

Point of use complementary food fortification with multiple micronutrient powders in the Philippines



**CHILDREN, FOOD SECURITY
AND NUTRITION**

**CASE STUDY:
PHILIPPINES**

University of the Philippines Los Baños Foundation, Inc.
United Nations Children's Fund

 **MDG F**
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DRAFT

Terminal Report

Development of Case Study on JP MDG-F 2030 Point of Use Complementary Food Fortification with Multiple Micronutrient Powders in the Philippines



University of the Philippines Los Baños
Foundation, Inc.

United Nations Children's Fund

June 2013

**DEVELOPMENT OF CASE STUDY ON JP MDG-F 2030 POINT
OF USE COMPLEMENTARY FOOD FORTIFICATION WITH
MULTIPLE MICRONUTRIENT POWDERS IN
THE PHILIPPINES**

TERMINAL REPORT

Submitted by:

Normahitta P. Gordoncillo

Corazon VC. Barba

Ma. Theresa M. Talavera

Maria Ana T. Quimbo

University of the Philippines Los Baños Foundation, Inc. (UPLBFI)

United Nations Children's Fund (UNICEF)

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MICRONUTRIENT POWDERS IN THE PHILIPPINES

EXECUTIVE SUMMARY

1. The project entitled “Development of Case Study on JP MDG-F 2030 Point of Use Complementary Food Fortification with Multiple Micronutrient Powders (MNPs)” was conducted to document the program implementation in retrospect, in Zamboanga City and in the Municipality of Aurora, Region IX, Philippines.
2. Specifically, the study aimed to: (1) describe the conceptual and operational mode of Joint Programming in the practice of Point of Use Complementary Food Fortification with MNPs; (2) determine the knowledge and practice on Complementary Food Fortification with MNPs at the household level; and (3) generate insights and lessons learned in promoting progress towards the MDG 2030 from the case experience of Joint Programming in the practice of Point of Use Complementary Food Fortification with MNPs.
3. The study was done in two levels: (a) service providers, including managers from various levels; and (2) household. Given the two study sites in Region IX, namely Zamboanga City and the Municipality of Aurora, the study worked within a rapid appraisal approach using a combination of research techniques, such as desk reviews, key informant interviews and focus group discussions with service providers and managers, and survey at the household level. The latter involved the survey of a total of 120 households in four barangays, namely Calarian and Boalan in Zamboanga City, and San Jose and La Paz in the Municipality of Aurora.
4. The conceptual framework specifically designed for this case study represented the procedural and technical flow of the Joint Programming in the Point of Use Complementary Food Fortification with MNP. In this framework, the MNP as an intervention becomes a product of collaborative undertakings in planning, coordinating, resource allocating and mobilizing across levels and sectors.

Results from the Desk Reviews, KIs and FGDs

5. There are enough international and national policies that provide the legal basis to distribute the MNP to identified target groups. The home fortification is being implemented as part of the IYCF strategy to improve nutrient intake from complementary foods of children by six months of age. While there is no specific policy referring to WFP implementing the MNP program, the DOH's AO 2010-0010 and DM 2001-0303 can serve as WFP's support and contribution achieving the MDGs, PPAN and DOH goals of reducing child mortality and addressing micronutrient needs.
6. According to the Home Fortification Technical Advisory Group (HFTAG), home fortification is an innovation aimed to improve the diet quality of nutritionally vulnerable groups, such as young children. The term MNP refers to sachets containing dry powder with micronutrients that can be added to any semi-solid or solid food ready for consumption. Home fortification with MNP aims to ensure that the diet, i.e. complementary foods and breast milk combined, meets the nutrient needs of young children.
7. The World Food Program (WFP) was the lead implementing agency, responsible for procuring and delivering the MNPs to the program areas, as well as training health workers on the guidelines for the distribution and use of the MNPs. The brand name of the MNP is Vita Nutrient Mix (VNM).
8. The roles of national and regional agencies are focused on planning and coordinating the program, while the city, municipal and barangay levels focus on distributing the MNP sachets and monitoring the MNP's proper use.
9. Based on information gathered from the interviews with program managers and service providers, the MNP supplies came from the WFP Central Office in Manila, delivered to WFP Iligan Office, then to Zamboanga City and to Aurora, Zamboanga del Sur. In the case of Zamboanga City, the MNPs were first unloaded at 16 main or cluster health centers before distributing to the 98 barangay health centers. In the case of Aurora Municipality, the supplies were unloaded at the Municipal Health Office, bypassing the Provincial Health Office. The Municipal Health Office has the authority to allocate and distribute the MNPs to the target areas and target group.

10. Various distribution schemes are utilized in order to distribute the MNP sachets to the target group, i.e. during the *Garantisadong Pambata* (GP) activities and house to house visits conducted by the BHWs. Sometimes, MNP is distributed in Zamboanga City when OPT (Operation *Timbang*) is being conducted. During GP, breastfeeding is promoted; deworming tablets are given, as well as MNP sachets. In addition to the midwives and BHWs, peer counselors also distribute MNP sachets. Recalled dates of distribution between Zamboanga City and Aurora varied, where the former had their first wave of distribution around August of 2011, while the latter distributed sometime in mid 2012.
11. Both sites claimed to have reached all of their target recipients and more, i.e. children ages above the bracket of 6-23 month-old, due to an oversupply of the MNPs. Refusal rate was estimated to be about 5-10% of target household recipients, usually occurring after first distribution.
12. A monitoring system has been established to track the progress of the MNP home fortification program implementation. The BHWs/BNSs have standard accomplishment forms supposedly to be submitted monthly, which eventually ended being submitted quarterly due to work overload. From the BHWs/BNSs, the forms are submitted to the midwives, and in turn to the C/MHO for consolidation before submission to the WFP program assistant. Initially, empty sachets were checked as signs of compliance, and calendars as a record of home use. These practices dwindled since not all households can be monitored regularly using this system, and also realizing that empty sachets do not always mean that the contents have been consumed.
13. A highlight of good management and service practices include the following: a) government agencies' participation, b) focal persons' presence, c) local chief executives and the health officers' support, d) localized multiple distribution systems, and e) immediate response to negative feedbacks on MNP utilization.
14. The problems encountered include the following: a) Inadequate capacity development, since not all have been trained on proper IYCF practices and/or feel confident enough to address concerns from household recipients; b) inadequate logistical support, which is more pronounced once the supplies are unloaded at local sites; c)

health and nutrition workers' attitude of seeing the MNPs as separate from overall efforts at nutrition improvement; d) delayed distribution of MNPs, such that there were less MNPs that could have been distributed in two years; e) vague and/or inconsistent instructions on the frequency of use; f) WFP MNP supply overlapping with the DOH MNP supply, with implications on storage facilities, shelf-life, and quality, and; g) delayed monitoring reports.

Results from the Survey at the Household Level

15. All respondents from the four study sites expressed awareness of VNM. Majority of the respondents, regardless of barangay, had something to describe about VNM. The respondents' top answers are either as "source of nutrients" or that these are "nutrients in powder form added to any food". In San Jose, a barangay in the Municipality in Aurora, some 30% could not describe the MNPs despite of their awareness of it.
16. The respondent's source of information about VNM is primarily the health workers, including the barangay health workers, barangay nutrition scholars and midwives. Some also mentioned leaflets and posters as other sources of information, particularly in San Jose (26%), La Paz (20%), and a few mentioning it also in Boalan (9%).
17. Across barangays, a varying proportion of respondents (10-40%) had no knowledge of the VNM's purpose, regardless of awareness and ability to describe it. Among those who answered knowing the VNM's purpose, the most popular answer in all study sites is "to improve health status of children", followed by "to prevent micronutrient deficiency". Others said for "appetite, beautiful skin, and to have sharp mind".
18. In multiple answers to the question on what the MNPs contain, the most frequent was the B complex vitamins, followed by Vitamin A, Vitamin C, and Iron.
19. Majority of the respondents (83% to 97%) pointed out that they never encountered a problem in distributing VNM; although sparingly, some mothers recall not receiving the VNM unless they ask for it; or receiving more than the number of boxes they expect based on the number of their entitled children; and not knowing where to get the stocks.

20. In all study areas, the most common practice of fortifying food with VNM is by adding it to boiled rice and vegetable dishes. Although sparingly mentioned, the VNM is dissolved in liquid, such as juice and milk, which is being discouraged due to VNM possibly settling in the bottom, thus decreasing its chances of being consumed.
21. The fortification process is popularly practiced after cooking, while the food is cold, or sometimes either while the food is still hot or warm. At least four responses described giving the VNM in one spoonful of rice, and in pure form, followed with a glass of water.
22. Of those who claim to have observed changes in their children due to the VNM, the top two positive results or VNM benefits are children's increased appetite and increased growth. Some respondents also related that VNM use has also improved the children's immune system and made them hyperactive and sleepy.
23. About 20% said noticing side effects with their children consuming VNM-fortified food, including diarrhea, vomiting, and food aversion. Generally, the respondents stopped giving the VNM to their children. Among those who reported the problem to the BHWs, the advices ranged from "stop using the VNM" to "continue using the VNM", on varying notes of explanations.
24. An exploratory question on households' willingness to pay showed 70-90% are willing to pay 4-6 pesos per MNP sachet. The main reasons of those unwilling to pay are financial problem, some children refuse to consume it due to its rusty taste, and that it is not prescribed by the doctor. Other reasons are that it is ineffective, they already have vitamins, preference for the syrup form and that the child is already two years old and thus too old for the VNM.

Recommendations

25. The recommendations cut across the key components of the program in terms of policies, production and/or supply, delivery system, and monitoring and evaluation, such as the following: a) develop an operations manual that spells out levels of authority and decision-making, procedures, and overall conduct of the program to make the roles of the agencies involved clearer; b) pursue localized sourcing of the MNPs as a cost consideration, without trade-offs for quality; c) address the issue of the MNPs' oversupply in view of overall program planning and management; d) distribute supplies

along existing mainstream structures; e) account and consider costs that may be incurred from the moment the local government receives it to the time that the MNPs are distributed to the households; f) predict the nature of existing health workers' disruption, and facilitate the program's integration to larger, ongoing development systems, and not just another resource-demanding program; g) expand the monitoring and evaluation system to include compliance, changes in young child feeding practices, improvement in dietary diversity, and children's nutritional status, and; h) synchronize the monitoring schedule with the DOH system.

26. On the household recipients' end, the nature of this study's recommendations are of behavioral change communication, such as the following: a) more than just the routine instructions, there is a need to simulate counseling to caregivers, especially once initial reactions from the first use of the VNM set in; b) conduct regular counseling and nutrition education activities to reinforce their knowledge on the MNP's importance and its use; c) initiate support groups among mothers and caregivers to serve as credible and firsthand examples of the proper use of MNPs and in the process encourage others to use MNPs, and; d) consider households' overall dietary context, from the moment the MNPs are introduced to the time that it is being evaluated for effectiveness.
26. Finally, an awareness of the lessons learned from implementing the Point of Use Complementary Food Fortification with MNPs bestows a special responsibility to those hastening the process of nutrition improvement. As the word of scaling up goes around, be it in the context of physical spread or new initiatives, the lessons learned in the JP MDG-F 2030 should prove useful towards creating the conditions conducive for a successful scaling up of the MNPs as an intervention.

1. Introduction

One of the four Millennium Development Goal Fund (MDG-F) Joint Programmes in the Philippines is the MDG-F 2030 Joint Programme on Ensuring Food Security and Nutrition for Children 0-23 months (U2). Operating on the premise that Joint Programmes contribute in promoting progress towards the MDGs, the MDG-F 2030 area aims at the following: 1) increased exclusive breastfeeding rate in the JP areas by 20% annually; 2) reduced prevalence of undernutrition by at least 3% among children 6-24 months old by 2012, and 3) improved capacities of national and local government and stakeholders to formulate, promote, and implement policies and programmes on IYCF. In particular, the MDG-F 2030 practice of Point of Use Complementary Food Fortification with multiple micronutrient powder (MNPs) stands to demonstrate a wealth of experiences in Joint Programming.

In support of the achievement of the objectives of MDG-F 2030 Joint Programme on Ensuring Food Security and Nutrition for Children 0-23 months, the development of case studies on the Point of Use Complementary Food Fortification with multiple micronutrient powders (MNPs) can capture best practices as well as document lessons learned for purposes of generating knowledge and policy implications. As such, the case study addresses concerns in inter-agency and intersectoral coordination, national ownership and policy reform of the Complementary Food Fortification with Multiple Micronutrient Powders. To meaningfully assess Joint Programming as an approach, this study looked into the utilization concerns in complementary food fortification with multiple micronutrient powder at the household level.

