The development of this Micronutrient Supplementation Manual of Operations has never been more timely and crucial than now, as we move into the final five (5) opportune years of meeting our commitment to the Millennium Development Goals (MDGs) of improved maternal-newborn-child health and nutrition status by 2015, together with countries throughout the world.

This Micronutrient Supplementation Manual of Operations is a useful guide for local, regional, and national managers and implementers as we accelerate our efforts in providing good quality micronutrient supplementation services to targeted populations nationwide. Micronutrient supplementation as an intervention is crucial to improving and sustaining the health and nutrition of infants, children, pregnant and lactating women, and all other women of reproductive age. It provides them with better defense against infection and other high risk health conditions that could lead to death or disabilities. The Micronutrient Supplementation Manual of Operations outlines how the national program framework and policies on rapid maternal and newborn death reductions, accelerated child survival, and an expanded micronutrient supplementation can be translated and contextualized at the local level.

While this Micronutrient Supplementation Manual of Operations is a significant milestone in our health and nutrition endeavor, its usefulness and benefits will only be realized if all health care providers reference the MOP in their day-to-day provision of quality care and services to each client they encounter. This includes not only those health care providers in the frontline, but also those in hospitals and other health-care facilities and allied health offices.

I both congratulate and challenge each one of us as we move towards 2015. Let us set our micronutrient supplementation bar to a higher level, bring in all our resources and efforts together, and act more swiftly to reach and serve our clients with the quality services they deserve.

ENRIQUE T. ONA, MD, FPSC, FACS
Secretary of Health
ACKNOWLEDGMENT

The Department of Health (DOH) is grateful to all management, staff, colleagues, and partners in the micronutrient supplementation arena who have provided their inputs and contribution, without which, this Micronutrient Supplementation (MS) Manual of Operations (MOP) would not have reached fruition.

First of all, I would like to thank the members of the Technical Working Group on the MS-MOP development, for having painstakingly written, reviewed, revised, and further edited the document. I would also like to thank their mother agencies and offices: the National Center for Disease Prevention and Control (NCDPC), the National Center for Health Promotion (NCHP) and Health Emergency Management Staff (HEMS), the National Nutrition Council (NNC), the Food and Nutrition Research Institute (FNRI), Helen Keller International (HKI), and the following USAID Projects: A2Z, HealthPRO, and SHIELD.

I also salute the panel of experts and technical staff who initially worked on the Administrative Order No. 2010-0010, which provided the overall policy direction on Micronutrient Supplementation: the A2Z Project, the Health Policy Development Project (HPDP), and Sustainable Health Improvements through Empowerment and Local Development (SHIELD), funded by the United States Assistance for International Development (USAID), the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), the Philippine Pediatric Society (PPS), HKI, the Nutrition Center of the Philippines (NCP), and the International Council for the Control of Iodine Deficiency Disorders (ICCIDD), all of whom have generously shared their time and expertise in the development of the policy and guidelines.

I am also aware of the efforts undertaken by Centers for Health Development NCR, I, III, IVA, IVB, VI, VII, IX and the provinces of La Union, Pangasinan, Pampanga, Bulacan, Cavite, Laguna, Negros Oriental, Zamboanga del Norte, and the cities of Caloocan, Dagupan, Makati, Manila, Navotas, Quezon, and Zamboanga during the field test of the manual to make it valid, relevant and user-friendly to those in the frontlines.

Lastly, the DOH would like to thank A2Z, the USAID Micronutrient Project, implemented by the Academy for Educational Development and HKI, for financing the development, field testing and printing of this Manual.

We hope that all who have been involved in the development of the Manual will continue to facilitate its dissemination and adoption at the local level and by other concerned agencies, and remain vigilant in our advocacy and promotion to ensure its use and compliance nationwide.

At the back of this manual, is a list of the persons and organizations who were involved in its development. To each one, again we thank you.

GERARDO V. BAYUGO, MD, MPH, CESO III
OIC, Undersecretary of Health
Policy, Standards Development and Regulation and
Health Sector Financing Cluster
ACRONYMS AND ABBREVIATIONS

