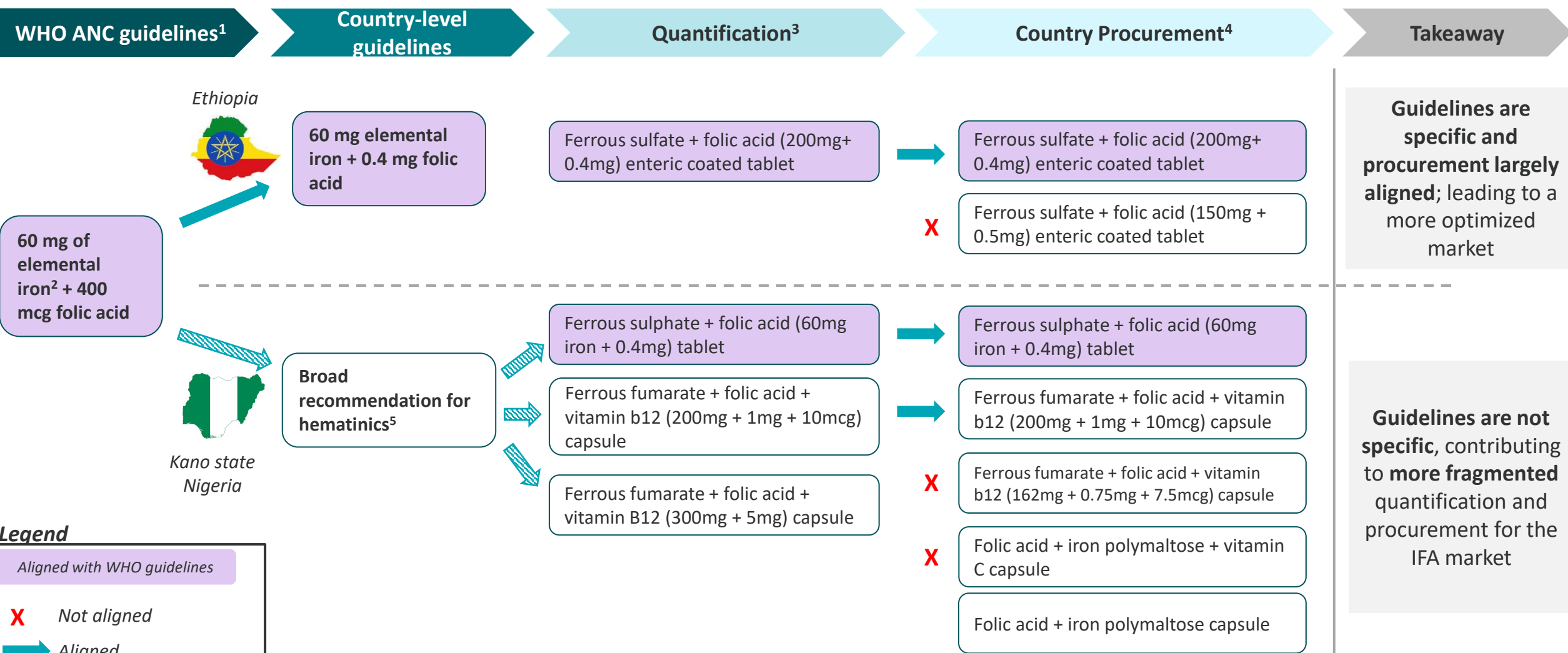


Note: geographies of analysis included Ethiopia, Tanzania, Uganda, Kenya, and Kano State, Nigeria

1. The forecasted addressable market for the public sector was calculated using a demographic- and morbidity-based methodology, focused on the uses of the priority medicines for MNCH conditions in country STGs and triangulating publicly available data, guidance, and expert opinion for 2016-2018. Pricing data collected between 2016-2018 was applied to both forecast and procurement volumes to then calculate the funding gap as a total and disaggregated by countries.

2. Values were calculated using the procurement data sourced from country government procurement agencies (EPSS, FMOH, MSD, NMS, KEMSA, DMCSA), other procurement agencies (JMS, SOML), and donors

# Specificity in country guidelines and alignment across guidelines, quantification, and procurement is key to minimizing fragmentation and optimizing resource allocation to increase access to IFA



**Guidelines are specific and procurement largely aligned;** leading to a more optimized market

**Guidelines are not specific,** contributing to more fragmented quantification and procurement for the IFA market

1. The WHO recommends 60 mg elemental iron in populations where anemia in pregnant women is a severe public health problem (prevalence ≥40%), like Ethiopia and Nigeria.  
 2. The equivalent of 60 mg elemental iron varies by the type of iron compound. The IFA product with 200mg of ferrous sulfate procured in Ethiopia specifies that it contains 60mg of elemental iron and thus aligns with the WHO and country guidelines.  
 3. Quantification data was sourced from: Maternal Health Program Pharmaceuticals Quantification Report of Ethiopia 2019/20 to 2021/22; Kano: DMCSA "proposed tender" 2016, 2017, Free Maternal Child Health Quantification 2016 - 2018 led by DFID-funded MNCH2 Program, SOML-funded MNCH Week Workplan 2017, 2018. (We are still waiting on data from 2019-2022 for Kano.)  
 4. Procurement data was sourced from country government procurement agencies– EPSS between 2019-2022 and DMCSA between 2016-2018. (We are still waiting on data from 2019-2022 for Kano.)  
 5. Kano's broad recommendation for hematinics is from 2018. It has since been updated to be more specific, but the 2018 guideline is being used here for the purpose of comparing to the 2016-2018 procurement data.

