World Vision

PROJECT BRIEF

Zambia Multiple Micronutrient Supplementation – Zambia

1. Project Overview

Country: Zambia

Region: SAR

Location: Southern, Lusaka, and Northern Provinces

Implementation Period: December 2023 – December 2026

Donor: The Power of Nutrition, Kirk Humanitarian, World Vision US

Contact Person: Megan McNerney (mmcnerney@worldvision.org)

2. Problem Statement & Rationale

Problem Statement

Zambia continues to experience unacceptably high levels of maternal malnutrition and adverse pregnancy outcomes, driven in part by widespread micronutrient deficiencies and gaps in antenatal care (ANC) utilization and quality.

- Anemia affects approximately 41% of pregnant women, with additional deficiencies in vitamin A, vitamin B12, and other essential micronutrients, reflecting a nutrition gap not addressed by iron and folic acid (IFA) alone.
- Preterm birth (7.4%) and low birth weight (11.2%) remain common, with the highest burden in Lusaka, followed by Southern and Northern Provinces.
- Although Zambia provides IFA through ANC, frequent and prolonged stockouts, logistical and transport challenges, and inconsistent counseling undermine reliable access and use of supplements.
- On the demand side, late ANC initiation, limited ANC contacts, cultural beliefs, fears around pregnancy disclosure, traditional remedies, forgetfulness, side effects, and limited family support reduce both uptake and adherence to supplementation.
- Health workers and community-based volunteers (CBVs) face capacity constraints, including limited time, insufficient interpersonal counseling skills, and inadequate job aids, further weakening effective service delivery.

Together, these supply- and demand-side barriers limit the impact of existing maternal nutrition interventions and contribute to persistently poor maternal and newborn outcomes.

Rationale

Zambia continues to face high levels of maternal micronutrient deficiencies and adverse birth outcomes, which are not fully addressed by the current reliance on iron and folic acid supplementation alone. Global and national evidence demonstrates that multiple micronutrient supplementation (MMS) provides more comprehensive nutritional support during pregnancy and is associated with improved maternal and neonatal outcomes compared to IFA, particularly in low- and middle-income settings with high anemia and food insecurity. However, formative research shows that the effectiveness of supplementation is constrained by late antenatal care initiation, inconsistent ANC attendance, cultural beliefs, stock disruptions, and poor adherence driven by limited counseling, forgetfulness, and inadequate family and community support. Introducing MMS therefore requires not only improved commodity availability but also deliberate social and behavior change interventions that address barriers at the individual, household, community, and health-system levels. This work is designed to generate implementation evidence and strengthen behaviors that enable early ANC attendance, MMS uptake, and sustained adherence, informing scalable and sustainable integration of MMS into routine antenatal care in Zambia.

3. Target Population

Primary Target Population

- Pregnant women attending (or eligible to attend) antenatal care services in Lusaka, Northern, and Southern Provinces of Zambia, with particular attention to:
    - Women with early pregnancies who delay ANC initiation
    - Women in rural, peri-urban, hard-to-reach, and food-insecure settings
    - Women with limited literacy and limited access to reliable health information

  The implementation research is expected to reach approximately 329,000 pregnant women across the three provinces during Phase II.

Secondary and Influencing Audiences

- Because women's behaviors are shaped by their environment, the SBC strategy also intentionally targets:
    - Male partners and other household decision-makers (e.g., mothers-in-law)
    - Community leaders, including traditional and religious leaders
    - Health care providers, including nurses, midwives, pharmacists, and MCH staff
    - Community-based volunteers such as SMAGs
    - District and provincial health system actors responsible for supply chain management, supervision, and planning.

4. Behavioural Focus & Theory of Change

Priority Behaviours:

- Pregnant women attend antenatal care (ANC) early, within the first 12 weeks of pregnancy
- Pregnant women complete at least eight ANC visits during pregnancy
- Pregnant women initiate MMS by taking at least one MMS tablet at their first ANC visit
- Pregnant women take MMS daily throughout pregnancy as prescribed
- Health facilities ensure timely and consistent delivery of MMS through ANC and outreach services
- Health facilities maintain a reliable and uninterrupted MMS supply, avoiding stockouts
- Health care workers provide accurate, respectful, and consistent counseling on MMS and maternal nutrition
- Male partners support ANC attendance and MMS use, including accompanying women to ANC where possible
- Community-based volunteers (CBVs) provide ongoing support and reminders to encourage adherence
- Community and household influencers (leaders, mothers-in-law, elders) actively support ANC attendance and MMS use and discourage harmful traditional practices

Theory of Change:

The ZMMS project's theory of change centers on improving maternal and fetal health by ensuring that pregnant women have consistent access to, uptake of, and adherence to multiple micronutrient supplements. Achieving this requires a sequential pathway in which MMS is reliably available at health facilities, women attend ANC early and regularly, initiate MMS at their first visit, and adhere to daily intake throughout pregnancy. These outcomes are enabled by accurate counseling, reminder systems, and sustained social support from male partners, families, community leaders, and CBVs. When supply-side and demand-side barriers are addressed together, sustained behavior change can contribute to reduced micronutrient deficiencies and anemia in pregnancy.