AMC average monthly consumption
AMV anti-measles vaccine
AO Administrative Order
BCG Bacillus-Calmette-Guerin
BHS barangay health station
BHWs barangay health worker
BNB Botika ng Bayan
BNS barangay nutrition scholars
CAR Cordillera Administrative Region
CBA collective bargaining agreement
CGS Child Growth Standards
CHD Center for Health Development
CHO City Health Office
CIDA Canadian International Development Agency
DALY disability adjusted life year
DOH Department of Health
DPT diphtheria, pertussis, tetanus
DSWD Department of Social Welfare and Development
ECCD early childhood care and development
FDA Food and Drug Administration
FEFO first-to-expire, first-out
FHB Family Health Book
FHSIS Field Health Service Information System
FNRI Food and Nutrition Research Institute
GP Garantisadong Pambata
HMO health maintenance organizations
HNP health promotion
HPC health promotion and communication
HPCP health promotion and communication plan
HPDP Health Policy Development Project
ICCIDD International Council for the Control for Iodine Deficiency Disorders
IEC information, education and communication
IDA iron-deficiency anemia
IDD iodine deficiency disorders
IMCI integrated management of childhood illness
INACG International Nutritional Anemia Consultative Group
IOC iodized oil capsule
IPC/C inter-personal communication and counselling
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<tr>
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<td>ITR</td>
<td>individual treatment record</td>
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<tr>
<td>IUGR</td>
<td>intra-uterine growth retardation</td>
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<tr>
<td>LBW</td>
<td>low birth weight</td>
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<tr>
<td>LCE</td>
<td>local chief executive</td>
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<tr>
<td>LGU</td>
<td>local government unit</td>
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<tr>
<td>MCB</td>
<td>mother and child book</td>
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<td>MCP</td>
<td>maternity care package</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MI</td>
<td>Micronutrient Initiative</td>
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<td>MNCHN</td>
<td>maternal-newborn-child health and nutrition</td>
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<tr>
<td>MNP</td>
<td>micronutrient powder</td>
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<td>MOP</td>
<td>manual of operations</td>
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<td>MS</td>
<td>micronutrient supplementation</td>
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<td>NCDPC</td>
<td>National Center for Disease Prevention and Control</td>
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<td>NCHP</td>
<td>National Center for Health Promotion</td>
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<td>NCP</td>
<td>Nutrition Center of the Philippines</td>
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<td>NGO</td>
<td>non governmental organization</td>
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<td>NNC</td>
<td>National Nutrition Council</td>
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<td>NNS</td>
<td>National Nutrition Survey</td>
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<td>NSCB</td>
<td>National Statistical Coordination Board</td>
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<td>OPB</td>
<td>out-patient benefit package</td>
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<td>OPD</td>
<td>out patient department</td>
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<td>ORS</td>
<td>oral rehydration salts</td>
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<td>PD</td>
<td>Presidential Decree</td>
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<td>PHO</td>
<td>Provincial Health Office</td>
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<td>PIPH</td>
<td>Province-Wide Investment Plan for Health</td>
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<td>PIR</td>
<td>program implementation review</td>
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<td>PITC</td>
<td>Philippine Importation and Trading Center</td>
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<td>PNDF</td>
<td>Philippine National Drug Formulary</td>
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<td>PPS</td>
<td>Philippine Pediatric Society</td>
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<td>PSA</td>
<td>public service announcements</td>
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<td>RENI</td>
<td>recommended energy and nutrient intake</td>
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<tr>
<td>R and D</td>
<td>research and development</td>
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<td>RHO</td>
<td>regional health office</td>
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<td>RHU</td>
<td>rural health unit</td>
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<td>RNPC</td>
<td>Regional Nutrition Program Coordinator</td>
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<tr>
<td>S and T</td>
<td>science and technology</td>
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<td>SHIELD</td>
<td>Sustainable Health Improvements through Empowerment and Local Development</td>
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<td>SWOT</td>
<td>strength-weakness-opportunity-threat</td>
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<td>TCL</td>
<td>target client list</td>
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<td>TEV</td>
<td>travel expense voucher</td>
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<td>TT</td>
<td>tetanus toxoid</td>
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<td>TSH</td>
<td>thyroid stimulating hormone</td>
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<td>TWG</td>
<td>technical working group</td>
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<td>UIE</td>
<td>urinary iodine excretion</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>VAC</td>
<td>Vitamin A capsule</td>
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<tr>
<td>VAD</td>
<td>Vitamin A Deficiency</td>
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<td>VADD</td>
<td>Vitamin A deficiency disorders</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WFP</td>
<td>World Food Program</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Anemia</td>
<td>A condition that occurs when the red blood cells do not carry enough oxygen to the tissues of the body.</td>
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<tr>
<td>Diet Diversification</td>
<td>Changing dietary practices of young children and pregnant and lactating mothers, through nutrition information and education, to encourage consumption of variety of foods from the different food groups to ensure adequacy of energy and micronutrient intakes.</td>
</tr>
<tr>
<td>Disability-Adjusted Life Year</td>
<td>A measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death. One DALY represents the loss of one year of equivalent full health.</td>
</tr>
<tr>
<td>Emergency</td>
<td>An extraordinary situation wherein people are unable to meet basic survival needs, and there are serious and immediate threats to human life. These usually result from disaster or environmental degradation.</td>
</tr>
<tr>
<td>Food Fortification</td>
<td>One of the interventions to reduce micronutrient deficiencies. It is the process whereby nutrients are added to foods to maintain or improve the quality of the diet of a group, community, or population. Examples are flour fortified with vitamin A and iron, sugar with vitamin A, oil with vitamin A, rice with iron, and salt with iodine.</td>
</tr>
<tr>
<td>Governance</td>
<td>Refers to the wide range of functions carried out by national and local governments as they seek to achieve national health policy objectives.</td>
</tr>
<tr>
<td>Health providers</td>
<td>Refers to individual health staff or any health care facility (BHS, RHU/health center, private clinics, hospitals, lying-in/birthing clinics, school clinics, corporate clinics, etc.) that provide health services including micronutrient supplementation.</td>
</tr>
<tr>
<td>Heme</td>
<td>The absorbable form of iron.</td>
</tr>
<tr>
<td>Iodine</td>
<td>An essential trace mineral found in the food we eat and a component of the thyroid hormones. These hormones are needed for the brain and nervous system to develop and function normally.</td>
</tr>
<tr>
<td>Iodine Deficiency Disorders</td>
<td>Refers to the ill-effects of iodine deficiency in a population that can be prevented by ensuring that the population has an adequate intake of iodine. It is the most common cause of preventable mental retardation. It also affects the mother’s reproductive functions and impedes children’s learning ability.</td>
</tr>
<tr>
<td>Iron</td>
<td>Iron is an essential trace mineral needed for hemoglobin (Hb) formation which carries oxygen from the lungs to the tissues and carbon dioxide from the tissues to the lungs. It is stored in the liver, bone marrow and spleen.</td>
</tr>
</tbody>
</table>
Iron Deficiency Anemia
Refers to the severe depletion of iron stores that result in a low hemoglobin concentration. The body cannot make enough hemoglobin and healthy red blood cells because it lacks the necessary nutrients.

Low Birth Weight Infants
Infants weighing less than 2.5 kg upon birth. Used as a proxy indicator for premature babies who need to be given iron supplementation.

Micronutrient
A dietary element essential only in small quantities.

Micronutrient Powder
A form of supplement containing a premix powder of vitamins and minerals that are easily sprinkled once daily into any semi-liquid food without changing the color, taste or texture of the food.

Micronutrient Supplement
Vitamin and mineral food supplements derive their nutritional relevance primarily from the minerals and/or vitamins they contain. Vitamin and mineral food supplements are sources in concentrated forms of those nutrients, alone or in combinations, marketed in forms such as capsules, tablets, powders, solutions, etc. that are designed to be taken in measured small-unit quantities, but are not in a conventional food form, and whose purpose is to supplement the intake of vitamins and/or minerals from the normal diet. (CODEX) STAN 146-1985, Appendix II

Micronutrient Supplementation
A short to medium term intervention, intended to prevent and/or correct high levels of micronutrient deficiencies by providing large doses of micronutrients immediately until more sustainable food-based approaches (e.g. food fortification and diet diversification) are put in place and become effective.

Older Persons
These are persons who are 60 years old and above as defined by the Senior Citizen’s Act of the Philippines.

Persistent Diarrhea
An episode of soft to watery stools lasting more than 14 days but without signs of dehydration.

Planning
Involves selecting interventions that meet the population’s needs and making arrangements to implement them effectively.

Public Health Importance
Refers to the cut-off points recommended by WHO as to when to consider a micronutrient deficiency to be a public health concern necessitating state intervention.

Vitamin A Deficiency
Prevalence Cut-Off Point to define public health problem based on biochemical indicators WHO (1996)

<table>
<thead>
<tr>
<th>Level of Public Health Importance</th>
<th>Prevalence of VAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>≥2% to &lt;10%</td>
</tr>
<tr>
<td>Moderate</td>
<td>≥10% to &lt;20%</td>
</tr>
<tr>
<td>Severe</td>
<td>≥20%</td>
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<th>Category of Public Health Importance</th>
<th>Prevalence of Anemia</th>
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<tbody>
<tr>
<td></td>
<td>Severe</td>
<td>&gt; 40%</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>20.0-39.9%</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>5.0-19.9%</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>&lt; 5.0%</td>
</tr>
</tbody>
</table>

**Iodine deficiency**

The indicator of iodine deficiency “elimination” is a median value of 100 µg/L, in the general population, and not more than 20% of the UIE should be below 50 µg/L (ICC-IDD). The UIE levels for adequacy among pregnant women is 150 µg/L.

**Reformulated Oral Rehydration Salt**

Refers to oral rehydration salt that contains reduced amount of glucose and salt.

**Severe Pneumonia**

Refers to presence of any general danger sign or chest indrawing or hard, high pitched sound in inhalation or exhalation in a calm child.

**Supervision**

A mechanism to ensure health workers perform their functions and tasks according to protocols, and for them to keep on improving their performance. Supervision is expected to complement the orientation and training provided to health staff in developing and honing their skills and competencies. Supervision also entails the review and verification of records and reports (monthly progress report, FHSIS, LGU records, and other sources) and allows actual observation of the staff’s working conditions.