As part of a Global Review Knowledge Product on Children, Food Security and Nutrition within the MDG-F, this case study may serve as evidence in advocacy, planning, and resource allocation practices in Joint Programming. The case study also yields situation-specific lessons from which future attempts at home food fortification using MNPs may learn from. Thus, this study embarked in response to the call commissioned by the MDG F 2030 Joint Programme Management Unit, through the United Nations Children's Fund.

1.1. Objective

The overall objective of the project was to develop a case study documenting the “JP MDG-F 2030 Point of Use Complementary Food Fortification with Multiple Micronutrient Powders” in Zamboanga City and the Municipality of Aurora in Region IX, Philippines.

Specifically, the project aimed at the following:

1. to describe the conceptual and operational mode of Joint Programming in the practice of Point of Use Complementary Food Fortification with Multiple Micronutrient Powders;
2. to determine the knowledge and practice on Complementary Food Fortification with Multiple Micronutrient Powders at the household level; and
3. to generate insights and lessons learned in promoting progress towards the MDG 2030 from the case experience of Joint Programming in the practice of Point of Use Complementary Food Fortification with Multiple Micronutrient Powders.

2. Background and Context

2.1. What the Policy Says

The MDGF-JP (Joint Programme) on Ensuring Food Security and Nutrition for Children 0-23 months old is a 3 three-year collaborative project among UN agencies: United Nations Children’s Fund (UNICEF), World Health Organization (WHO), International Labor Organization, Food and Agriculture Organization, World Food Programme (WFP) and National Nutrition Council (NNC). It aimed to increase exclusive breastfeeding rate by at least 20% annually; to reduce prevalence of undernutrition in six JP areas by at least 3% in children 6-24 months old by 2011; and improve the capacities of government (national and local) and stakeholders to formulate, promote and implement policies and programs on the Infant and Young Child Feeding program or IYCF. The JP includes implementing the Multiple Micronutrient Powder Supplementation Program. WFP spearheaded the program implementation as one of the UN agencies participating in the MDGF 2020 JP.

At the international level, the Copenhagen Consensus in 2008 identified micronutrient supplementation as one of the interventions that can advance global welfare. In 2007, a joint statement issued by three UN agencies, namely, WHO, WFP and UNICEF – focused on preventing and

controlling micronutrient deficiencies in populations affected by an emergency. WHO (2011) recommends implementing home fortification for food with MNPs containing at least iron, vitamin A and zinc to improve iron status and reduce anemia among infants and children 6-23 months. Guidelines have also been developed, i.e. HFTAG's Programmatic Guidance Brief on Use of MNPs for home fortification, WHO's Guideline on the Use of MNPs for Home Fortification of Foods Consumed by Infants and Children 6–23 Months, DOH-issued guidelines, and WFP's guideline distributed in the program areas.

At the national level, the Philippine government and the nutrition sector recognize the importance of micronutrient supplementation (defined as providing pharmaceutically prepared vitamins and minerals to treat or prevent specific micronutrient deficiency) as one of the interventions addressing malnutrition. The NNC and the Department of Health (DOH) are committed to achieve the MDG of reducing child mortality and improving maternal health by 2015.

The NNC, which is the country's highest policy making body on nutrition, has formulated the Philippine Plan of Action for Nutrition (PPAN) for 2011-2016. The latest PPAN includes reducing the levels of Vitamin A deficiency (VAD) and iodine deficiency disorders (IDD) to below public health levels, and iron deficiency anemia (IDA) to < less than 40%. One of the strategies to achieve the PPAN objectives is home fortifying complementary food with MNP.

To ensure the local government units' support, the Department of Interior and Local Government Memorandum Circular 2012-89 was issued to all provincial governors, city/municipal mayors, *punong* barangays (village chiefs), ARMM regional governor, DILG regional directors and others concerned regarding the adoption of the PPAN at the local levels. This memo encouraged the local government units to implement programs and projects to achieve nutrition targets including micronutrient program Vitamin A supplementation twice a year, iron supplementation for infants and pregnant women, iodine supplementation in areas endemic to IDD and low access to adequately iodized salt, and home fortification with MNP.

The DOH's National Objectives also outline strategies to reduce the proportion of hungry and malnourished children by promoting optimum infant and young child feeding practices in various settings, adopting and implementing appropriate guidelines for the community-based

management of acute malnutrition, and providing quality services to ensure children's survival. Specific to micronutrient supplementation, DOH, as the lead agency, has issued several department issuances. Administrative Order (AO) 2010-0010, with the subject "Revised Policy on Micronutrient Supplementation to Support Achievement of 2015 MDG Targets to Reduce Under five and Maternal Deaths and to Address Micronutrient Needs of Other Population Groups" was issued last April 19, 2010. The AO aimed to: 1) guide health workers and providers in administering micronutrient supplements to identified population groups and clients; 2) promote the compliance and adherence among DOH offices, the LGUs and private sector to the revised policy and guidelines, and; 3) generate support of other stakeholders in implementing the micronutrient supplementation (MS) policy and guide throughout the country. It also provided the general guidelines on MS and defines the roles and responsibilities of the different units within DOH at the national and regional levels (regional, provincial and district hospitals, LGUs and development partners). This AO was followed by Department Memorandum (DM) No. 2011-0303 entitled "Micronutrient Powder Supplementation for Children 6-23 Months". The objective of the DM was to improve the micronutrient status and to reduce anemia among children 6-23 months of age by home fortifying complementary food using MNP. The MNP contains 15 vitamins and minerals combined in one product that can be mixed in home-prepared food. It comes in single-served sachets or packages for easy home use. The DM also contained guidelines on the frequency and how to use MNP, its distribution system and storage.

Other national policies that recognized the implementation of micronutrient supplementation (MS) to address micronutrient malnutrition, and that preceded the two DOH issuances above include AO 2008-0029 and AO 2005-0014. AO 2008-0029 entitled "Implementing Health Reforms for Rapid Reduction of Maternal and Neonatal Mortality" or the MNCHN Strategy, aimed to rapidly reduce maternal and neonatal mortality by providing a package of maternal, newborn, child health and nutrition (MNCHN) services. AO 2005-0014 or the "National Policies on Infant and Young Child Feeding" pronounces policy guidelines on: 1) the IYCF Program's target beneficiaries; 2) breastfeeding practices; 3) complementary feeding practices; 4) MS; 5) universal salt iodization; 6) food fortification; 7) exercising other feeding options; and 8) feeding in exceptionally difficult circumstances.

In summary, there are enough policies at the international and national levels that provide the legal basis to distribute the MNP to identified target groups. The home fortification is being implemented as part of the IYCF strategy to improve nutrient intake from complementary foods of children by six months of age. While there is no specific policy referring to WFP implementing the MNP program, the DOH's AO 2010-0010 and DM 2001-0303 can serve as WFP's support and contribution to the achievement of the MDGs, PPAN and DOH goals of reducing child mortality and addressing micronutrient needs.

2.2. The Intervention

Point of use complementary food fortification with multiple micronutrient powders (MNP)

The need for more rapid alleviation of the problems of malnutrition gives way to nutrition interventions. In this context, nutrition intervention becomes a means of channeling additional resources more quickly and effectively to nutritionally needy groups. In the Philippines, micronutrient deficiencies are perceived to be continuing public health problems. As embodied in the Philippine Plan of Action for Nutrition 2011-2016, food fortification is one intervention that can alleviate the problem of micronutrient deficiencies. Traditionally, food fortification programs were based in institutions focusing on a specific food rather than improving practices at home.

According to the Home Fortification Technical Advisory Group (HFTAG), home fortification is an innovation aimed to improve the diet quality of nutritionally vulnerable groups, such as young children. The term Micronutrient Powders (MNP) refers to sachets containing dry powder with micronutrients that can be added to any semi-solid or solid food ready for consumption. Home fortification with MNP aims to ensure that the diet, i.e. complementary foods and breast milk combined, meets the nutrient needs of young children. Also, home fortification is recommended where complementary foods do not provide enough essential nutrients, such as when: 1) dietary diversity is low (due to scarcity or poor affordability); 2) complementary food prepared for the young child has insufficient nutrient content and density (for example, watery porridges and food with micronutrient content that is too low); and 3) the bioavailability of micronutrients is poor due to absorption inhibitors in the diet (fibre, phytate, tannin), which is especially the case in plant-based meals.



An Inevitable comparison between the MNPs from the WFP labeled as Vita Nutrient Mix (A, B), and the MNPs from the DOH (C).

Is MNP a micronutrient supplement or a fortificant?

The WHO guideline uses home fortification or point of use fortification while the DOH refers to MNP as micronutrient supplement or micronutrient powder supplementation. While this may be regarded as a minor concern, it might be better to be consistent in the use of terms for common understanding among national and local implementers, and in promoting the intervention for mothers/caregivers. In this report, the Point of Use of Complementary Food Fortification with MNPs will be referred to as the MNP home fortification program to distinguish it from the DOH MNP supplementation program. At the local levels, the MNP is further referred to as the Vita Nutrient Mix by virtue of the labeled boxes and sachets containing the MNPs for distribution.

2.3. Conceptual Framework

The conceptual framework specifically designed for this case study is a representation of the procedural and technical flow in the practice of Joint Programming in the Point of Use Complementary Food Fortification with Multiple Micronutrient Powders (MNP). In this framework, the MNP as an intervention becomes a product of collaborative undertakings in planning, coordinating, resource allocating and mobilizing across levels and sectors. In itself, the intervention needs to be assessed in terms of features, including the distribution of MNPs. The intervention stands to be measured of its performance vis-à-vis effectiveness and efficiency by looking into outreach versus targets over time. The quantity and frequency at which the MNPs reach the target household-recipients shall serve as outcome indicators as an intervention. Finally, this study will look into the utilization aspects of the MNPs at the household-recipient level to size up alignment with what MNPs were intended for. On the whole, the inherent systems approach in this conceptual framework will make the case study environ-sensitive to possible intervening factors along pathways.

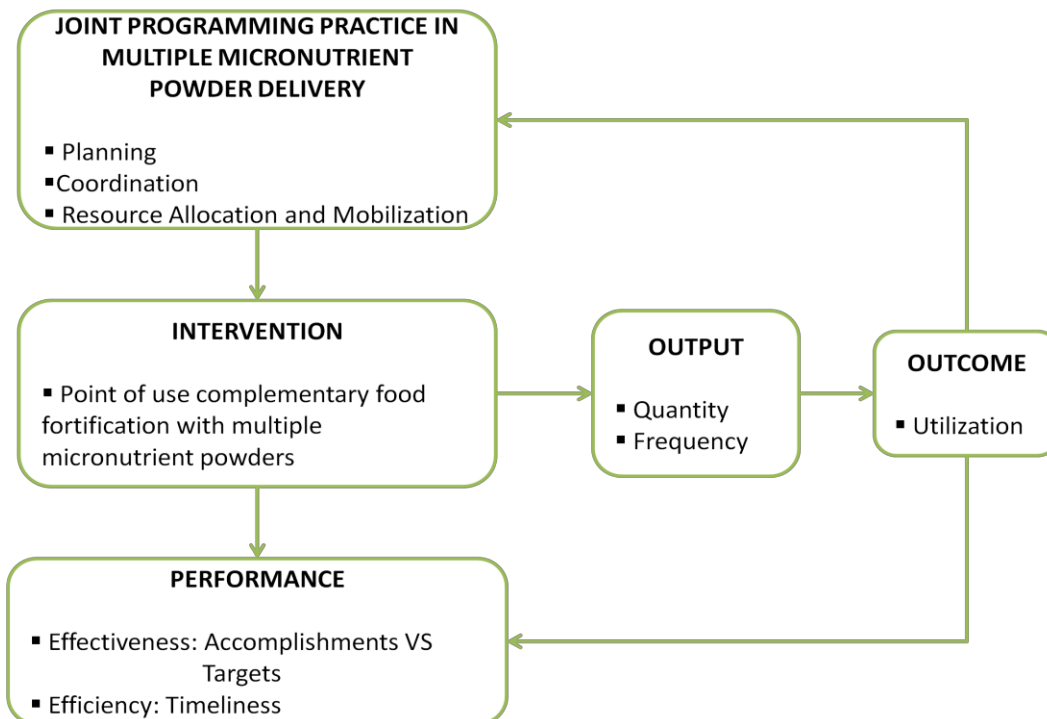


Figure 1. Conceptual Framework of the JP MDG-F 2030 Point of Use Complementary Food Fortification with Multiple Micronutrient Powders

3. Methods

Study Approach, Scope, Techniques and Analyses

This study was done in the context of the practice of Point of Use Complementary Food Fortification with Multiple Micronutrient Powders within the Joint Programme framework, as implemented in Zamboanga City and the Municipality of Aurora in Region IX, Philippines. As such, the scope of the study included concerns and issues in planning, coordinating, implementing from the national to local level service providers; and utilization at the household level. It worked within a rapid appraisal approach using a combination of quantitative and qualitative techniques in research.