ANC supplementation can be broadened to include Multiple Micronutrient Supplements (MMS), which are a more cost-effective alternative to IFA and could prevent adverse maternal health outcomes. However, **access to MMS will face similar challenges present in the IFA market**

### Why MMS?

- Multiple Micronutrient Supplements (MMS) are an antenatal supplement that **addresses anemia and other micronutrient deficiencies**
- Compared to iron folic acid (IFA), UNIMMAP MMS – the gold standard MMS formulation containing iron, folic acid, and 13 additional micronutrients – is much **more cost effective** – with a **cost-benefit ratio of over 1,000x in some contexts** – at averting DALYs<sup>1</sup>
- While MMS has a lower iron content (30 mg) than the WHO-recommended IFA (60 mg), it has been shown to **be just as effective at preventing anemia**<sup>2</sup>
  - Additional micronutrients present in **MMS improve the absorption of iron** and may also improve other deficiencies known to cause anemia
  - It's possible that MMS may have a **better taste and fewer adverse side effects** than IFA, due to its lower iron content, which could lead to **improved adherence**.
- There is **significant interest from donors and partners in supporting countries in transitioning from IFA to MMS** for prevention of anemia during pregnancy

### Emerging challenges in the MMS market

#### Demand

**Low demand** caused by low awareness, lack of clear WHO recommendation for use, and higher price compared to IFA

#### Supply

Lack of registered **UNIMMAP MMS suppliers** in countries

#### Regulatory

**Risk of regulatory fragmentation**  
*(Misalignment between country guidelines and EMLs, quantification, and procurement leads to sub-optimal resource allocation)*

#### Financing

**Funding gap** and problems with domestic resource mobilization

**IFA market challenges that can impact the MMS market**



1. Nutrition International Cost-Benefit Tool. <https://www.nutritionintl.org/learning-resources-home/mms-cost-benefit-tool/>  
 2. Gomes et al. 2023. Antenatal multiple micronutrient supplements versus iron-folic acid supplements and birth outcomes: Analysis by gestational age assessment method. *Maternal and Child Nutrition*, 19(3), e13509.

# Balanced Energy Protein (BEP), a food supplement for underweight pregnant women, can also improve maternal health, but the BEP market needs attention

## Why BEP?

- BEP is a food supplement for pregnant and lactating women which **includes multiple micronutrients, energy, and protein**
- BEP given to underweight pregnant women prevents adverse birth outcomes and **promotes gestational weight gain.**
- Recent analysis has shown that a targeted approach of **providing BEP to underweight women and MMS to women with an adequate BMI is more cost-effective** than supplying MMS alone.<sup>1</sup>

## Challenges with the BEP market<sup>2</sup>

### Demand

**Low awareness** among key country-level stakeholders about BEP and how to integrate it amongst other interventions to prevent malnutrition

### Supply

**Limited supply base** for BEP; Suppliers aren't entering the market due to low demand and prioritization of other products (i.e., RUTF)

### Regulatory

**No clear standardized global guidance** on quality standards and formulations

### Financing

**Insufficient funding** from global donors and procurers



1. Young et al. Cost-effectiveness of antenatal multiple micronutrients and balanced energy protein supplementation compared to iron and folic acid supplementation in India, Pakistan, Mali, and Tanzania: A dynamic microsimulation study. *PLoS Med.* Feb 2022; 19(2)
2. Source: R4D analysis for Maternal and Child Wasting project. Insights were collected from stakeholder interviews conducted between January – October 2023.

## Conclusion

- Addressing micronutrient deficiencies in pregnant women can reduce risk of anemia and adverse health outcomes, including PPH.
- **The MHS Caucus could help prioritize access to preventative ANC supplementation products, like IFA, MMS, and BEP.**



# Moderated discussion

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1. Any reactions or questions? When we talk about adverse maternal outcome prevention, how do you see nutrition factoring in?
2. Has this come up/ how does this feature in your respective activities, priorities, or strategies on maternal health outcomes?
3. Any objections to including efforts on maternal nutrition into the MHC Caucus? How can we make ANC Supplementation a priority within MHS caucus? What are the next next steps?
  - *A sub-group?*
  - *Share updates on work done on nutrition from existing members?*
  - *Recruitment of additional orgs working primarily on nutrition?*
4. What is the evidence base we need to explore?
  - What evidence is needed to enhance prioritization of interventions among governments, partners, and donors?
5. What other questions do we need to prioritize?
  - What efforts are currently underway to increase coverage of preventative nutrition products?
  - What learnings can be drawn from experiences to-date in scaling up access to these products?