**Vitamin A**

A fat-soluble vitamin needed by the body for normal sight, growth, reproduction, cell differentiation, and healthy immune system.

**Vitamin A Deficiency**

A level of depletion of total body stores of retinol and its active metabolites, such that normal physiologic function is impaired.

**Well-closed container**

A container that protects the product from contamination, loss, or damage when subjected to ordinary or customary handling and shipment.

**Xerophthalmia**

Constitutes the principal clinical sign of VAD, and is the most widely employed definitive criterion for assessing whether the deficiency is a significant public health problem.

**Zinc**

An essential mineral, found in almost every cell in the body, which stimulates growth and immune system.
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INTRODUCTION

The Department of Health (DOH) issued Administrative Order (AO) No. 2010-0010, on the Revised Policy and Guide on Micronutrient Supplementation to Support the Achievement of the 2015 MDG Targets to Reduce Under-Five and Maternal Deaths and Address Micronutrient Needs of Other Population Groups (Annex 1). The AO laid down the key principles, policy directions, and general guidelines in the implementation of Micronutrient Supplementation Program.

This Manual of Operations (MOP) is designed to help various groups of stakeholders involved in the design, management, and implementation of Micronutrient Supplementation (MS) interventions throughout the country to put into action the policies and general guidelines stipulated in the AO. Specifically, the MOP aims to serve as guide for:

(1) service providers, in both the public and private sectors, in the delivery of micronutrient supplements to the targeted populations;

(2) local health officials in the governance and implementation of Micronutrient Supplementation Program in their respective localities; and

(3) DOH-Centers for Health Development (CHDs) and NNC-Regional Offices, local health and nutrition officials, technical assistance providers, and development partners in providing technical guidance for the implementation of the Micronutrient Supplementation Program.

Service providers in (1) above include health care providers in health facilities such as the BHSs, RHUs, private clinics, hospitals, and other service outlets that provide and deliver micronutrient supplementation services. The MOP also contains information that can help the Barangay Health Workers (BHWs), Barangay Nutrition Scholars (BNSs), or other community volunteer workers carry out their roles and tasks in the delivery of micronutrient supplementation and related services at the community level. However, this information may need to be further translated into less technical and complex terms through orientation or training.

Local health officials in (2) above are those who are responsible for the governance, financing, and regulation of micronutrient supplementation interventions. They may be heads of the local health and nutrition offices at the municipal, city and provincial levels, and local governance officials (e.g. local chief executives, members of the Sanggunian bodies, administrative and procurement officials, etc.), and officials of other authorized agencies in-charge of ensuring the quality and affordability of micronutrient supplementation products in the local market.

The DOH-CHDs and NNC-Regional Offices, as well as Non Government Organizations (NGOs), academia, Professional Societies, other development partners, and the donor community are all encouraged to use this MOP as their reference in designing technical, logistical, and financial assistance packages for the micronutrient supplementation needs of the LGUs.
The MOP is structured into 9 sections described as follows:

**Section 1.**  The Micronutrient Supplementation Program Guiding Principles, Policy and General Guidelines

Section 1 introduces MS as one of the country’s three-pronged strategies in addressing micronutrient deficiencies, along with diet diversification and food fortification. The guiding principles, overall policy direction, and general guidelines that should be followed when designing, managing, and implementing MS interventions in the country are discussed.

**Section 2.**  The Essential Micronutrients and Common Deficiencies

Section 2 introduces the essential micronutrients focusing on vitamin A, iron, folic acid, iodine, and zinc - their definitions, functions, benefits and sources; and provides information on the causes and consequences of deficiencies in these nutrients particularly VAD, IDA, Folate Deficiency, and IDD. This section also discusses zinc as an add-on in the management of diarrhea.

**Section 3.**  Magnitude of the Micronutrient Deficiency Problems

Section 3 provides information on the prevalence of micronutrient deficiency problems in the Philippines based on the most recent, available data. It presents the trend of micronutrient deficiencies over time and the disparities across regions and socio-economic strata of the population. Gaps and challenges in addressing the micronutrient deficiencies, particularly in the implementation of micronutrient supplementation interventions, are discussed.

**Section 4.**  Micronutrient Supplementation Interventions

Section 4 describes the MS packages recommended for different age and physiological groups, specific health conditions, and special or difficult situations. The MS package specifies the supplements, recommended dosage, frequency, and timing of giving the supplements.

**Section 5.**  Delivery of Micronutrient Supplementation Services

Section 5 provides the guidelines for the actual delivery and administration of the MS packages, such as during the provision of routine Maternal-Newborn-Child Health and Nutrition (MNCHN) services to beneficiaries in health facilities or by health care providers, and the provision of MS through events like the Garantisadong Pambata (GP) national campaign. Non-traditional avenues that may be tapped as MS package delivery or service outlets, such as the workplace, school, community center, are identified.
Section 6. Health Promotion and Communication for the Micronutrient Supplementation Program

Section 6 presents the basic principles, goals and strategies of health promotion in general, and identifies key areas in the MS Program where these can be operationalized and applied. Guidelines for devising local health promotion and communication action plans, which need to be integrated into the LGUs’ overall Annual Health Strategic/Operational Plan, are provided. Key messages to be communicated and disseminated are identified for each specific target population group.

Section 7. Management of Micronutrient Supplementation Program

Section 7 presents the systems that need to be put in place, operationalized and sustained to support the delivery of quality MS packages. This covers governance-related matters including forecasting and planning to meet the LGU’s MS requirements, procurement, distribution and storage of MS supplies, management of information related to the distribution, delivery and use of micronutrient supplementation, supervision, monitoring, and evaluation.

Section 8. Sustained Financing and Regulations for Quality Micronutrient Supplementation Interventions

Section 8 provides guidelines for mobilizing resources to finance the MS requirements of an LGU, and presents options for financing the MS interventions, which local governance teams may consider. Mechanisms for regulating the quality of MS by the LGUs and other mandated government agencies are stipulated.

Section 9. Implementation Arrangements

Section 9 details the mechanisms for coordinating the implementation of the provisions of the Revised AO on MS. The Section also deals with monitoring and evaluation activities, including the roles and functions of each group of stakeholders involved in micronutrient supplementation implementation nationwide.
Users of this MOP are encouraged to review and discuss the guide, and use it as a reference for further strengthening the management and implementation of micronutrient supplementation interventions in their respective areas of assignment. The MOP is limited in scope and does not attempt to provide all the answers to queries regarding micronutrient supplementation. This version must be seen as a work in progress, and shall be updated once new evidences and technologies are made available.
A. Micronutrient Supplementation in Response to Micronutrient Malnutrition in the Country

The government adopts a three-pronged strategy in addressing micronutrient malnutrition, specifically:

1. Diet diversification or promoting the consumption of a variety of foods rich in micronutrients;
2. Food fortification or the addition of nutrient to staples (rice, flour, cooking oil, and sugar), in salt, and processed food products;
3. Micronutrient supplementation with vitamin A, iron, and iodine.

Food-based approaches, i.e. diet diversification and food fortification, which both aim to provide essential micronutrients through improved food consumption, remain to be the cornerstone of these strategies. However, these two interventions have yet to generate the desired level of micronutrient adequacy among the general population. Thus, MS Intervention will continue to be provided and strengthened.