A transect of the line of implementation from the national down to the household levels served as basis for the type and number of respondents, and the technique appropriate for use in the study.

1. **Desk review.** The desk review looked into the documents pertaining to Joint Programme guidelines, monitoring and evaluation reports, baseline and other studies.
2. **Key Informant Interviews (KII).** This applied the use of semi-structured and open-ended questions, with individually interviewed respondents of known varying stake on the topics of interest (Appendix B). Considering the nature of multi-level involvement cutting across various lines of work and sectors, the key informants in this study are the national, regional and provincial officials and JP staff/officials involved in the MNP program (Appendix G).
3. **Focus Group Discussions (FGD).** Two FGD sessions, one at each site, i.e. Zamboanga City and the Municipality of Aurora, were participated in by local MNP service providers, including the City/Municipal Nutrition Action Officer, City/Municipal Health Officer, City/Municipal Development Officer, barangay captains and/or their representatives, as well as by the barangay nutrition scholars and barangay health workers (Appendices E, F). Guided by a set of open-ended questions, the FGDs established actual processes of service delivery relative to the MNPs, as well as explored among the participants their experiences and lessons learned in the implementation of the MNPs at the local level (Appendix C).
4. **Survey.** The surveys addressed topics concerning the utilization of the MNPs at the household level, as a validation of information gathered at the service provider's level (Appendix D). The households

came from four purposively selected barangays, namely, Calarian and Boalan in Zamboanga City; and San Jose and La Paz in the Municipality of Aurora. By characteristic, barangays Calarian and San Jose belong to the urban type relative to site and ranking in the list of barangays with most facilities, while barangay Boalan and La Paz belong to the list with least number of facilities. A total of 120 households were randomly selected from the four barangays, 30 households from each barangay (Appendices H, I). Three out of the four barangays had masterlists of child-recipients of the micronutrient powder as of end of year 2012 which served as the population from which the households were randomly selected. Barangay La Paz in the Municipality of Aurora had their list of child-recipients in the same list used for other services such as the OPT, deworming, and immunization. By selecting the households randomly, the study attempted to provide a perspective over the purposively selected barangays. A sampling of households from randomly sampled barangays would have yielded more accurate results but logistical limitations did not permit this. Hence, the analysis of the survey results would be limited to the selected barangays, yet possibly reflective of the rest of the sites in Region 9.

The data from the survey results were analyzed descriptively using frequency counts and averages. The information gathered through KIIs and FGDs were analyzed for patterns that would be meaningful to describing how the program was implemented in Region 9.

A core team of four with expertise in human nutrition, public health and program planning and management, and knowledge and education management carried out the tasks at hand. Upon approval of the inception report in March 2013, two research assistants were recruited in view of the administrative and data collection needs of the project. About a month of preparations covering both logistical preparations and local data collection protocols (e.g. pre-testing and finalization of interview instruments, seeking of consent from local officials through endorsements, and courtesy calls) transpired before actual data collection took place between the following months of April and May.



A and B, Focus group discussions in the Municipality of Aurora and Zamboanga City, respectively; **C,** Key informant interview with local health worker; **D, E and F,** Surveys on MNP utilization at the household level.

4. Results and Discussion

Much like any other program intervention, MNP utilization is intended to bring about desired changes among its target consumers/users. The ensuing discussions focus on MNP as an intervention, its features, distribution system, and utilization. Highlighted are actual experiences, lessons learned, and various issues confronting the delivery and actual use of MNP. Overall, the findings presented in this case study should be viewed as processes rather than blueprints, evolving as they come. Some recommendations are likewise forwarded addressing the challenges faced by both the implementers and consumers.

4.1. Program Management Review on the MNPs as an Intervention

WFP is the only agency that has experienced using MNP as an intervention. The JP coordinator referred to the programs of the MDGF-JP while the provincial health office (PHO) and MHO identified MS program.

The MNP was distributed as part of the emergency operations in response to typhoons Ondoy and Pepeng in Northern Luzon. In this project, the Joint Statement of WHO, WFP and UNICEF on MNP use were guides in the operations. The target group (6-18 months old children) was given six months supplementation. The areas were selected in coordination with DSWD and NNC regional offices based on severity of the typhoon impact. An NGO (Helen Keller International) implemented it with funding from the private sector. Selected health and nutrition workers were trained on MNP benefits and proper utilization, and they served as MNP focal persons at their respective duty stations. The MHOs decided which mothers/caregivers the MNPs were delivered to every month. In terms of agencies and their roles, WHO, UNICEF and WFP formulated the MNP; HKI was the NGO implementing partner; DOH and NNC National Office accepted donations and approved the implementation of the project; DSWD Region III selected the area considering typhoon damages to provinces and municipal areas; and LGUs selected municipalities. Distributing MNP was integrated with the existing health service delivery. LGUs also reoriented health workers, as well as monitored and evaluated the project.

The JP Coordinator shared that the MDGF JP has specific target areas. Before implementing the MNP home fortification program, there were already JP programs implemented, e.g. exclusive breastfeeding promotion, vitamin supplementation, mothers' class, immunization. The component on exclusive breastfeeding (Breastfeeding TSEK – *Tama, Sapat at Eksklusibo*) was implemented in the MDGF areas where mother leaders and other health workers were trained to become peer counselors.

At the provincial and municipal levels, micronutrient supplementation (i.e. iron supplements, vitamin A capsule) was identified as one program that was implemented even before the MNP home fortification program.

Accompanying or co-existing interventions in place

There are existing interventions in the areas, which are the Recipe Trials implemented by the Food and Agriculture Organization and the Conditional Cash Transfer (CCT) program of the Department of Social Welfare and Development (DSWD). The households that are provided with MNP are also beneficiaries of the CCT program.

Other DOH interventions that are implemented at the same time with MNP home fortification program are Vitamin A and Iron supplementation, deworming, OPT, immunization, mothers' class (*Pabasa sa Nutrisyon*), and *Garantisadong Pambata* (GP).

Based on the JP Field Coordinator's observation, the local health workers are overburdened with the many interventions and that they sometimes forget to implement the MNPs as a routine. Similarly, the Municipal Nutrition Action Officer or MNAO stated that all nutrition programs are implemented simultaneously with the MNP home fortification program. However, the latter was given more importance under complementary feeding with the conduct of recipe trials, wherein health workers observe and correct the mothers' practices in feeding their children (6-23 months). According to the JP Field Coordinator, the MNP was not introduced during this training to avoid confusing the mothers. But according to the MNAO, during the recipe trials, adding the MNP was demonstrated.

In 2012, the DOH distributed MNP supplements nationwide. The CHD Region IX included Zamboanga City, and Aurora, Zamboanga del Sur in providing MNP as buffer or stock in case the WFP MNP supply runs out.

Planning and Implementation

Several agencies and individuals are involved in planning and implementing the MNP program. Planning is done at the national level with WFP (the lead UN agency), DOH, NNC and local government units. Government agencies such as DOH, NNC and the LGUs have their own organizational set-ups. The brand name of the MNP is Vita Nutrient Mix (VNM).

Start of MNP program

At the national level, the WFP started the coordination and preparation activities in July 2010, and the program was implemented in November 2011. At the regional and provincial levels, the program implementation launching was recalled to be the first quarter of 2012. At the municipal level, the health officer and the nutrition officer were not able to accurately recall the start date of the program. The different service providers recall it somewhat differently. At the regional and provincial level, the start date is mid-2011 (social mobilization & training was in early 2011; MNP was delivered to JP areas in the third to fourth quarter of 2011), while those at the local levels reckon that the date is when they received the first MNP supply, which is December.

Agencies and Individuals Involved

Agencies such as WFP, DOH, NNC and their respective offices from the regional down to the municipal/city levels play various roles in the MNP home fortification program. The roles of agencies at the national and regional levels are focused on planning and coordinating the program, while the municipal and barangay levels focus on distributing the MNP sachets and monitoring the MNP's proper use.

At the national level, there is a National Technical Working Group (NTWG) of MDGF 2030, which is chaired by NNC supervising the PMU. The NNC Director co-chairs the Program Management Committee (PMC), and the Program Management Unit (PMU) is housed in NNC. The NNC is part of the discussions on how the program will be implemented through the NTWG.

The Family Health Office of the National Center for Disease Prevention and Control (NCDPC) is represented in the MDGF-NTWG, which planned for WFP's MNP home fortification program. The DOH has offices at the regional level, e.g. CHD Region 9. The functions of the DOH at the local

level have been devolved from the provincial down to the barangay levels. Hence, the PHO is under the Provincial Governor and Provincial Health Officer; the City/Municipal Health Office (C/MHO), City/Municipal Health Officer, nurses, and midwives are under the City/Municipal Mayor; and the barangay health and nutrition workers are under the barangay captains. However, DOH provides technical assistance and expert services on disease prevention and control, including micronutrient malnutrition. In the WFP's MNP home fortification program, the PHO is not directly involved. In contrast, the C/MHO receives the MNP supply and has the authority to allocate and distribute the MNPs to the target areas and target group.

Similar to DOH, the NNC maintains regional offices only. However, it has created a coordinating structure that involves government and non-government agencies implementing nutrition and related programs. These are called local nutrition committees, i.e. regional nutrition committee (RNC), provincial nutrition committee (PNC), city/municipal nutrition committee (C/MNC), and barangay nutrition committee (BNC). The local nutrition committee is headed by the local chief executive (governor or mayor or barangay captain) and assisted by a local nutrition action officer. In Aurora, Zamboanga del Sur, the MNAO is ensured that the MNP home fortification program was integrated in the Municipal Nutrition Action Plan (MNAP) and the BNC appointed a barangay official that can monitor the use of the MNP in the barangay. The MNAP is the municipality's plan, which includes programs addressing malnutrition for various agencies that are MNC members.

At the regional level, the WFP is the supplier of the MNP sachets, provides the training and monitors the program. The NNC coordinates the program and is also involved in training and monitoring activities. The CHD region IX identifies targets and is also involved in training and monitoring. The NNC Regional Nutrition Program Coordinator's specific roles in the program include monitoring the MNP supply and quality in JP areas as scheduled for distribution, and ensure that JP areas are ready to receive the supplies with proper and adequate storage area. The MDGF Field Coordinator is stationed at the NNC regional office. He/she also quarterly monitors the MNP at RHUs and household level.

The PHO is generally mentioned as an office that is not involved in the WFP MNP home fortification program. However, the provincial focal person on nutrition supervises the MNAO who is involved in ensuring that the home fortification program is included in the MNAP. In the DOH MNP supplementation program, the PHO has a major role to play. The

Provincial Focal Person for Nutrition collects the DOH MNP from the Regional Office in Zamboanga City, provides storage area for MNP in IPHO, and immediately allocates MNP to municipalities. The Provincial Nutritionist gives the MNP to the MNAO and midwives, tracks down or monitors how sachets were received by each municipality, and reviews the municipalities' master list, which is the basis for allocating the number of MNP per area.

At the local level, the MNP home fortification program is considered as a special program where the MNP sachets are directly supplied to them by WFP, and coordinating and submitting a report is also directed to WFP, though it passes through the C/MHO. The Barangay Nutrition Committee also appointed a barangay official to monitor MNP use.