5. Intervention Design & Implementation

Formative Research Methods:

The ZMMS project employed a cross-sectional mixed-methods formative research design to generate evidence for the introduction and scale-up of MMS within ANC platforms. The core formative methods included:

- Qualitative methods as the primary formative approach, consisting of:
    - In-Depth Interviews (IDIs) with pregnant women, postpartum women, health facility staff, community leaders, CBVs, policymakers, and other key stakeholders

    - Focus Group Discussions (FGDs) with pregnant women, family and community influencers, CBVs, and community members to explore shared norms, beliefs, and practices
- Quantitative surveys conducted in parallel (and presented as annexes) with:
    - Pregnant and postpartum women
    - Health workers
    - Health facilities
      These surveys captured knowledge, attitudes, behaviors, service coverage, and supplement availability
- Landscape/document review of ANC, IFA, and nutrition policies, guidelines, coordination mechanisms, and M&E systems to contextualize findings
- Purposive sampling across three provinces (Lusaka, Northern, Southern), ensuring representation across rural, peri-urban, and urban settings and across the ANC service continuum
- Systematic qualitative analysis, using:
    - Inductive and deductive coding
    - Thematic analysis
    - Co-occurrence tables
    - Inter-coder reliability processes supported by Dedoose software

Core Project Models Used:

- Socio-ecological model: Barriers and facilitators were analyzed across individual, interpersonal, community, facility, district, and national/system levels, informing multi-level intervention design
- ANC as an integrated service delivery platform: The project model treats ANC as a "supermarket" entry point for multiple interventions (nutrition, HIV services, counseling, supplements), positioning MMS integration within routine care rather than as a standalone intervention
- Implementation research model: Phase I (formative research) informs Phase II (implementation and evaluation), with MMS introduction treated as a pilot to generate evidence for national policy adoption
- Community–facility linkage model: The project relies on CBVs/SMAGs, outreach services, and household counseling as extensions of facility-based ANC services for demand generation, adherence support, and follow-up
- Data-driven service improvement model: Routine use of HMIS/DHIS2, ELMIS, pharmacy scorecards, and quarterly review meetings is positioned as central to monitoring service delivery, stock management, and adaptation
- Transition model from IFA to MMS: MMS introduction is framed as a system transition rather than product substitution, requiring SBC, supply-chain readiness, capacity strengthening, and social norm change

SBC Approaches:

- Integration of MMS messaging into routine ANC services, positioning ANC as the primary entry point for behavior change
- Interpersonal communication and counseling by health workers at facility and outreach ANC visits to address knowledge gaps, myths, and side effects
- Capacity strengthening of health workers and CBVs to improve counseling quality, interpersonal communication skills, and consistent messaging
- Community mobilization and engagement, including the use of religious leaders, traditional leaders, and elderly women as trusted influencers
- Male partner engagement strategies to promote shared responsibility for ANC attendance and MMS adherence
- Household-level follow-up and support, especially through CBVs acting as adherence supporters or "adherence buddies"
- Use of reminders and nudges, including SMS messages, phone reminders, and habit-formation techniques to support daily MMS adherence
- Norms-shifting approaches that promote MMS as safe, effective, and preferable to unverified traditional remedies
- Advocacy-oriented SBC efforts to strengthen buy-in from health system actors and community structures that influence service delivery and uptake

Justification for SBC Approach:

The ZMMS SBC approach is justified by evidence that access to MMS alone is insufficient to ensure early ANC attendance, uptake, and sustained adherence among pregnant women. The strategy responds to documented behavioral, social, and structural barriers—including fear of witchcraft, misinformation, reliance on traditional remedies, household decision-making dynamics, forgetfulness, side effects, and inconsistent provider counseling—that directly influence maternal nutrition practices. Because these barriers operate across individual, interpersonal, community, and institutional levels, a multi-level SBC approach grounded in the socio-ecological model is required. By combining service-based counseling, community engagement, social support, and systems-level reinforcement, the SBC strategy improves acceptability, feasibility, and sustainability of MMS integration within routine ANC services.