B. Guiding Principles in Micronutrient Supplementation

The design, implementation and management of MS should be guided by the following principles:

a. Rights-Based Approach. MS should be anchored on the rights of every Filipino, especially children and women, to be well-nourished and healthy, as expressed in the Convention on the Rights of Children and the Convention on the Elimination of All Forms of Discrimination Against Women.

Thus, as each one should provide for his or her needs for micronutrients through one’s own motivation and resourcefulness, government has the obligation to assist particularly the poor and marginalized, to develop their capacity to claim their right to good nutrition and health, and facilitate their access to micronutrients. The rights-based approach also calls for the participation of “beneficiaries” in the management of micronutrient supplementation programs.

b. Systems Approach. Fundamental reforms in the health service delivery, governance, financing, and regulations shall be instituted to ensure the supply, quality and delivery of the MS package. Local officials should ensure the availability, quality and affordability of MS by expanding the delivery to public-private facilities and installing support systems for installing support
systems for planning, forecasting, procurement, and promotion of MS. The systems approach also requires installation of regulatory measures, particularly in the manufacture and registration of micronutrient supplements.

c. **Life-Cycle Based Intervention.** Micronutrient supplements shall be provided with the peculiar requirements and conditions of individuals at various life-stages in mind. A life-cycle-based micronutrient supplementation intervention hinges on two dimensions. First, micronutrient deficiency early in life affects the health, nutritional status, growth, learning capacity, welfare, and economic productivity of individuals during school-age and adulthood, and impacts on the quality of the next generation. Secondly, each stage of the life-cycle has peculiar micronutrient supplementation requirements, i.e. the need for MS is different in terms of types, amount, frequency, and duration between the life-stage groups.

d. **Equity.** In providing micronutrient supplements, top priority must be given to population groups that are most vulnerable to micronutrient deficiencies, and have the least capacity to access micronutrient supplements. Thus, the poorest of the poor, marginalized, and hard-to-reach segments of the population should be given priority in resource allocation and capacity-building efforts. Furthermore, efforts should ensure that they are reached and served.

e. **Complementation of Interventions.** Complementing MS with other interventions like deworming, environmental sanitation, healthy lifestyle promotion, immunization, oral health, and other health and nutrition packages, will ensure maximum results. MS must be resorted to only when diet diversification and food fortification are unable to meet the micronutrient requirements of individuals.

f. **Evidence-Based Interventions and Approaches.** Policies and guidelines should be based on prevalence surveys and efficacy studies (or studies that show the effectiveness of the supplement in improving micronutrient status) conducted locally or in other countries by recognized experts or research groups. Medical practitioners and local health workers shall be provided with the scientific reports to help them explain the importance of the intervention to their clients. The DOH will periodically update the policies and guidelines on micronutrient supplementation as new evidence becomes available.

g. **Integrated Service Delivery.** Service integration in MS delivery will be carried out by:

a. aligning MS with existing public health program packages;
b. purposively integrating MS in health services at each service delivery point and ensuring interface between the health care provider and client in both public and private facilities;
c. ensuring good referrals and follow-up of clients especially those who require extended period of supplementation; and,
d. expanding the provision of MS to non-health sector settings, like schools, workplaces, malls, etc.
C. Overall Policy

The overall policy on MS is contained in DOH AO No. 2010-0010 entitled, “Revised Policy on Micronutrient Supplementation to Support Achievement of 2015 MDG Targets\(^1\) to Reduce Under-Five and Maternal Deaths and Address Micronutrient Needs of Other Population Groups.” (Annex 1)


D. General Guidelines

a. MS shall be adopted as an intervention to address micronutrient malnutrition in one or more of the following situations or conditions:

i. prevalence of micronutrient malnutrition for a particular group or of the entire country is at a level of public health significance

ii. micronutrient needs of population groups cannot be met through current diets and inadequate use of fortified foods

iii. use of micronutrient supplements has been proven to be safe and effective in improving health at each stage in the life-cycle and on the next generation

iv. in times of disasters or emergencies

v. in areas that are endemic to malaria and schistosomiasis

vi. when a person is diagnosed to be deficient in a micronutrient

b. The following population groups should be prioritized for MS:

i. Low birth weight infants

ii. 6-59 month old children

iii. Pregnant and lactating women

iv. Female adolescents (10-14 years old), and

v. Non-pregnant/non-lactating women of reproductive age (15-49 years old)

c. MS should be in the right dosage, timing, frequency, and duration according to the needs of these priority groups.

d. Given current evidences, there is NO recommended micronutrient supplementation for the following age groups:

i. Children, 5-9 years old

ii. Adult males, < 50 years old

iii. Adults, ≥ 50 years old

However, therapeutic dosage may be given to individuals diagnosed with a deficiency.

\(^1\) Related MDG targets are 1) to reduce under-five mortality rate by 2/3 of 1990 levels by 2015 or from 80 deaths per 1,000 live births in 1990 to 27 deaths per 1,000 live births; and 2) to reduce maternal mortality from 162 per 100,000 live births to 52.5 per 100,000 live births.
e. The delivery of micronutrient supplements shall be integrated into the existing Maternal, Newborn and Child Health and Nutrition (MNCHN) service delivery channels. Other avenues that could best reach the targeted clients, like schools and the workplace, should also be used to widen reach and coverage.

f. LGU capacity shall be enhanced in the areas of diagnosis, administration of micronutrient supplements, counselling, promotion, systems design, client referral, recording and reporting, follow-up, and tracking.

g. Financing for MS must be secured and sustained, preferably through a specific line item in the national and local budget. LGUs shall be primarily responsible for the micronutrient supplement requirements of their constituents, and may adopt cost-sharing with other partners. PhilHealth benefit packages through which micronutrient supplements can be reimbursed will be promoted.

h. Micronutrient Supplementation information management shall be strengthened through the continuous collection and analysis of technical evidence on the prevalence of micronutrient deficiencies and efficacy of MS, and the creation of a system that will track eligible populations, supply of micronutrient supplements, and outreach by MS intervention.

i. Promotion of MS shall focus on behaviors regarding accessing micronutrient supplements in the regular market or the public health system, and on improving clients’ awareness and appreciation of the benefits of micronutrient supplementation and the negative consequences of micronutrient deficiencies. It will also advocate for wider adoption by LGUs, NGOs, and the private sector of the recommended micronutrient supplements, and increased allocation for MS in the DOH and LGU budgets.

j. Continuous availability and adequacy of micronutrient supplements shall be assured at the local level. The pharmaceutical industry and other partners concerned will be encouraged to locally manufacture affordable and quality micronutrient supplements.

k. The DOH, through the Food and Drug Administration (FDA), shall prioritize product registration for new micronutrient supplement formulations.

l. The DOH shall facilitate the rapid procurement of the micronutrient supplements and provide technical assistance and the mechanism to LGUs that will help them to access local as well as foreign suppliers of the supplements.

m. Monitoring, supervision, and evaluation of the MS Program must be improved by including the tracking of indicators on the status of governance, financing, and regulations besides the indicators of service delivery, and by integrating MS in the MNCHN monitoring, supervision and monitoring, and in the regular program implementation review of the public health system.
A. Introduction

Micronutrients are needed by our body in small quantities to support important biological processes. If our body does not get the small quantities of micronutrients needed, this may result to serious health problems. Vitamins and minerals are micronutrients. Vitamins include Vitamin A, D, E, K, and C, as well as the B-complex vitamins like thiamin (B1), riboflavin (B2), niacin (B3), pyridoxine (B6), folate (B9), and cyanocobalamin (B12). Minerals include iron (Fe), calcium (Ca), sodium (Na), iodine (I), copper (Cu), and zinc (Zn). On the other hand, macronutrients like protein, carbohydrate and fats are needed by our body in large quantities to provide energy and build tissues.