Table 1. List of agencies and their roles in the of the MNP program

Level/Agency	Roles
World Food Program Central Office	<ul style="list-style-type: none"> • Coordinate with DOH and NNC for the program planning and implementation of MNP project component • Coordinate with other participating UN agencies on complementation of activities in the identified MNP areas (Zamboanga City and Aurora, Zamboanga Del Sur) • Prepare activities starting July 2010 • Oversee management of MNP program • Prepare and submit report to the MDGF coordinator • Designate WFP representative in the MDGF National Technical Working Group (NTWG) • Train health and nutrition worker at regional and local levels (when necessary) • Participate in NTWG meeting and related activities
WFP Local Office	<ul style="list-style-type: none"> • Coordinate and monitor their implementation in liaison with the WFP technical focal person, regional and provincial coordinators, and cooperating agency • Provide technical guidance for the MNP project and support LGU focal points as and when

Level/Agency	Roles
	<p>required, in consultation with WFP technical focal person</p> <ul style="list-style-type: none"> • Assist in organization of annual reviews and workshops to capitalize on lessons learned and disseminate this experience to stakeholders
National Nutrition Council	<ul style="list-style-type: none"> • Chair of the NTWG • Co-chair of the PMC • Supervise the PMU
<p>Field Coordinator for MYCNSIA in Region 9</p> <p>(formerly MDGF Joint Programme Coordinator)</p>	<ul style="list-style-type: none"> • Liaise and network with federations and alliances since MDGF has many components, with activities complementing each other, such as the IYCF, human milk bank, exclusive breastfeeding in the workplace • Trouble shoot program implementation, e.g. budget revisions and rescheduling • Report to World Food Programme and MDGF Project Management Unit on MNP matters by email or call • Communicate concerns regarding MDGF with the PMU of the MDGF2030 and relayed to the concerned UN agency, NNC, DOH • Coordinate activities in Zamboanga City and Aurora, Zamboanga del Sur through calls, text messages, emails, and visits, both for MDGF and MNP program. Specific to MNP program, Ms. Susan Batutay (Program Assistant) or Ms. Roselie Asis (Nutritionist) of WFP are contacted.
NNC Regional Nutrition Program Coordinator	<ul style="list-style-type: none"> • Chairperson of the Regional Technical Working Group for MDGF 2030 • Lead in the orientation and advocacy on the MDGF at the JP areas (LCEs, City Health Officer and MNCHN program officers and other stakeholders) • Coordinate with the other program components of the MDGF, e.g., the labor sector, COMBI and the FAO assisted projects to insure the holistic implementation of the MDGF in JP areas

Level/Agency	Roles
	<ul style="list-style-type: none"> • Coordinate the implementation of the various projects per JP areas • Address program issues that could be resolved at the regional level and elevate matters to the national TWG that are beyond regional resolutions
DOH Regional Nutritionist	<ul style="list-style-type: none"> • Provide technical assistance to the provinces including MDGF areas • Fund management • Serve as resource person/technical expert • Support the regional director • Coordinate with WFP regarding the MNP program; MNP supply is not given to the regional office as the MNP is distributed by WFP direct to Aurora, Zamboanga del Sur
Provincial focal point for nutrition	<ul style="list-style-type: none"> • Supervise Municipal Nutrition Action Officers (MNAOs)
Provincial Nutritionist Dietitian	<ul style="list-style-type: none"> • MNP sachets from WFP are distributed directly from WFP Iligan Office to Aurora, Zamboanga City
City/Municipal Health officers	<ul style="list-style-type: none"> • Supervise the implementation of the program; the nurses and midwives implements the program • Guide mothers how to use the MNP properly • Handle complaints regarding MNP
City/Municipal Nutrition Action Officers	<ul style="list-style-type: none"> • Partner with the Rural Health Unit (RHU) in program implementation • Program coordinator for establishing peer groups (volunteer mother leaders) • Acts as resource speaker during IYCF seminar
Barangay Officials	<ul style="list-style-type: none"> • Provide support to the MNP program
Barangay Health Workers	<ul style="list-style-type: none"> • Distribute MNP sachets during <i>Garantisadong Pambata</i>, house to house visits, CHT navigators • Conduct home visits
Barangay Nutrition Scholars	<ul style="list-style-type: none"> • Weigh children and determines nutritional status • Maintain list of underweight children

The key informants were also asked about their understanding of the various individuals involved in the MNP home fortification program. From their replies, the roles of other agencies are not as quite clear to them as their own roles. The WFP, which is the lead agency, views UNICEF as a partner UN agency in providing technical assistance on IYCF related concerns; DOH as the main implementing government partner which issued the national policy of MNP supplementation and responsible for the promotion and capacity building on IYCF; and NNC as the overall lead agency for the coordination of MDGF 2030, provides technical assistance on IYCF promotion and capacity building at all implementation levels. On the other hand, the JP Field Coordinator identified that the role of WFP is to conduct monitoring visits and that the local health workers' role is to deliver the MNPs to mothers/caregiver. The MNAO does not know the role of other agencies in the program except that of MHO/RHU. The MHO identified incorrectly that the role of UNICEF is to provide funds for the MNP home fortification program and that the DOH is the implementor of the program and is responsible for conducting trainings of health workers.

Availability of written operational guidelines

The JP Coordinator and the MHO were positive that there is a health workers' training manual. The guidelines contain the importance of MNP for 6-23 month -old children, do's and don'ts of using the MNP, frequency of distribution, how to distribute, and use of monitoring forms.

Delivery of MNP

The MNP sachets are delivered from WFP Central Office to WFP Iligan Office, then to Zamboanga City and to Aurora, Zamboanga del Sur. In the case of Zamboanga City, the MNPs are first unloaded at 16 main or cluster health centers, before distribution to the 98 barangay health centers. Various distribution schemes are utilized in order to distribute the MNP sachets to the target group, i.e. during the *Garantisadong Pambata* (GP) activities, house to house visits conducted by the BHWs and CHT navigators or CHTs. Sometimes, MNP is distributed in Zamboanga City when OPT (Operation *Timbang*) is being conducted. During GP, breastfeeding is promoted; deworming tablets are given, as well as MNP sachets. In addition to the midwives and BHWs, peer counselors also distribute MNP sachets.

Aurora, Zamboanga del Sur

Zamboanga City

	Level	Agency	Responsible person	Agency	Responsible person
Supply from	National	WFP	Staff in charge	WFP	Staff in charge
Received by	Municipality	Municipal Health Office	Public Health Nurse	Clusters of Health Centers	Public Health Nurse
Distributed to	Barangays	Barangay Health Station	Midwives and BHWs	Barangay Health Station	Midwives and BHWs, peer counselors
Received by	Household		Mothers/Children		Mothers/Children

The local health workers were oriented before they actually distribute the MNP sachets. In Zamboanga City, distribution guidelines were given to the local health workers. The guidelines provide information on the target age group, unit of MNP distribution, instruction, distribution schedule, distribution sites, distributors, reporting forms, and monitoring system. The MNAO and Public Health Nurse from Aurora, Zamboanga del Sur also recalled being briefed about the importance of MNP, its content, food preparation, and recommended answers to questions or negative feedback of mothers/caregivers regarding MNP.

In the DOH MNP program guidelines, MNP distribution starts from the DOH Central Office to the CHD to C/PHO to MHO and to mothers/caregivers, and then finally to the children. The distribution interval is separated for 6-11 month-old infants (every child will receive 60 sachets over a period of six months) and for 12-23 month-old children

(every child will receive 60 sachets every six months for a total of 120 sachets in a year). From the RHU, the midwives or BHW/BNS will distribute the MNP sachets at one box of MON every three months. The interval of distribution are at six month-old infants, nine months, 12 months during MMR, 15 months catch up with EPI, 18 months, and 21 months. The MNPs can be distributed in health facilities (health centers and barangay health station) during growth activities or expanded Garantisadong Pambata services, home visits as necessary (for example, during CHT household visits, and outreach activities, e.g., during scheduled visit of health teams in GIDA or depressed areas).

The identification and location of the target population was easier said than done, as problems about accessibility, availability and willingness became problems in actual implementation. Targeting became a product not only of vulnerability but as well as feasibility. While both study sites claimed to have reached all target recipients during overall program implementation, responses were uncertain when probed for consistency in reaching all targets throughout all deliveries. In the case of Zamboanga City, the service providers estimated a five to 10% of their target recipients not reached at one time or another due to refusal and/or unavailability.

Coordination

With the implementation of a nutrition intervention such as the MNP home fortification program, coordination is a major component to ease implementation, avoid duplicate distribution of MNP, ensure efficient use of resources including manpower, achieve common understanding of implementing guidelines, and use the same information for mothers/caregivers. Moreover, there are many agencies, LGUs, and individuals who are involved in the program from different administrative levels.

Several ways of coordination, such as sharing information and implementing common strategy were noted by the service providers. For sharing information, the implementing guidelines were distributed to service providers, and trainings/workshops were conducted. A common strategy was also achieved particularly in the delivery system, i.e. MNPs distributed by BHWs and midwives through home visits, *GP* activities, and consultation in health centers.

In addition, horizontal (national to national) and vertical (national down to LGUs) coordination was also practiced. The vertical coordination has to be looked into given that the provincial level is not involved in the program. In the existing DOH system, sending feedback is from barangay to municipal/city to provincial to regional and then to national level. The provincial level is nearest to the municipalities tasked to provide technical support for program implementation.

The WFP directly delivered the MNP supply to the program areas bypassing the regional and provincial levels of the existing DOH delivery system. The municipal health officers were in favor of this system since they did not have to pick up the supplies from the PHO and they were able to implement a program directly with not much bureaucracy. However, not using the institutionalized and legal coordination system of DOH may have some drawbacks, i.e. non-involvement of the PHO personnel in implementing the program, which the responsibility will be transferred to them later on upon program completion, or the perpetuation of thinking that it is a special program and that it will eventually end, hence they will just comply with what is being asked of them.

It is apparent that the established working and personal relationships of the individuals involved have eased the coordination for the MNP home fortification program. For instance, the DOH regional nutritionist knows the NNC regional nutrition program coordinator and the JP Field Coordinator. They said that they can easily call each other if there are issues. The DOH regional nutritionist also knows the two nutritionists who in turn know the health and nutrition action officers of Zamboanga City and Aurora, Zamboanga del Sur. Coordination has to be kept at the institutional level and should not be relied on individuals.

The JP Field Coordinator receives information on various concerns, such as MNP expiration date, updating the masterlist of children given MNP sachets, and final mode of MNP distribution, among others. The JP Field Coordinator can also directly contact the WFP's nutrition officer and program assistant, and communicates other MDGF-JP matters to the PMU, concerned UN agency, NNC, and DOH.

The WFP Program Assistant oversees the MNP home fortification program implementation and monitoring. The JP Field Coordinator, NNC regional office, DOH regional nutritionist, CHO and MHO is focused on coordinating the delivery, distribution and monitoring of MNP. There is close coordination between the WFP Nutritionist and the WFP Program

Assistant, particularly on addressing urgent concerns that needs action at the regional level; the Nutrition Officer directs the Programme Assistant. National agreements are relayed to the DOH and NNC regional offices. The Program Assistant also visits the health centers with a representative from CHO and NNC/DOH whenever available. During the visits, issues raised or observed on the field are discussed immediately.

At the PHO, very minimal or no coordination occurs since the MNP supply is directly delivered to Zamboanga City and Aurora, Zamboanga del Sur. In contrast, for the DOH MNP micronutrient supplementation program, the PHO is responsible for getting the MNP supply from the CHD Region 9 in Zamboanga City, storing, and allocating the MNP to different municipalities. The PHO also advises the MHOs to get their MNP supply from their office. The PHO also coordinates for the submission of the monitoring report.