Implementers:

- Ministry of Health (MoH), Zambia – Government lead and steward, providing policy alignment, oversight, and integration of MMS into routine ANC services

- MoH Technical Units (Reproductive Health Unit; Child Health and Nutrition Unit; MoH Pharmacy) – Technical guidance on ANC delivery, nutrition, and supplement supply management
- District Health Offices (DHOs) – District-level coordination, supervision, capacity strengthening, and data review for SBC activities and MMS rollout
- Provincial Health Offices (PHOs) – Oversight of district implementation and support for planning, logistics, and reporting
- Health Facilities (ANC clinics and outreach platforms) – Frontline delivery of MMS, counseling, client education, and behavior change interactions
- Health Care Workers (nurses, midwives, nutritionists, pharmacists, MCH staff) – Primary SBC implementers through ANC counseling, adherence support, and client education
- Community-Based Volunteers (CBVs), including SMAGs – Household-level SBC delivery, follow-up, adherence reminders, and community sensitization
- Community Structures and Leaders (traditional leaders, religious leaders, elderly women, male champions) – Norms-shifting, myth-busting, and community endorsement of MMS and ANC

6. Results (Formative Research)

The project reported several outcomes from the formative research phase:

- **ANC attendance is widely valued but often delayed.** Women recognize ANC as essential for monitoring maternal and fetal health, yet first visits commonly occur around 13 weeks due to late pregnancy disclosure, fear of witchcraft, stigma, and distance to facilities.
- **Stockouts of iron and folic acid are frequent and prolonged.** All surveyed health facilities reported iron shortages, many lasting several months, which disrupts consistent supplementation and sometimes forces women to purchase supplements privately.
- **Supplement uptake is generally high when available, but adherence is inconsistent.** Most pregnant women reported taking IFA daily, yet adherence is undermined by forgetfulness, side effects, and insufficient counseling on how to manage those side effects.
- **Family and community members strongly influence women's health behaviors.** Male partners, mothers-in-law, and community leaders can either support ANC attendance and supplement use or discourage them through traditional beliefs and misconceptions.
- **Acceptability of MMS is very high among women and providers.** Nearly all women expressed willingness to switch from IFA to MMS, and health workers viewed MMS favorably due to its comprehensive nutritional benefits, while highlighting supply consistency as the primary concern.

7. Key SBC Messages

- Early ANC attendance protects the health of both mother and baby
- Attending ANC early and regularly is not dangerous and is not linked to witchcraft
- MMS provides more complete nutrition than iron and folic acid alone
- Taking MMS daily helps prevent anemia, low birth weight, and pregnancy complications
- Mild side effects from MMS are normal and manageable, and should not stop use
- Starting MMS early and continuing throughout pregnancy leads to better birth outcomes
- Male partners play a vital role in supporting healthy pregnancies
- MMS is safe, proven, and recommended by health professionals
- Traditional remedies should not replace clinically tested supplements like MMS
- Family and community support helps pregnant women stay healthy and complete treatment

8. Key Lessons Learned

- **Availability alone does not guarantee impact.** Even when supplements are valued and acceptable, late ANC initiation, inconsistent counseling, household influences, and forgetfulness significantly limit uptake and adherence, requiring deliberate social and behavior change approaches alongside commodity provision.
- **Pregnant women's behaviors are shaped by their social and service environments.** Decisions about ANC attendance and supplement use are strongly influenced by male partners, mothers-in-law, community leaders, and provider practices, highlighting the need for multi-level engagement beyond the individual woman.
- **Health system and community systems must work together for sustained adoption.** Reliable supply chains, respectful and consistent provider counseling, and well-supported CBVs and community structures are all necessary to translate high acceptability of MMS into consistent use and improved maternal and neonatal outcomes.

9. Scalability & Sustainability Considerations

- **Integration into Existing Health System Platforms**
  - Scalability depends on embedding MMS distribution and SBC activities within routine ANC services, rather than creating parallel systems.
  - Aligning counseling, supply management, reminder systems, and monitoring with existing MoH structures (e.g., ANC registers, CBV systems, DHIS2) reduces operational burden and increases the likelihood of continued implementation beyond the project period.
  - Integration also supports national ownership and policy uptake.

- **Strengthening and Institutionalizing Capacity**
  - Sustained impact requires building long-term capacity among health workers, CBVs, and district officials, rather than reliance on external implementers.
  - Training, mentorship, and use of job aids should be institutionalized through district-led processes and regular supervision structures. This enables consistent quality of counseling and support as MMS is expanded to additional facilities and districts.
- **Leveraging Community Structures and Social Norms**
  - Engagement of existing community structures (e.g., NHCs, HCCs, religious and traditional leaders, male champions) enhances sustainability by anchoring behavior change within local norms and trusted relationships.
  - As communities internalize the value of early ANC and MMS use, social support for these behaviors can continue even with reduced external inputs. This community-driven reinforcement is critical for scale.
- **Financial and Operational Feasibility at Scale**
  - For national scale-up, SBC activities must be cost-aware and adaptable, prioritizing low-cost, high-reach channels such as group counseling, CBV follow-up, and SMS reminders.
  - Planning for recurrent costs—such as training refreshers, communication materials, and messaging platforms—supports realistic transition to government or partner financing. Demonstrating cost-effectiveness strengthens the case for sustained investment.