This section focuses on four (4) micronutrients: Vitamin A, Iron, Folate, and Iodine – with discussions on functions, dietary sources, deficiencies, diagnosis, and measures for the prevention and control of deficiencies. Zinc is also discussed as an add-on in the management of diarrhea.

B. Vitamin A and Vitamin A Deficiency

1. What is Vitamin A?

• Vitamin A is a fat-soluble vitamin. It cannot be synthesized or made in the body, and should be obtained from food. Over 90% of vitamin A is stored in the liver. Vitamin A is sensitive to light.

2. What are the functions of Vitamin A?

• Vitamin A is crucial for child survival. Among underfive children, it significantly reduces:

  - the risk from mortality by 23-34%\(^2\)
  - deaths due to measles by about 50%
  - deaths due to diarrhea by about 40%

• It plays an important role in promoting and maintaining good vision. Deficiency in vitamin A is the most important cause of preventable blindness.

• It promotes healthy linings of the eyes, and the respiratory, urinary and intestinal tracts. Healthy linings help to protect against bacteria and viruses that can lead to infections.

• It is essential for the normal functioning of the immune system by producing white blood cells and regulating the way other immune cells function, thus helping the body fight infections.

• It is important in cell division – hence it is important in growth and development, including the development of the embryo during reproduction, and when the cell becomes part of the brain, muscle, lungs, blood, or other specialized tissue.

• It promotes bone growth.

3. What are the food sources of Vitamin A?

There are two categories of vitamin A depending on whether the food source is from animals or from plants:

Preformed Vitamin A: Vitamin A that comes from animal sources is usually in the form of retinol. Retinol is readily absorbable and can be used by the body immediately.

Examples: breast milk, liver, egg yolk, whole milk, and vitamin A - fortified food products

Provitamin A Carotenoid. Vitamin A that comes from plants is usually in the form of carotene. This can be converted to retinol in the body. It is abundant in darkly-colored fruits and vegetables.

Examples: fruits (e.g. mangoes, papaya, other dark orange fruits which usually contain more vitamin A than yellow ones), orange and yellow vegetables (e.g. carrots, squash, etc.) as well as dark-green leaves (e.g. malunggay, kamote leaves, spinach) which usually contain more vitamin A than a light green leaf; and root crops (e.g. yellow orange camote/sweet potatoes). Red palm oil is also a very rich source of carotene. Because of its fat milieu, vitamin A does not need oil for it to be absorbed.
4. **What nutrients increase the absorption of Vitamin A?**

Vitamin A is fat-soluble. It is absorbed in the small intestines along with fat; therefore, inadequate dietary fat may be associated with poor absorption of vitamin A.

In order for the provitamin A carotenes to be absorbed and used by the body, these must be eaten or cooked with foods rich in fats, or simply cooked in oil.

5. **What is Vitamin A Deficiency (VAD)?**

Vitamin A Deficiency is the condition that results from prolonged inadequate intake of vitamin A, resulting in vitamin A level in blood that is below a defined acceptable range and therefore not available to carry out the functions described earlier. Although vitamin A is stored in the liver, it can become depleted when intake of vitamin A-rich foods is consistently inadequate.

VAD is common among malnourished children because malnourished children generally have diets that are inadequate in energy, protein and multiple micronutrients. Poor growth is associated with VAD, which may coexist with other micronutrient deficiencies. For example, zinc and protein (which are both growth-supporting nutrients) are needed for the synthesis of retinol binding protein (RBP) that transports vitamin A to the tissues. Therefore vitamin A cannot be efficiently utilized when zinc and/or protein are deficient.

VAD has been related to impaired synthesis of red blood cells, and contributes to anemia and iron deficiency.

VAD increases risk to infections.

VAD leads to Xerophthalmia. (Please see discussion below)

6. **How is Vitamin A Deficiency diagnosed?**

• Clinical Signs and Symptoms in the Eyes.

Xerophthalmia is a principal clinical sign of VAD. It is characterized by changes in the conjunctiva, which is the membrane that covers the white area of the eye, leading to Bitot’s spots. When the severity of VAD increases, this may be followed by changes in the cells of the cornea, which is the part of the eye that covers the iris and the pupil, and will result in corneal ulcer and blindness. The following are the clinical classifications of Xerophthalmia:

(i) **Night Blindness (XN)**. It is described as having difficulty in seeing in the dark, gropes and bumps on furniture and other objects along the way. Some local names for night blindness are matang-manok, kurap, harapon, halap.
(ii) **Bitot’s Spot** (XIB). These are foamy, soapy, whitish patches on the white part of the eye. These patches are caused by the shedding of dead epithelial cells. It may not disappear completely after high dose of vitamin A capsule (VAC) treatment, especially in older children and adults. However, these spots do not affect their sight.

(iii) Corneal Xerosis (X2). The cornea is cloudy and dry with an orange-peel appearance. Some people call this fish scale over the eyes. Child’s vision is diminished even at daytime.

(iv) Corneal Ulcer (X3A). The cornea looks dull and has a small crater.

(v) **Keratomalacia** (X3B). The cornea is soft and no longer flat. It may bulge because of its excessive softness. The cornea is in danger of rupturing.

(vi) *Corneal Scar*. The cornea has a whitish/greyish discoloration. This is due to the healed ulcer of previous VAD.

- Biochemical Tests: Retinol level in the blood or serum (Serum Retinol) is commonly used to assess vitamin A status using the following criteria:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Serum Retinol Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficient</td>
<td>&lt;10 µg/dl</td>
</tr>
<tr>
<td>Low</td>
<td>10-19 µg/dl</td>
</tr>
<tr>
<td>Acceptable</td>
<td>20-49 µg/dl</td>
</tr>
<tr>
<td></td>
<td>&lt;0.35 mmol/l</td>
</tr>
<tr>
<td></td>
<td>0.70 mmol/l to 1.05 mmol/l</td>
</tr>
<tr>
<td></td>
<td>&lt; 1.05 mmol/l</td>
</tr>
</tbody>
</table>


- The WHO (1996) states that there is severe VAD public health problem when 20% or more of the population has serum values ≤0.70 mmol/l; a moderate public health problem when the prevalence is at least 10% to < 20%; and a mild problem when the prevalence is <10%.