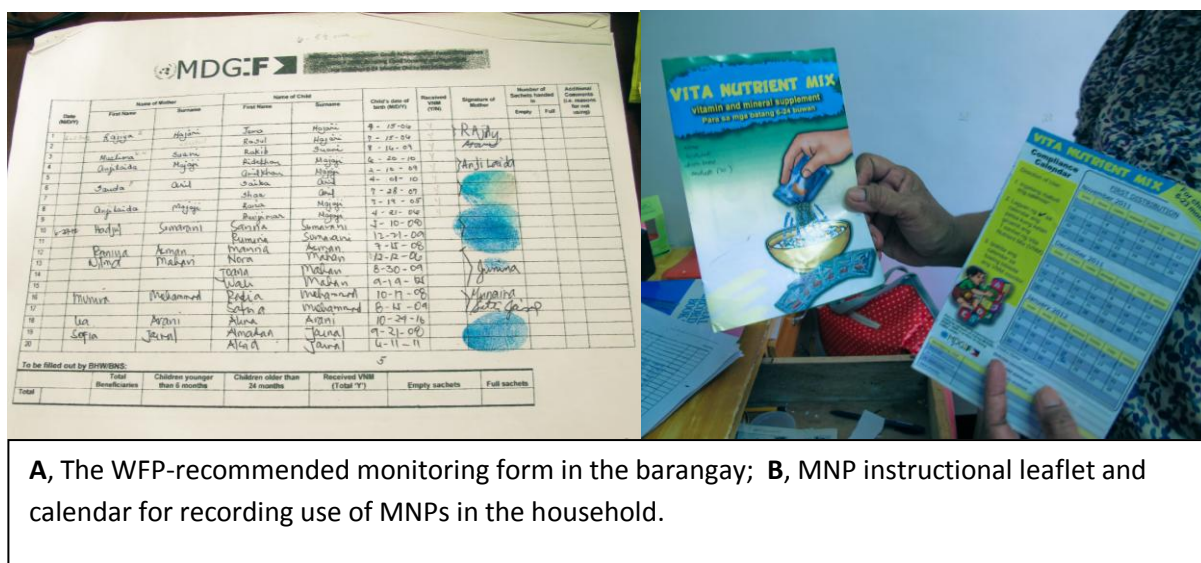
At the municipal level, coordination is focused on ensuring that each child would receive the correct number of MNP sachets on time. The house to house distribution scheme is mainly utilized by the BHWs and midwives. The MHO coordinates the MNP program implementation by assigning the midwives to the different *barangays* (each *barangay* has one midwife). The midwife supervises the BHWs' distribution of the MNP sachets. Monthly meetings are conducted to update the BHWs and remind them to follow-up the mothers/caregivers given the MNP sachets. The MNAO coordinates with the MHO regarding MNP training and monthly monitoring.

Promotion

In addition to orienting local health workers on the use of MNP, information materials were developed and distributed to mothers/caregivers. One is the Vita Nutrient Mix Compliance Calendar, which is printed in Filipino and contains a calendar of the distribution starting November 2011, followed by December 2011 and January 2012. The instruction also states that the calendar should be shown to the VNM monitor. The second calendar is for the second distribution from February 2012 to April 2012. MNP is also promoted during the home visits and GP.

The DOH's Department Memo 2011-0303 also spelled out the information dissemination activities, e.g. orienting health workers on MNP should be part of regular meetings, gathering and consultation sessions, in every IYCF and nutrition-related activities; and informing mothers or caretakers that if the child is taking the MNP, the child's stool may turn black or dark brown. Frequently-asked-questions were also prepared.

The local health workers recommend promoting the MNP using trimedia, particularly television, as mothers/caregivers believe in role models or actresses endorsing products.



Monitoring and Evaluation

A monitoring system has been established and tracks the progress of the MNP home fortification program. One of the major elements being monitored is the delivery of the MNP supply from the WFP Central Office to the warehouse in WFP Cotabato Office. From the warehouse, the MNPs are delivered to Zamboanga City and Aurora, Zamboanga del Sur. The health offices in Zamboanga City and in the Municipality of Aurora are then requested to distribute the MNPs. In Zamboanga City, the MNPs are coursed through 16 main health centers in each district and then to the 98 barangay health centers. In Aurora, the MNPs are unloaded at the Municipal Health Office and then to the barangay health stations. The barangay midwife, together with the BHWs and BNSs, distributes the MNPs. Once in the local health centers, the holding time ranges from one month to about three months.

City Nutrition Committee,
Zamboanga City

MICRONUTRIENT SUPPLEMENTATION

Activity /Target	Annual Target No.	No. Accompl.	%	Remarks
Vitamin A Supplementation (Prophylactic)				
A. Infants (6-11 months)	10,452	9,610	91.9%	MR SIA April-May'11
	12,198	11,512	94.37%	GP October, 2011
B. Preschool Children (12-59 months)	83,089	86,834	104.5%	MR SIA April-May'11
	97,282	93,696	96.3%	GP October, 2011
C. School Children (6-12 yrs.)				
D. Post Partum Women	26,701	21,274	80%	FHSIS Report, Annual, 2011
E. Preschool children (Severely and Underweight children)	5,500	5,280	96%	
F. School children				
Iron Supplementation		2,696		GP October, 2011
A. Infants (6-11 months)				
Infants 2-6 mos w/ low birthweight given iron	346	331	96%	
B. Preschool Children (12-59 months)		2,141		GP October, 2011
C. Anemic children 2-59 months	508	495	97%	FHSIS Annual Report, 2011
D. Pregnant Women		4,389		
Lactating Mother		2,733		
E. School children				
F. Other Targets, please specify				
Sick Children 6-11 mos given Vit. A	1,389	1,217	88%	
Sick Children 12-59 mos given Vit. A	1,971	1,393	71%	
Sick children 60-71 mos given Vit A	613	401	65%	
Total Infants Given Iron	12,198 (95%11,588)	8,674	74.8%	
Other activities, please specify				
Micronutrient Powder distribution 6-24 months	25,170	25,170	100%	MDGF-2030 (WFP)

FOOD FORTIFICATION

1. Iodized Salt Utilization

Accomplishment report showing 100% MNP coverage in Zamboanga City.

Another element monitored is the use of the MNP at the household level. A monitoring form was developed to be filled up by BHWs/BNSs. The form asks for the mother's name, child's name, child's birthday, date when VNM was received, mother's signature, number of sachets handed in (empty or full), and additional comments. The accomplished form is submitted every month. However, accomplishing the form is not a regular activity according to the JP Field Coordinator due to the BHWs/BNSs' heavy workload. Hence, submission is quarterly instead of monthly. The community health workers submit the completed form to the midwives, then the C/MHO consolidates the reports. The consolidated report is submitted to the WFP program assistant. The observations of the BNS/BHW are noted and they write down the date of their visit in the

individual compliance calendar. They also use their own logbook/notebook for other details of the visit. For WFP, there is no specific reporting format but whatever is observed in the field, it is e-mailed to the Nutrition officer for further technical assistance.

The BNSs and BHWs are most involved in monitoring. They do it every month and report to their midwives. The BHWs, who are expected to visit the household at least once, ask the mothers to keep the empty sachets to check whether or not they have been consumed. However, it was only during the early part of the program that this checking system was used. Not all households can be checked regularly using this system, and empty sachets do not always mean that the contents have been consumed. Midwives shared their results with nutritionist-dietitians, district nurses and doctors. WFP monitors at least once every two months through home visits and/or focused group discussions, together with the area nutritionist-dietitians. There were also times that the monitoring had to be postponed due to UN security-related protocols.

Resource Allocation and Mobilization

The WFP does not fund the selected program areas. They provide the MNP but not transportation expenses. Both the LGUs in Zamboanga City and Aurora Municipality consider MNP as a special program, without having to explicitly provide for additional funding. Instead, they use existing manpower and logistical resources. While barangay officials and health workers are willing to participate without added compensation, it will not be sustainable in the long run to provide additional coordination, monitoring and logistical support to the health workers. This strategy works at the moment because the program is treated as a special program that will eventually end.

Future Plans/Sustainability

Since the WFP MNP home fortification is considered a special program, the service providers were asked about their future plans for the program. The JP Field Coordinator, who is now the Field Coordinator for Maternal and Young Child Nutrition Security Initiative in Asia (MYCNSIA) in Region IX shared that the MNP program will be scaled up to 46 MYCNSIA areas. MYCNSIA is a EU-UNICEF funded project aimed at improving the nutrition security among women and young children in Southeast and South Asia.

The MYCSNIA initiative is supporting five Asian countries – Bangladesh, Indonesia, Lao PDR, Nepal and the Philippines – under a four-year programme (2011-2014). The Philippines is one of the countries that bears a heavy burden of child undernutrition.

WFP plans to support DOH's nationwide implementation through technical assistance, while NNC plans to continue the program as part of operationalizing the Philippine Plan of Action for Nutrition 2011-2016. However, as in any activity, it should not be undertaken without careful consideration of the cost. In general, programs that distribute or subsidize products or services may be difficult to sustain. Already, there are talks about assessing alternative sources of funds, including that of the local government's. A counterpart contribution to the program may be negotiated whether in terms of shouldering their salaries, release time, and other related costs in bringing them to the program sites. Necessarily, however, it must be aligned with the priority areas of the local government. Once in the site, to tap into the willingness of the household recipients to partly or fully shoulder costs.

The behavioral change communication component of the program needs to be strengthened. The households' awareness on the benefits of the MNPs from the program can arouse interest in continuing the MNP locally and generating support from LGUs.

Good Practices

Using the definition of good practice as a process or a methodology that represents the most effective way of achieving a specific objective, several have been identified by the service providers from different levels of implementation.

1. **Presence/existence of policies on the use of MNP:** While the DOH policies were issued in preparation for the implementation of the DOH MNP micronutrient supplementation program, it has paved the way for the WFP MNP home fortification program implementation. Policies which were issued earlier, such as IYCF and MHNCN Strategy, complemented and supported the MNP program.

2. **Adherence to the international guideline on the use of MNP:** The UN agencies and the NTWG agreed to follow the guidelines on using MNP as indicated in the agreement to follow the MNP specifications in the Joint Statement of WHO, UNICEF and WFP, including prioritizing the 6-23 month-old children as the target group. This promoted the same message on the use of MNP at the local levels. Another agreement put in place was that WFP will be responsible for the procurement and delivery of MNP to the program areas as the lead implementor. Training of health workers was also done.
3. **Government agencies' participation:** Since this is a UN led program, involvement of government agencies such as DOH and NNC was appropriately done. NNC included MNP in its Nutrition Advocacy through the local television show. The CHO introduced the MNP in the launching of the July Nutrition Month.
4. **Presence of focal persons:** Having a WFP point person in the region was good because they did not always have to raise concerns to the national level.
5. **Support from the local chief executives and the health officers:** In Aurora, Zamboanga del Sur, the mayor supported the program. The health workers appreciated that their mayor was the one sharing to the barangay captains the importance of the MNP. In Zamboanga City, the CHO was on top of the program implementation and managed the MNP supplies in the 16 districts.
6. **Contextualizing and using multiple distribution system according to the local situation:** Integrating the distribution of the MNP in the existing health activities such as GP, vitamin A capsule supplementation, iron supplementation, growth monitoring, and Conditional Cash Transfer program is feasible. However, BHWs/BNSs contact with the mothers/caregivers to hand over the MNP sachets should not be equated with counseling or nutrition education, as more time is needed for education. Mothers in Zamboanga City developed their own practical strategies to consume MNP despite their child's indifference to food with MNP, like adding it to "taho" and in some cases milk.

7. **Immediate response to negative feedbacks received:** Health workers (midwives, BNS, BHW) conduct counseling to mothers/caregivers and help them identify possible causes of diarrhea, then encourage mothers to continue using the MNP. In addition, examples of children who have good experiences with the use of MNP were used as models. The WFP responded immediately to complaints about MNP by gathering the RHU staff and conducting FGD and verified if the mothers followed the instructions; the quantity of MNP added to the food; if child's number of defecation is more than the normal or the stool is only soft but not yet diarrhea; among others. The RHU staff said that had they known these side effects and its explanations, they could have explained well to the mothers.

Problems Encountered

1. **Inadequate capacity development:** Not all health and nutrition workers were trained on proper IYCF practices. Some of the health workers said that they need more training to answer questions on undesirable effects of the MNP, e.g. dark stool, unpleasant taste, bad odor, and diarrhea.
2. **Inadequate logistical support:** Sometimes, the BHWs and BNSs use their own money to conduct home visits and to get the supply from the health center; they also serve as 'cargador' for the boxes. The van hired to deliver the MNPs from Cotabato to Zamboanga City got lost. The delivery person wanted to bring the MNPs to one health center only, even if the agreement was for the MNPs to be delivered to all 16 centers. In the first delivery, only about half of the centers were reached, and other centers had to go to those centers to claim theirs. In the second delivery, all 16 centers (DOH's) were reached. The service providers also had difficulty in storing the MNP boxes as they and the barangay health stations still had existing supply that had not been distributed. In the second batch, 20 boxes of MNP were received but only one 4 box was distributed.
3. **Poor attitude of health and nutrition workers:** Some BNS and BHW see the supplementation as added work.