**Table 1. Prevalence of VAD with Serum Retinol values ≤0.70 mmol/l**

<table>
<thead>
<tr>
<th>Level of Public Health Problem</th>
<th>Prevalence of VAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>&gt;2 - &lt;10%</td>
</tr>
<tr>
<td>Moderate</td>
<td>≥10- &lt;20%</td>
</tr>
<tr>
<td>Severe</td>
<td>≥ 20%</td>
</tr>
</tbody>
</table>
7. What are the causes of VAD?

- Inadequate intake of vitamin A-rich foods (Generally, availability of vitamin A-rich foods is seasonal.)
- Non-breastfeeding (Breastmilk is a good source of vitamin A.)
- Frequent illness and malnutrition (Illness and malnutrition increase the requirement for vitamin A, may disrupt intake and may disrupt absorption of vitamin A from food.)

8. Who are prone to VAD?

- Preterm infants
- Non-breastfed infants
- Underweight children
- Children with measles, bouts of diarrhea, and acute respiratory infection
- Children with parasitic infestation
- Population groups affected by emergencies/disasters whose food supply or rations lack variety, and do not contain vitamin A sources

9. What are the consequences of VAD?

- VAD in children causes
  - Low resistance to acute respiratory infection
  - 40% increase in the risk of death from diarrhea
  - 50% increase in the risk of severe measles
  - 23-34% increase in overall mortality
  - Retardation or hindrance of physical growth, including bone and brain growth and development
  - Blindness
- VAD among pregnant women causes
  - Difficulty in seeing in the dark
  - Night blindness, which usually occurs during the last trimester when the demand by both the unborn child and the mother is at its highest; women suffering from night blindness have a higher risk of maternal morbidity and mortality.

10. How to prevent and control VAD?

- Exclusive breastfeeding for the first 6 months of life
- Increased intake of vitamin A-rich foods and adequate intake of dietary fat, protein, zinc, and Vitamin E
- Consumption of vitamin A-fortified foods
- Vitamin A supplementation: Vitamin A supplements are given orally. Preparations are available in capsules of 100,000 IU, 200,000 IU, and tablets of 10,000 IU.
C. Iron, Iron deficiency, Iron-Deficiency Anemia (IDA) and Anemia

1. What is Iron?

• Iron is an essential trace mineral that is needed for hemoglobin (Hb) formation. Hb is part of the red blood cells and gives blood its red color. Hb carries oxygen from the lungs to the tissues. Oxygen is needed by the body to produce energy to do work. Iron is stored in the liver, bone marrow and spleen.

2. What are the functions of iron?

• Iron makes Hb, the red coloring of the blood. Hb carries oxygen from the lungs to the tissues. It prevents iron-deficiency anemia (IDA).

• It is part of enzymes which help to transfer oxygen within the cells. Cells need oxygen for the production and release of energy to support cell growth and functions (e.g., immune function) and to build new tissues. Children need to make more red blood cells and tissues in order to grow.
• It is needed in the synthesis of hormones that support brain development and function.
• In women of reproductive age, iron needs an increase to help replace red blood cells that are lost during menstruation or child birth. It prevents maternal death from severe anemia, associated with severe bleeding that occurs during delivery.
• It increases the chances of infant survival during early childhood.

3. What are the food sources of iron?

There are two forms of iron: heme iron and non-heme iron. Heme iron is from animal food sources; non-heme iron from plant food sources. Heme iron is better absorbed than non-heme iron.

• Heme iron, or iron from animal sources: liver, kidney, spleen, heart, blood, meat, chicken, and fish/shellfish

• Non-heme iron, or iron from plant sources: legumes, cereals, dark green leaves
4. What foods and drinks affect the absorption of non-heme iron?

The absorption of heme iron is not significantly affected by diet, while the absorption of non-heme iron is affected by some components of diet.

Foods that decrease the absorption of non-heme iron are called iron inhibitors, while foods that increase the absorption of iron are called iron enhancers.

**Iron inhibitors:**

- Foods that contain tannin, a substance found in tea and coffee. It is recommended that tea and coffee should not be taken with the meal but instead it should be taken thirty minutes after a meal.
- Foods that contain phytate, a substance found in whole grains, legumes, and seeds

**Iron enhancers:**

- Meat, fish and poultry
- Organ meats like liver, spleen, etc.
- Vitamin C-rich fruits and vegetables: guava, atis, pineapple, papaya, aratiles, mango, orange, dalanghita, guyabano, kamatsile, sinigwelas, suha, and tomatoes, bell pepper, etc.
- Non–heme iron can be absorbed better by taking foods rich in Vitamin C and animal source foods.

5. What is Iron Deficiency, Iron Deficiency Anemia (IDA), Anemia?

- **Iron deficiency** is a condition resulting from inadequate iron in the body. It is the most common nutritional deficiency and the leading cause of anemia.

- **IDA** refers to the severe depletion of iron stores which results in a low hemoglobin concentration. The body cannot make enough hemoglobin and healthy red blood cells because it lacks iron.
• According to International Nutritional Anemia Consultative Group (INACG), WHO and UNICEF, IDA is highly prevalent in less developing countries. About 50% of all anemia is due to iron deficiency.

• It is most prevalent among infants, pregnant and nursing women, elderly, children, and adolescent girls.

• Anemia is a condition that occurs when the red blood cells do not carry enough oxygen to the tissues of the body.

![Diagram of Causes and Consequences of Anemia]

**6. What are the causes of iron-deficiency anemia?**

- Lack of dietary iron intake
- Poor iron absorption in the body
- Increased needs for iron due to high iron requirement for infants, adolescent girls, pregnant and lactating women
- Chronic blood loss
- Malaria and parasitism, especially hookworm infestation

**7. What are the consequences of anemia?**

**In infants**

- Long-term, delayed or impaired of psychomotor functions
- Frequent attacks of illness

In children

• Growth retardation
• Impaired motor development and coordination
• Decreased physical activity (fatigue)
• Poor mental development or poor scholastic achievement (low scores on achievement tests)
• Impaired language development
• Poor psychological and behavioral activity

In pregnant women

• Premature births,
• Intra-uterine growth retardation (IUGR) and low birth weight,
• Reduced ability of pregnant women to survive prolonged bleeding during and after childbirth,
• Getting fatigued easily, making child labor difficult, thus prolonging delivery,
• 3.5 times more likely to die than those who are non-anemic

In adults (both sexes)

• Decreased physical activity
• Decreased productivity

8. How is anemia diagnosed?

Iron-deficiency anemia can be diagnosed through clinical signs and symptoms, and through laboratory tests:

• Clinical Signs and Symptoms

(1) Presence of palmar pallor
(2) Presence of pale conjunctiva
(3) Pale nailbeds
(4) Pale buccal mucosa

• Laboratory Tests

(1) Hemoglobin level determination – most common test
(2) Other laboratory tests include:
   a. Serum ferritin,
   b. Transferrin saturation,
   c. Erythrocyte protoporphyrin
• The following are levels of hemoglobin (Hb) in mild anemia:

<table>
<thead>
<tr>
<th>Age or sex group</th>
<th>Hb Level below:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children 6 months below to 5 y.o.</td>
<td>11</td>
</tr>
<tr>
<td>Children 5-11 years</td>
<td>11.5</td>
</tr>
<tr>
<td>Children 12-13 years</td>
<td>12</td>
</tr>
<tr>
<td>Men</td>
<td>13</td>
</tr>
<tr>
<td>Pregnant Women</td>
<td>11</td>
</tr>
<tr>
<td>Non-pregnant women</td>
<td>12</td>
</tr>
</tbody>
</table>