4. **Poor timing in the distribution of MNPs:** Delayed distribution of MNPs such that there were less MNPs distributed than what could have been distributed in two years. The timing of distribution in December 2011 was not ideal as the offices then were already in a holiday mood for the Christmas season. Consequently, distribution spilled over to January 2012, leading to a shorter time for distribution.
5. **Vague and/or inconsistent instructions:** There was no final or definite instruction on the frequency and number of sachets. During the training, the instruction was for 90 sachets, but the actual number distributed was 60 sachets – BHWs were confused, especially since that the accompanying instruction was still to tell the caregivers to use the sachet every other day, even with just 60 sachets.
6. **Confusing format of the expiration date:** The difference between the Philippine and international way of labeling expiration dates creates misinterpretation. For instance, “04/12/13” will be read in the Philippines as April 12, 2013, while it actually means December 4, 2013 as labeled internationally. Attempts at explaining are almost always futile as people tend to have a mental set on how the label should be read.
7. **Distributing MNPs near expiration date:** WFP distributed MNP sachets that expire December 2012. The service providers said that they did not want to accept the supply but they eventually did, so they followed the instruction from the WFP staff to distribute it to pregnant and lactating mothers and to children older than 24 months including school children. In the HF-TAG, school children are included among the target groups that can be given MNPs, hence there was no violation of the guidelines. The health workers were cautious and afraid to distribute the nearly expired without proper explanation. Some of the mothers/caregivers also refused to accept the said MNPs.
8. **Delayed implementation of the MNP program in the JP areas:** The delay was due to slow approval of branding and box design for the MNP; and new guidelines issued to distribute MNP, which

needed to again update health workers to prevent confusion.

9. **Delayed distribution of MNPs:** One batch of MNP was rejected because it was two to three months to expiration date. At that time, the CHO/MHO still had stocks of MNP which needed to be distributed. Because of the delay in the distribution, the masterlist had to be adjusted as well. Some new six month-old children in the list were not included, while those beyond age 23 were included as instructed by the WFP. By the time the MNPs arrived, they were given one box only instead of two. Eventually, they had to reconstruct the masterlist to consider changes in target child recipients. Some mothers with children below six months of age already ask to be given the MNP. Workers had to explain that only children of six months to 23 months of age are entitled to the MNPs.
10. **Delayed submission and maintenance of master list:** The list is needed as basis in the determining the allocation of MNPs per area. Some transferees, although eligible by age, may not be in the list and thus are not given the MNPs.
11. **Overlapping of the WFP MNP supply with the DOH MNP supply:** With distributing the DOH MNP supply in the two MDGF areas, some households received two kinds of MNP – one from WFP and another from DOH. Relative to the DOH MNP, the provincial office received feedback that the DOH MNP is not being consumed because of the rusty taste, discoloration (black), lumpy, and bad odor. With this, comparison of the two MNPs is unavoidable and questions have arisen regarding the timing of distribution and confusion among mothers/caregivers. The municipal health officials have stated that during their training, the WFP MNP that they tasted did not have a taste at all.
12. **Not providing funds for the cost of coordination work:** Coordination entails meetings, logistic inputs such as snacks during meetings; internet access and sufficient cellphone load to contact fellow workers or supervisors; fare going around the barangays; and travel allowance to attend meetings/trainings/seminars. Hence, funds for coordination should be allocated and not left to the LGU's discretion.

13. **Unclear message on the frequency of consuming MNP:** Health workers and mothers/caregivers understand the message about consumption frequency differently. While the guideline states the frequency of consumption, there is still confusion in interpretation.
14. **Mothers/caregivers' low level of appreciation of the program:** Local health workers have to constantly remind, motivate and teach the mothers/caregivers how to use the MNP. The mothers/caregivers' understanding of the MNP is crucial as she is the one that decides to give or not give MNP to her child/children. The workers also expressed the need for a massive promotion of the MNP using tri-media as the mothers/caregivers' awareness and attitude towards the MNP can be improved by sharing positive experiences, e.g. increased appetite, healthy and smooth skin, which can reinforce the acceptance of the MNPs by other mothers.
15. **Delayed monitoring reports:** The major challenge in implementing is the submission of reports from barangay to City/Municipal MNP Focal Persons, which subsequently also delays their submission to WFP. This is aggravated by the feedback of BHWs/BNSs who have difficulty due to inaccessible roads and/or high transportation expenses from health center to far-flung beneficiaries' houses. This hampered their desire to do follow-up monitoring.

4.2. MNPs at Point of Use

In both study sites, it has been the practice for the BHWs and BNSs to invite mothers and caregivers to the orientation on how to use the MNPs conducted by the midwives. Midwives give the first MNP supply (one box per child). Mothers, whose houses are far from the Rural Health Center or Barangay Health Station, are given more than one box. BHWs distribute the succeeding MNP supply. Each BHW is assigned to 20 households or more depending on the size of their catchment area. There is only one BNS in the barangay. He/she sometimes accompanies the BHWs when they distribute the MNP. He/she is in charge of weighing the children. In Aurora, the first MNP distribution was last July 2012, while the second distribution was last November 2012. In Zamboanga City, the first distribution was recalled as having taken place sometime in August 2011.

It is important to note that the MNP is given to 6-23 month-old children, when they are most vulnerable when food variety and quantity are limited. In the household survey, mothers/caregivers were found to be giving inadequate amounts of food to children, with low variety, and low consumption of animal/protein-rich food. Local health workers observed the monotonous diet of children (e.g. banana, sweet potato, cassava and porridge) and explained that these are the food available in the area. Another factor that affects the use of MNPs in the households is the number of children sharing food.

Respondents' Profile

Respondents across the four (4) study sites have an average age that ranges from 29 to 37 years, with 18 years old as the youngest, and 66 years old as the oldest.

Most of them are female and currently married, with 100% females serving as research participants in San Jose, and 97% in all the other three (3) barangays. This result is not surprising since the mothers, in general, are the ones who personally look after their children's health and nutrition. It should also be noted that a few of the respondents are grandparents.

In terms of educational background, a greater proportion of the respondents from Calarian have either completed a college degree (23%) or a high school diploma (23%), with more number of the respondents (30%) from Boalan having finished only elementary education. Meanwhile, majority of respondents from barangays of Aurora have completed secondary education, 47% from San Jose and 41% from La Paz.

As to occupation, many of them are full-time housewives, with a few engaged in small *sari-sari* store business. This situation is true for all the four (4) study sites. When asked as about their length of residence in the barangay, Boalan respondents have been permanent residents of the area for a longer period of time (21 years) as compared with respondents from the other barangays who have stayed in their respective barangays from within 11 to 15 years.

The Child-Recipients of the Vita Nutrient Mix

Three (3) out of four (4) barangays were able to produce their master list specific to the multiple micronutrient powders from the World food Program, while that in Barangay La Paz used the same list for deworming, Vitamin A Supplementation and OPT. To reach the household level, random sampling was applied to select 30 child-recipients using the latest lists of recipients in 2012. Households to which these children belong were then located with the help of the local barangay health workers and barangay nutrition scholars.

However, in the course of interviews with the households, some of them have two child-recipients, thus making a total of 165 children from all four barangays. Their ages range 6-88 months and many of them are boys except, for recipients from Calarian who are mostly girls. Of the 165 child-recipients, majority belong to the 6-23 months old group in barangays Calarian in Zamboanga City, San Jose and La Paz in the Municipality of Aurora, followed by the 24 to 59 months old children. In Boalan, there are slightly more child-recipients aged 24 and older.

Table 2. Frequency count of VNM child-recipients by age group in the four barangays in Zamboanga City and Aurora Municipality

CLUSTER AGE	REGION IX							
	ZAMBOANGA CITY				AURORA MUNICIPALITY			
	Calarian		Boalan		San Jose		La Paz	
	Count	%	Count	%	Count	%	Count	%
6 to 23 months	29	70.73	22	47.83	25	62.50	21	55.26
24 to 59 months	9	21.95	17	36.96	13	32.5	15	39.47
60 to 71 months	3	7.32	7	15.22	2	5.00	1	2.63
88 months	0	0.00	0	0.00	0	0.00	1	2.63
Total	41	100.00	46	100.00	40	100.00	38	100.00

Note that while the study started off with an assumption of finding only 6-23 month-old children as child-recipients, actual master lists yielded ages much more than that specified as criterion for entitlement. This may be

explained by the adjusted targeting made about midway in the program, pointing to an oversupply of the multiple micronutrient powders as reason.

Incidentally, majority of the respondents in all study sites indicated that they do not know the criteria for being recipients of VNM. Some of those who know the criteria mentioned that malnutrition and that their children's age (six to 23 months) are the main criteria to be selected as recipients; others said that 4Ps (*Pangtawid Pamilya Pilipino Program*) with 6-23 months or with malnourished children are required to receive Vita Nutrient Mix. Varying age ranges for entitlement also have been mentioned, such as 6-23, 6-59, and 6-71 months old.

Awareness of and Knowledge on Vita Nutrient Mix

All respondents from the four (4) study sites expressed awareness on Vita Nutrient Mix. Majority of the respondents, regardless of barangay, had something to describe about the Vita Nutrient Mix. The top answers of the respondents are either as "source of nutrients" or that these are "nutrients in powder form added to any foods". It should be noted, however, that San Jose in the Municipality of Aurora had the most number of respondents (30%) who cannot describe the Vita Nutrient Mix, despite their awareness of it.

The respondent's source of information about Vita Nutrient Mix is primarily the health workers, including the barangay health workers, barangay nutrition scholars and midwives. Some also mentioned leaflets and posters as other sources of information particularly in San Jose (26%), La Paz (20%), and a few mentioning it also in Boalan (9%). Despite, however, of the quite active information campaign about Vita Nutrient Mix with the involvement of the health workers and use of printed campaign materials like leaflets and posters, there is still a significant number of respondents who does not have an idea about what Vita Nutrient Mix is specifically used for and what are its nutrient contents. For this reason, the design of the information campaign about Vita Nutrient Mix is an aspect that needs to be looked at by program management.

Across barangays, a varying proportion of respondents from 10 percent to 40 percent admitted to having no knowledge about the purpose of the Vita Nutrient Mix, regardless of awareness and being able to describe it. Among those who answered knowing the purpose of the Vita Nutrient Mix (see

Figure 2), the most popular answer in all study sites is “to improve health status of children”, followed by “to prevent micronutrient deficiency”. Others said for “appetite, beautiful skin, and to have sharp mind”.

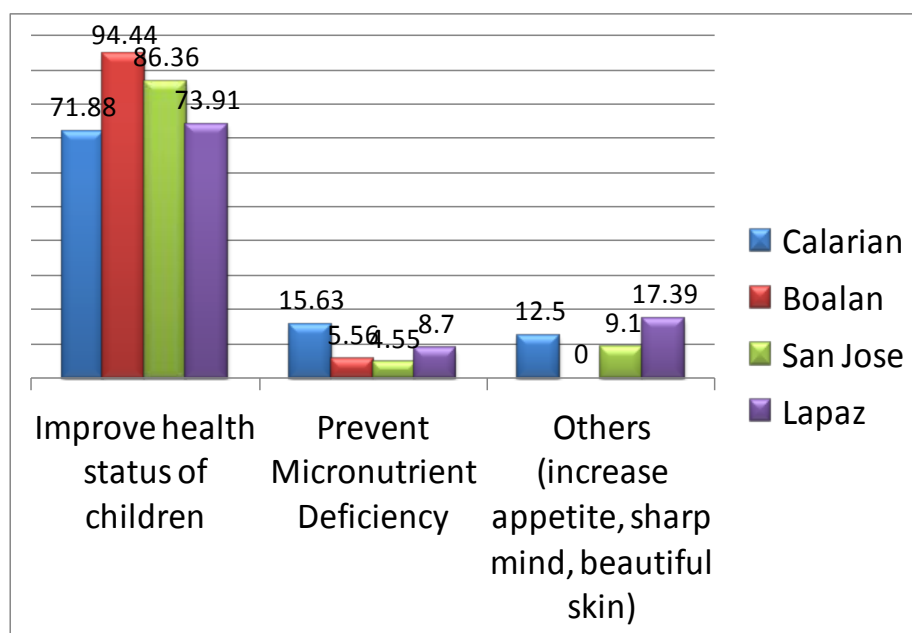


Figure 2. Respondents' knowledge about the purpose of Vita Nutrient Mix

When asked about what the Vita Nutrient Mix contains, the responses included all the nutrients that it actually contains in different numbers and combination, except for the mention of calcium. The most frequently mentioned, in multiple answers, was the B complex vitamins, followed by Vitamin A, Vitamin C, and Iron (Figure 3).