• Epidemiological criteria for assessing severity and magnitude of nutritional anemia in population groups.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of population with Hb less than the above cut-off points, especially women and children</td>
<td>≥40</td>
</tr>
<tr>
<td></td>
<td>10-39</td>
</tr>
<tr>
<td></td>
<td>1-9</td>
</tr>
<tr>
<td>Percent of population with Hb less than 7g/dL, especially women and children</td>
<td>≥ 40</td>
</tr>
<tr>
<td></td>
<td>1-9</td>
</tr>
<tr>
<td></td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

9. How to prevent and control anemia?

• Improve dietary intake of iron-rich foods
• Consume iron-fortified foods
• Take iron supplements
• Increase consumption of Vitamin C-rich foods
• Take deworming tablets
• Improve personal hygiene
• Proper health and environmental sanitation
D. **Folate and Folate Deficiency**

Anemia that is caused by a deficiency of folate is often accompanied by iron-deficiency anemia.

1. **What is Folate/Folic Acid?**

Folate is a water-soluble B vitamin. Folate is the form found in foods. Folic acid is a synthetic compound of folate and is the form available as supplement.

Folate is not stored in the body in large amounts, therefore the body needs daily supply of this vitamin through diet.

2. **What are the functions of Folate/Folic Acid?**

- Folate is involved in the synthesis of DNA, which is a building block of cells.
- It helps to produce and maintain new cells. This is especially vital during periods of rapid cell division and growth, such as in infancy or during pregnancy.
- It is important in the normal development of the neural tube during fetal growth.
- Red blood cells are also rapidly generated. Therefore deficiency in folate will disrupt normal red blood cell formation, and contributes to anemia. It helps keep the blood healthy.

3. **What are the food sources of Folate?**

Good food sources of folate are:

- Organ meats
- Shellfish like tahong, talaba, tulya, halaan, and suso
- Egg yolk
- Legumes like mongo, red, white, and black beans
- Vitamin C-rich fruits and juices like suha, aratiles, camachile, pineapple, guava, etc.
- Green leafy vegetables like malunggay, camote tops, ampalaya leaves, saluyot, etc.
- Other vegetables like radish and asparagus
- Cereals like oats, corn, and root crops like gabi and camote

- The food sources of folate like cereals, legumes, and beans contain phytates, which hinder the absorption of iron. It is recommended to consume them with foods rich in vitamin C or meat, poultry, and organ meats.
4. **What are the causes of Folate deficiency in pregnancy?**

- Low nutrient intake
- Increased demand during growth periods (infancy and puberty)
- High demand during pregnancy and lactation
- Short interval between pregnancies
- High demand and high losses during multiple pregnancies

5. **How to prevent Folate/Folic Acid Deficiency?**

- Avoid drinking alcohol.
- Have regular medical checkups during pregnancy.
- Take prenatal vitamin supplements, if they are prescribed.
- Eat well and include fresh vegetables, meat, and other sources of animal proteins – like poultry and organ meats.
- Do not overcook food.
- Do not smoke, as smoking increases vitamin requirements.

6. **What are the consequences of Folate/Folic Acid Deficiency?**

- Not getting enough folate can result in megaloblastic anemia. This is the type of anemia where healthy red blood cells are fewer than normal and abnormally large. This makes it hard for the blood to carry enough oxygen throughout the body. These large cells are called megalocytes, or megaloblasts, in the bone marrow.

- Neural tube defects – spina bifida and anencephaly are birth defects of multi-factorial etiology related to inadequate neural tube closure. Spina bifida is characterized by incomplete fusion of the vertebral arches with protruding sac with minges, spinal cord and nerve roots. Anencephaly is characterized by the absence of a forebrain.

7. **How is Folate deficiency diagnosed?**

Folate deficiency can be diagnosed through biochemical analysis (laboratory test). The following shows the classification of folate status:

<table>
<thead>
<tr>
<th>Status</th>
<th>Serum Folate</th>
<th>Red cell Folate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&gt; 6.8 nM</td>
<td>&gt; 450 nM (200 ng/ml)</td>
</tr>
<tr>
<td>Marginal</td>
<td>4.5 - 6.8 nM</td>
<td>340 – 450 nM</td>
</tr>
<tr>
<td>Deficient</td>
<td>&lt; 4.5 nM</td>
<td>&lt; 340 nM (150 ng/ml)</td>
</tr>
</tbody>
</table>

**E. Iodine and Iodine Deficiency Disorder**

1. **What is Iodine?**

- Iodine is a mineral that is an essential component of thyroid hormones.
- Thyroid hormone is produced in the thyroid gland, a butterfly-shaped gland found in the lower front part of the neck.
- Thyroid hormone is essential to development and metabolism.
2. What are the functions of Iodine?

Iodine is a component of thyroid hormones. The functions of thyroid hormones are categorized as:

- Growth and development
- Thyroid hormones play an important role in the development of the brain and central nervous system during fetal growth and development
- Thyroid hormones support growth in stature and bone maturation processes
- Control of metabolic processes
- Controls carbohydrate, protein, fat and vitamin metabolism
- Controls the cells’ oxygen use
- Controls body temperature

3. What are the sources of Iodine?

- Sea foods such as fish/shellfish: dilis, tanigui, crabs, squid, clams, shrimps, tahong, kuhol, susong pilipit, and alamang
- Seaweeds: ararosep, lato, pokpoklo
- Iodized salt
- Iodinated water and other iodine fortified foods

4. What is Iodine Deficiency Disorders (IDD)?

- IDD refers to the abnormalities that result when the body does not get enough iodine. It is the most common cause of preventable mental retardation.
- These abnormalities include goiter, miscarriage, stillbirth, congenital anomalies, growth and mental retardation, and physical and motor abnormalities

5. What are the causes of IDD?

- Inadequate intake of iodine
- Increased requirement of iodine during adolescence, pregnancy and lactation
- Consumption of food sources grown in areas with depleted levels of iodine
- High intake of raw foods with high goitrogens (cassava, cauliflower, cabbage, bamboo shoots). When these foods are cooked, the goitrogens are released.
6. How is IDD diagnosed?

• Clinical Diagnosis for Goiter at all ages

<table>
<thead>
<tr>
<th>Classification</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1a</td>
<td>Palpable Goiter</td>
</tr>
<tr>
<td></td>
<td>Goiter cannot be seen. It can only be felt by an experienced health worker. It must be at least the size of the outer half of the thumb of the patient.</td>
</tr>
<tr>
<td>Grade 1b</td>
<td>Very Small Goiter</td>
</tr>
<tr>
<td></td>
<td>It can be seen only when the neck is extended.</td>
</tr>
<tr>
<td>Grade 2</td>
<td>It can be seen when the neck is in normal position.</td>
</tr>
<tr>
<td>Grade 3</td>
<td>Goiter is visible at about 10 meters.</td>
</tr>
</tbody>
</table>

• Laboratory or Biochemical Diagnosis

(i) Low level of iodine in urine as measured by urinary iodine excretion (UIE)
(ii) High level of thyroid stimulating hormone (TSH) in the blood

7. What are the consequences of IDD?

In pregnant women and the fetus

• Abortion and miscarriages
• Congenital abnormalities
• Stillbirth

In infant and preschoolers

• Lack of iodine results to physical retardation in the form of cretinism characterized by mental retardation, squint, deaf-mutism, and paralysis
• Less neurological effects on motor and cognitive development, i.e., delayed walking, delayed speech
• Increased neonatal and infant mortality

In school children

• Poor learning ability
• Low motivation
• Poor school performance and general cognitive function

In adults

• Impaired mental function
• Poor work capacity resulting in low productivity
8. How to prevent and control IDD?