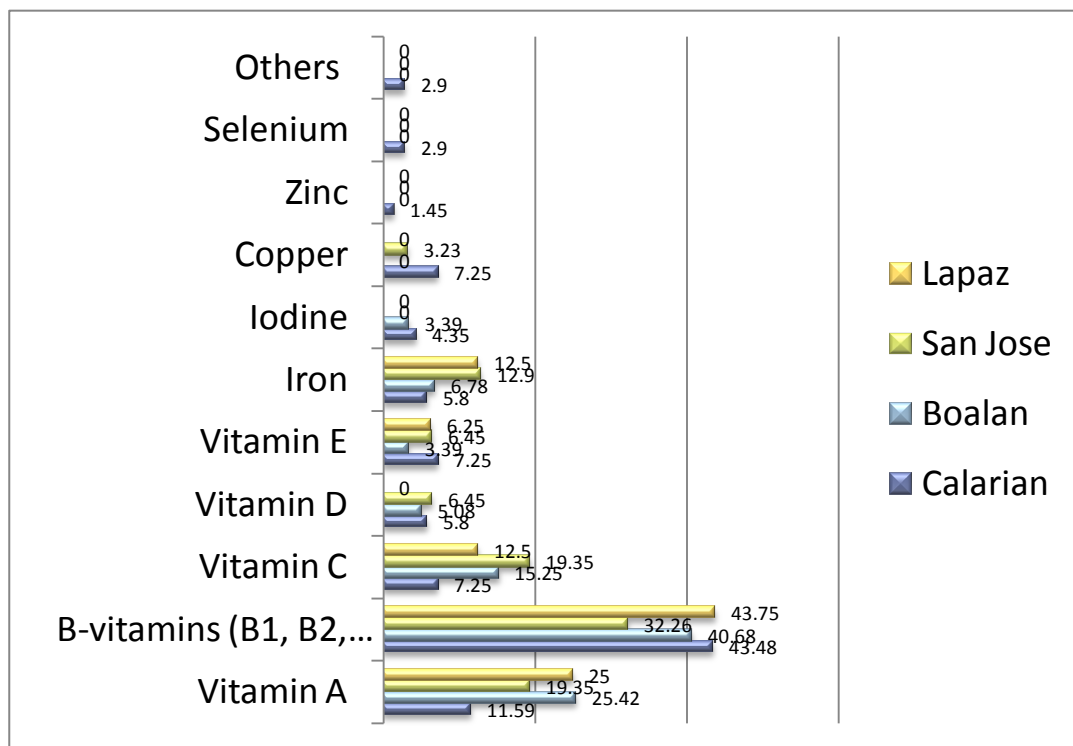


Figure 3. Respondents' knowledge about Vita Nutrient Mix's nutrient content

From the point of view of service providers, all those from Aurora and Zamboanga City were aware of the concepts of complementary feeding, food fortification, and multiple micronutrient powder (MNP), and Millennium Development Goals. They described food fortification as adding nutrients to food like vitamin A in noodles, iron in rice, and iodine in salt and that only those with DOH seal (Sangkap Pinoy seal) that contain the recommended amount of nutrients added. Micronutrient powder, on the other hand, was referred to as Vita Nutrient Mix that is made in Switzerland and distributed by the World Food Programme (WFP) which offices in Cotabato City and Iligan City. The participants also knew the person in charge at WFP of the MNP distribution. Complementary feeding was described as giving of foods such as porridge (*lugaw*) and vegetables to children whose ages are between 6-24 months. The additional food is needed at age 6 months after the child should have been exclusively breastfed from birth to 6 months. Even the MNAO and the planning officer who were both males knew of this concept. It is therefore hoped that there will be effective transmission of this knowledge from service providers to the target beneficiaries.

As to the Millennium Development Goals, the participants were more familiar with the goals related to health, i.e., reduce child mortality and improve maternal health. A few said that it is a program of the Department of Health (DOH) aimed at improving the general health status of the community and that is also about poverty reduction and the government's response to the malnutrition problem. The distribution of MNP was considered as a program contributing to child mortality reduction. Compared with the concepts mentioned above, level of awareness about the Joint Programming Millennium Development Goals was lower.

Distribution System: Quantity, Frequency and Mode of Delivery

Interview with the service providers from Aurora revealed that all children 6-23 months old were provided with MNP but they are unsure if all MNP sachets are being consumed. At the time of data collection, babies who have just reached their 6th month were no longer given MNP because those that are in storage are already expired.

The health workers are guided by the implementing guidelines on the use of MNP. The MHO received the guidelines during the seminar in Pagadian City where all midwives and midwives attended. The midwives also distribute flyers containing information on how to use the MNP.

The BHWs and BNSs invite mothers to attend the orientation while the midwives conduct the orientation on how to use the MNP. The first MNP supply, 1 box per child, is given by the midwives. Mothers whose houses are far from the Rural Health Center or Barangay Health Station are given more than 1 box.

The succeeding supply of MNP is distributed by BHWs. Each BHW is assigned to 20 households or more depending on the size of their catchment area. There is only one BNS in the barangay. She sometimes accompanies the BHWs when they distribute the MNP. She is the one in charge of weighing the children.

In the municipality of Aurora, the first supply of MNP was distributed last July 2012 and then mothers received MNP every month for six months. The second wave of supply was received last November from WFP. However, the MNPs' expiration date was December 2012. The service providers said that they did not want to accept the supply but they

eventually did so following the instruction from the WFP staff to distribute it to pregnant and lactating mothers and to children older than 24 months including school children. The service providers also had difficulty in storing the boxes of MNP as there as still existing supply that have not been distributed. They cannot also download it to the barangay health stations as there are still remaining boxes of MNP for distribution. In the second batch, 20 boxes of MNP were received but only 1 box was distributed.

The municipality of Aurora also received MNP from DOH according to the Regional Nutritionist. While they know that the municipality directly received MNP from WFP, the municipality was given an allocation to serve as buffer. However, this supply from DOH resulted to having mothers and caregivers received two types of MNP – one from WFP and one from DOH. It so happened that the DOH MNP has a pronounced rusty taste compared with that of MNP which was described as tasteless by the municipal service providers.

In general, the distribution scheme shown below is followed.

WFP-MNP

	Level	Responsible person
Supply from	↓WFP	Staff in charge
Received by	↓ZC Health Office Clusters/ Municipality of Aurora	Public Health Nurse
Distributed to	↓Barangays	Midwives and BHWs
Received by	Mothers/	

DOH-MNP

	Level	Responsible person
Supply from	↓DOH CO	
Received by	↓DOH-CHD	Regional Nutritionist
Received by	↓DOH-PHO	Provincial Nutritional Focal Point
Received by	↓LGU-MHO	Public Health

Level	Responsible person		Level	Responsible person
Children				Nurse
		Distributed to	↓Barangays	Midwives and BHWs
		Received by	Mothers/ Children	

On the other hand, survey respondents would recall that the start of the Vita Nutrient Mix distribution generally vary between the barangays in Zamboanga City and the Municipality of Aurora, where the former had received as early as mid 2011, while the latter only in mid 2012. The most popular distribution mode of Vita Nutrient Mix is directly to the house of the respondents (Table 2). This is true for Calarian (64%), San Jose (62%), and Boalan (47%). The distribution is commonly done either by the barangay health worker or the barangay nutrition scholar. In La Paz, the midwife also helps distribute, while in San Jose, some mothers are also involved. At least one parent recalled having volunteered in the distribution of the Vita Nutrient Mix through the Parents' Association where she is a member of. Meanwhile, majority of La Paz respondents (80%) receive their VNM in the barangay health center. Distribution in the barangay health center is another popular practice that is observed in the rest of the study sites.

Table 3. Place of Vita Nutrient Mix distribution in four (4) barangays in Zamboanga city and Aurora municipality (multiple answers)

PLACES OF DISTRIBUTION	REGION IX							
	ZAMBOANGA CITY				AURORA MUNICIPALITY			
	Calarian		Boalan		San Jose		La Paz	
	Count	%	Count	%	Count	%	Count	%
Health center within the barangay	7	21.21	16	47.06	11	32.35	24	80.00
City/municipality health center	0	0.00	0	0.00	0	0.00	2	6.67
Own house	21	63.64	16	47.06	21	61.76	2	6.67
Others (neighborhood, school, chapel, BNS/BHW house)	5	15.15	1	2.94	2	5.88	2	0.00
Total	33	100.00	34	100.00	34	100.00	30	100.00

Instructions on how to use VNM are commonly given either by the barangay health worker or the barangay nutrition scholar. Midwives also play an important role in providing instructions on how to use VNM, particularly in La Paz and San Jose. Consequently, the same individuals are also responsible for monitoring VNM consumption. The monitoring is mostly done by asking how recipients used the VNM. At some point in the program, calendars were distributed to households for them to record use of the VNM, and with which the health workers can monitor its use. However, caretakers of children often miss recording on such calendars, and have stopped being distributed as well. Also, households are instructed to keep empty sachets, for the health workers' collection in aid of monitoring. However, there are accounts where the empty sachets do not get collected and thus they just stopped keeping them.

Majority of the respondents (83% to 97%) pointed out that they never encountered problem in VNM distribution. Although sparingly, some mothers recall not being given the VNM unless they ask for it; or receiving more than the number of boxes they expect based on the number of their entitled children. Ironically, despite the claimed oversupply of the VNM, the main reason expressed by those who experienced a problem is related to insufficient stocks and that they do not know where to get stock. The recommended solutions for the problems cited are to regularly follow up health workers and to improve information dissemination.

Utilization of Vita Nutrient Mix

In all study areas, the most common practice of food fortification with VNM is by adding it to boiled rice (Table 3). In Zamboanga City barangays, VNM is also regularly added to rice porridge, while in Aurora barangays, it is also popularly used in meat broth (chicken, pork) or in fish broth. It is likewise a common practice to fortify *utan* or any vegetable dish with VNM. Although sparingly mentioned, the VNM is dissolved in liquid such as juice and milk, which is discouraged due to the possible settling of the VNM in the bottom thus decreasing its chances of being taken in.

Table 4. Food/dishes that respondents fortified Vita Nutrient Mix with (multiple answers)

FOODS/DISHES	REGION IX							
	ZAMBOANGA CITY				AURORA MUNICIPALITY			
	Calarian		Boalan		San Jose		La Paz	
	Count	%	Count	%	Count	%	Count	%
Boiled Rice/ + soy sauce	21	48.84	26	49.06	20	37.74	23	41.07
Rice Porridge/cerelac	11	25.58	7	13.21	9	16.98	5	8.93
Rice Porridge with meat/milk	0	0.00	3	5.66	0	0.00	0	0.00
Meat broth (Chicken, Pork, Fish)	4	9.30	4	7.55	11	20.75	10	17.86
Instant Noodles	0	0.00	4	7.55	3	5.66	0	0.00
Utan or any vegetable dish	2	4.65	6	11.32	7	13.21	11	19.64
Ground Mungbean/Corn	0	0.00	1	1.89	0	0.00	0	0.00
Ground/Flaked meat/canned goods	2	4.65	2	3.77	2	3.77	5	8.93
Others (Am, Juice, Milo, Milk)	3	6.98	0	0.00	1	1.89	2	3.57
Total	43	100.00	53	100.00	53	100.00	56	100.00

The fortification process is popularly practiced after cooking while the food is cold, or sometimes either while the food is still hot or warm. At least four (4) responses described giving the VNM in one spoonful of rice, and in pure form, followed with a glass of water. Based on such responses, there is a need to intensify the instructions on how to use Vita Nutrient Mix, as per guidelines.

Table 5. Fortification method used by the respondents (multiple answers)

FORTIFICATION METHOD	REGION IX							
	ZAMBOANGA CITY				AURORA MUNICIPALITY			
	Calarian		Boalan		San Jose		La Paz	
	Count	%	Count	%	Count	%	Count	%
Before Cooking while Cold	2	4.76	0	0.00	0	0.00	0	0.00
After Cooking while Hot	9	21.43	7	13.21	15	26.79	21	37.50
After Cooking while Warm	13	30.95	0	0.00	19	33.93	19	33.93
After Cooking while Cold	18	42.86	46	86.79	19	33.93	15	26.79
Others :	0	0.00	0	0.00	3	5.36	1	1.79
<ul style="list-style-type: none"> A sachet, all mixed in one spoonful of rice Pure VNM followed by a glass of water 								
Total	42	100.00	53	100.00	56	100.00	56	100.00

It is a common practice among household-recipients for their children to consume all the foods fortified with VNM. While some households admit to sharing fortified foods with non-entitled children (within the household or even with neighbors in cases such as when their own child refuses to eat the food), many households indicated that they never shared the fortified foods with non-entitled member of the household. The timing of giving the children food fortified with the VNM vary between everyday and every other day, until all sachets are consumed within the prescribed six (6) months. One (1) respondent has the notion that the child gets less of the benefits from the VNM if divided into two (2) feedings even if still within a day. Feeding VNM-fortified foods becomes all the more a problem when the child has fever, or is teething. At least one (1) respondent said that she stopped giving her child VNM-fortified food because the child would cry in fear every time she is seen adding it to the food.

Observations on VNM child-recipients

A small number reported no change among their children even after taking in food with the VNM. Of those who claim to have observed changes in their children due to the VNM, respondents across the study sites indicated that the top two (2) positive results or benefits derived from the use of VNM are increased appetite and increased growth among children-recipients (Figure 4). Some respondents also related that VNM use has also improved the children's immune system and made them hyperactive and sleepy.



Nothing says it better than the smile of a healthy child.

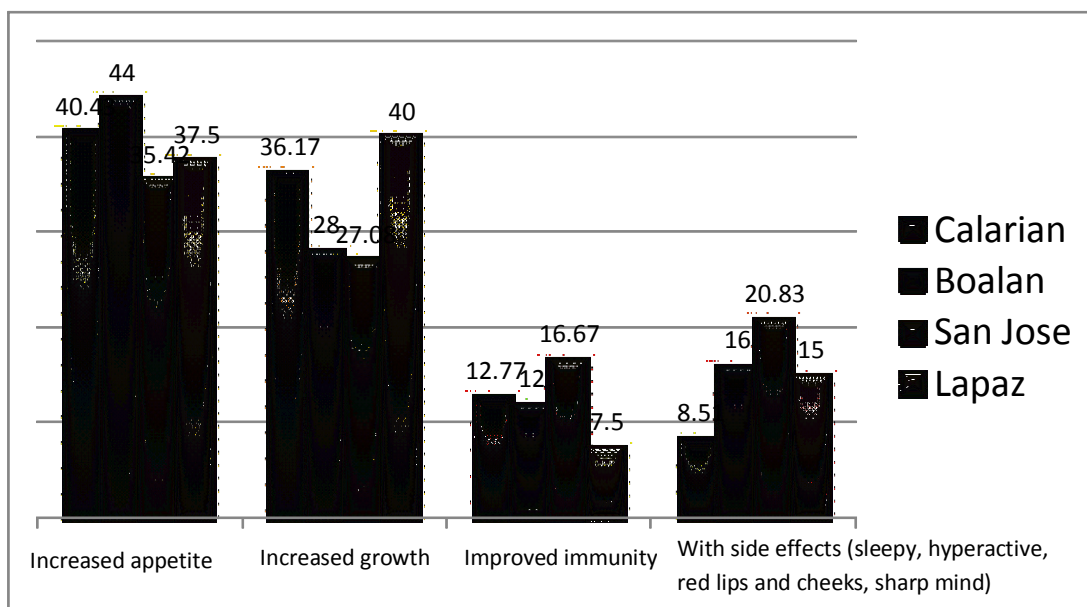


Figure 4. Respondents' observations on Vita Nutrient Mix child recipients

A monitoring system has been established and followed in the tracking of the progress of the implementation of the MNP home fortification program. At the household level, monitoring form was developed which should be filled out by BHWs/BNSs. The form asks for some information such as the name of mother, name of child, child' birthday, date when VNM was received, signature of mother, number of sachets handed in (empty or full), and additional comments. The accomplished form is to be submitted every month. However, accomplishing the form has not become a regular activity according to the JP Field Coordinator due to the many tasks of the BHWs/BNSs. Hence, submission becomes quarterly instead of monthly. The community health workers submit the completed form to the midwives and then to the C/MHO who consolidates the reports. The consolidated report is submitted to the WFP program assistant. The observations of the BNS/BHW are noted and they write down the date of their visit in the individual compliance calendar. They also use their own logbook/notebook for other details of the visit. For WFP, there is no specific reporting format but whatever is observed in the field, it is e-mailed to the Nutrition officer for further technical assistance.

The persons most involved in the monitoring are the BNSs and BHWs. They do it every month and report them to their midwives. The BHWs, who are expected to visit the household at least once, ask the mothers to keep the empty sachets for checking whether or not they have been consumed. However, it was only during the early part of the program that this system of checking was used. Not all households can be checked on a regular basis using this system, and empty sachets do not always mean that the contents have been consumed. From the midwives, the results are shared with their nutritionist-dietitians, district nurses and doctors. From WFP's side, monitoring is done at least once every two months through home visits and/or focus group discussions together with the area nutritionist-dietitians. There were also instances that the monitoring has to be postponed due to security-related protocols as a UN organization.

Problems/side effects and solutions in the use of VNM

When asked about side effects of the VNM, about 20% said noticing side effects with their children consuming VNM-fortified food. Three (3) reported that the problems or negative side effects of VNM are diarrhea, vomiting, and food aversion.

Table 6. Problems and/or side effects experienced by child- recipients of VNM (in multiple answers)

PROBLEMS/SIDE EFFECTS	REGION IX							
	ZAMBOANGA CITY				AURORA MUNICIPALITY			
	Calarian		Boalan		San Jose		La Paz	
	Count	%	Count	%	Count	%	Count	%
Diarrhea	3	37.50	0	0.00	2	28.57	2	25.00
Vomiting	0	0.00	0	0.00	3	42.86	2	25.00
Food aversion due to taste (bitter, rusty, food fatigue, and sandy texture)	5	62.50	4	100.00	2	28.57	4	50.00
Total	8	100.00	4	100.00	7	100.00	8	100.00

The respondents who faced problems mentioned above generally stop giving VNM to their children. Some said that they reported the problem to the persons distributing VNM who, as cited earlier, are the barangay health workers, barangay nutrition scholars, or the midwives. The advices given ranged from “stop using the VNM” to “continue using the VNM” on

varying notes of explanations and/or conditions such as that the body is still adjusting, or that the child must be observed first before deciding to stop use of VNM.

All respondents indicated that they received the VNM for free although the majority do not know who coordinates its distribution. As an exploratory question for possible input to sustainability, respondents were asked about their willingness to pay for the VNM. Many respondents (70% to 90%) expressed willingness to pay for VNM for an amount between P4.00 and P6.00 per sachet. The main reasons of those unwilling to pay are financial problem, its rusty taste that some children refuse to consume it, and that it is not prescribed by the doctor. Other reasons given are that it is not effective, they already have vitamins, preference for the syrup form and that the child is already two (2) years old and thus old enough for the VNM.

There were also varied issues raised by health service providers in Aurora regarding the implementation of MNP intervention. First is the non-provision of funds for transportation/fare going to and from the barangays and within the barangays of BHWs and midwives. This problem limits their mobility to effectively perform their functions.

Second is how to effectively and convincingly respond to mothers' comments or complaints such as not giving the MNP to children; MNP is mixed with a meat dish to lessen the "iron" taste [*lasang Iron kaya nilalagay sa adobo para mawala ang masamang lasa; nilalagay din sa sabaw ng gulay*]; and bad odor of MNP (*mabaho din kasi ang amoy*). The health officers explained that during the briefing, they were able to taste the MNP provided by WFP and it was tasteless. However, after a year of implementation, they have noted the "iron" taste. When a mother complains, she is advised to prepare different types of dishes wherein the MNP can be mixed. Mothers are also informed to divide the MNP into three and mix it to the child's meals, i.e., breakfast, lunch, dinner. Mothers can also mix the MNP in Milo chocolate drink to mask the "iron" taste.

Lastly is the mothers' attitude towards MNP. The municipal health officer related that there was one mother who can afford to buy multivitamins for her child but believes in MNP and she regularly gets her child's supply from the Health Center. On the other hand, there are some mothers who refuse to accept MNP. The BHWs said that there are more than 10 mothers who refused to accept MNP in their areas. Reasons for non-acceptance include child already taking vitamins; belief that MNP is not

that effective because it is free; and a story which is circulating that a child vomited and was hospitalized. The nurse related that there were three mothers who tried using the MNP and then stopped using it. When she visited and explained the benefits of the MNP, the mothers once again tried the MNP and until now were reported to be using it. However, the MNAO noted that majority of mothers still avail of the MNP.

5. Recommendations

The following recommendations are forwarded according to the key components of the program: policies, production and/or supply including packaging/labeling, delivery system, and monitoring and evaluation.

5.1. Policies:

- Issue memorandum or information that the WFP home fortification program has been completed to avoid expectations from the program areas.
- The objectives of the program, the agencies involved and their roles should be made clear. The development of an operations manual that spells out levels of authority and decision-making, procedures, and overall conduct of the program can be a step towards this direction.

5.2. Production and/or supply:

- Pursue localized sourcing of the MNPs as a cost consideration, without trade-offs for quality.
- Address the issue of oversupply of the MNPs (in an apparent move to make use of excess supply, actual ages of the children in this study extended way beyond the targeted age group) in view of overall program planning and management.
- Consider changing the format of the manufacturing and expiration date to month- day-year in view of the local practice in labeling.

5.3. Delivery system:

- Continue the system of distributing the MNP in regular health activities such as GP and mainstreaming with the CCT program. While expressions of preference abound in favor of bypassing certain points in the delivery pathway, it may be

noted that the reason for such was logistical in nature, such as having no storage space for the MNPs. Addressing logistics may be worth the benefits of a mainstreamed delivery with an end view of sustainability.

- There is a need to refine measures along the delivery system, such as the following: a) Adherence to conditions set for delivery including unloading points and services b) Preparedness on the part of the receiving end by allocating space and storage facility suited to hold supplies
- Account, consider and allocate for costs that may be incurred from the moment of receipt by the local government to the time that the MNPs get distributed to the households
- Predict the nature of disruption to existing health workers, and facilitate internalization of the program as a part of a larger development effort of ongoing systems, and not just another resource requiring undertaking affecting movements in the developmental flow.

5.4. Monitoring and evaluation:

- Expand the coverage of the monitoring and evaluation system from use of MNP to include compliance, changes in young child feeding practices, improvement in dietary diversity, and nutritional status of children
- Synchronize the monitoring schedule with the DOH system
- Incorporate a systematic mechanism for a multi-directional prompt feedback.

Futhermore, the findings at the household level surmises that the utilization of the Vita Nutrient Mix falls on the commitment of the local health workers, and the household members who make decisions on the consumption of foods fortified with the VNM by their children. The seemingly lack of knowledge about the Vita Nutrient Mix, even if all respondents claimed to be aware of it, points to the need to look into the design and/or dissemination of information regarding the use of Vita Nutrient Mix.

5.5. Behavior change communication:

- Mothers/caregivers should be continuously informed and motivated to use the MNP. There seems to be a need for

instructions that simulate counseling, especially once initial reactions from the first use of the VNM set in. Counseling and nutrition education activities can be regularly conducted to reinforce their knowledge on the importance of the MNP and how to use them. It should be made clear to the family that the MNP is intended for 6-23 months children. Refresher promotional materials should also be developed and distributed to the mothers/caregivers. While nutrition education has been an essential prerequisite to the use of the VNM, follow-through is another.

- Food fortification as a component in complementary feeding has the potential to enhance overall impact. For purposes of motivating potential participants, the immediate benefits of improved complementary feeding (such as alertness, beautiful skin, sound sleep in the words of the respondents themselves) should be emphasized as well as the longer term benefits of improved nutrition and a generation of healthier children.
- Initiate support groups among mothers and caregivers to serve as credible and firsthand examples of the proper use of MNPs and in the process encourage others to use MNPs,
- The overall dietary context with which the households, thus their children have to deal with, is an essential consideration in the utilization of home-based complementary food fortification with the VNM. That is, there is food to be fortified, and in itself, must be appetizing and good-tasting to make it acceptable to the children; as well as nutritious for overall effect. Since home food fortification works with program participants to better utilize already available foods, the education component should strengthen inputs regarding the preparation of complementary food in the home and the improvement of related practices.

Finally, an awareness of the lessons learned from implementing the Point of Use Complementary Food Fortification with MNPs bestows a special responsibility to those now involved to improvise or adapt to hasten the process of nutrition improvement. The prospect of scaling up is often heard from program managers in the course of this study, but should it be in terms of geographical expansion (in an effort to reach more) or take the form of new initiatives? Both ways or either way, the lessons learned in

the JP MDG-F 2030 should prove useful towards creating the conditions conducive for a successful scaling up of the MNPs as an intervention.

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