- Increased intake of iodine-rich foods
- Consumption of iodized salt
- Iodine supplementation

F. Zinc (As an Add-on in Diarrhea Management)

1. What is Zinc?

Zinc is an essential mineral that is found in almost every cell in the body. It stimulates the activity of many enzymes that control many major biochemical reactions in the body.

2. What are the functions of Zinc?

- Used in the management of diarrhea to decrease the duration, frequency and severity of diarrhea, in addition to the use of reformulated ORS
- Plays an important role in the function of DNA and RNA. DNA and RNA function in the synthesis of protein, which is the building block of cells and tissues
- Supports normal growth and development during pregnancy, childhood, and adolescence
- Supports a healthy immune system to prevent diseases and infections
- Supports healthy respiratory and intestinal tracts

3. What are the sources of Zinc?

- Meats like beef, pork, and poultry
- Crab meat
- Clams
- Talaba
- Milk and cheese
- Peanuts/beans
- Wholegrain cereals
- Brown rice
- Oats
- Whole wheat bread
- Potatoes

4. What substances affect the absorption of Zinc?

- Dietary fibers and phytic acid prevent the absorption of zinc in the body
- Vitamins such as C, E, and B₆, and minerals such as magnesium, can increase zinc absorption in the body.
A. Introduction

Micronutrient deficiencies of public health magnitude affect different population groups in the country. If micronutrient deficiencies are not adequately and effectively addressed, negative impact at the individual and the country levels are dire in consequences. At the national level, this will delay the goal of achieving the development goals.

Micronutrient deficiencies can cause inter-generational consequences. The level of health care and nutrition a woman receives before and during pregnancy, at childbirth, and immediately post-partum have significant bearing on the survival, growth and development of her fetus and newborn. Undernourished babies tend to grow into undernourished adolescents. When undernourished adolescents become pregnant, they in turn, may give birth to low-birth weight infants with greater risk of multiple micronutrient deficiencies.

Micronutrient deficiencies impact on economic productivity, growth and national development. Widespread iron deficiency is estimated to decrease the gross domestic product (GDP) by as much as 2% per year in the worst affected countries. Conservatively, this translates into a loss of about Php 172\(^3\) per capita or 0.9% of GDP. Productivity losses for anemic manual laborers have been documented to be as high as 9% for severely stunted workers and 5% and 17% for workers engaged in moderate and heavy physical labor, respectively.

This section presents the current status of micronutrient deficiencies based on the latest available data. The information highlights the urgency of micronutrient supplementation interventions and complementary strategies to address these deficiency problems.

B. Magnitude of micronutrient deficiencies

1. Vitamin A Deficiency

VAD is a public health problem for the following groups (2008, NNS).

(i) Among children 6 months to 5 years old, the prevalence of VAD is 15.2%. This prevalence has decreased over the years but remains a public health problem of moderate scale. This is lower compared to the global prevalence of 33.3%, but higher than the 12.9% rate in the Western Pacific Region;

(ii) Among pregnant women and lactating mothers, the prevalence rates are 9.5% and 6.4 %, respectively, both are considered mild public health problems. The VAD prevalence among pregnant women is lower than the global level of 15.3%, and of the Western Pacific Region level of 21.5%.

\(^3\) Using the exchange rate of Php43= $1.
2. Iron Deficiency Anemia

Iron Deficiency Anemia (IDA), based on the 2008 NNS assessment of anemia prevalence, is a public health problem among 6 to 23-month-old children and pregnant women. Iron deficiency is the major cause of anemia.

The 2008 National Nutrition Survey (NNS) revealed that the overall prevalence of anemia, all age groups covered, is 19.5%. While the prevalence of anemia decreased significantly from 1993 to 2008 (Fig. 3), it still remains a public health problem of significant scale, as the rates exceed the 40.0% cut-off set by the World Health Organization (WHO), for the following population groups:

(i) Infants, 6 months to less than 1 year old, at 55.7%
(ii) Children, 1 year to less than 2 years old, at 41.0%
(iii) Pregnant women at 42.5%
3. Iodine Deficiency

Iodine Deficiency is a public health problem among pregnant and lactating women (Table 2).

- The ICCIDD has set the indicator of iodine deficiency elimination as median urinary iodine excretion (UIE) of ≥100 µg/L for lactating women and children and ≥150 µg/L for pregnant women, and no more than 20.0% of respective populations with UIE below 50 µg/L.

- In 2008, the median UIE among 6-12-year-old children was 132 µg/L, indicating adequate iodine status, and only <20% of the children had UIE less than 50 µg/L. The elimination of iodine deficiency has been sustained from 2003 to 2008.

- Among pregnant women, the median UIE was 105 µg/L and 25.8% had UIE less than 50 µg/L in 2008. The median UIE of 105 µg/L in this group represents insufficient iodine intake. Iodine deficiency in this group persists.

- The median UIE and proportion with UIE below 50 µg/L were 81 µg/L and 34%, respectively, among lactating women. The median UIE of 81 µg/L in this group represents mild iodine deficiency.

<table>
<thead>
<tr>
<th>Age/Physiological Group</th>
<th>Goal*</th>
<th>Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median UIE 100-199 µg/L</td>
<td>71 201 132</td>
</tr>
<tr>
<td>6-12 year old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lactating women</td>
<td>Median UIE 150-249 µg/L</td>
<td>- 111 81</td>
</tr>
<tr>
<td>Pregnant women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-12 year old</td>
<td>&lt; 20% with UIE below 50 µg/L</td>
<td>35.8 11.4 19.7</td>
</tr>
<tr>
<td>Lactating women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant women</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


C. Disparities in the prevalence of micronutrient deficiencies and access to micronutrient supplementation

1. Micronutrient deficiency by socio-economic status and education

- Wide disparities in micronutrient deficiencies were apparent among populations of varying socio-economic status. Poverty or low income limits the ability of people to buy the needed foods rich in minerals and vitamins. Access to micronutrient supplements is influenced by the socio-economic profile of the mothers or households.

- The prevalence of IDA and VAD among children aged 6 months to 5 years, and among 6- to 12-year-old children, is higher among households in the lower income quintile (Fig. 4 and 5).
• The proportion of pregnant women who took iron tablet or syrup is higher among those who completed a level of education compared to no education at all. The same trend is seen among post-partum women who received a vitamin A dose (Fig. 6).

• Children, 6-59 months old whose mothers had a college degree were most likely to receive vitamin A in the past 6 months, and received iron supplements (Fig. 6).

2. Micronutrient deficiency by geographical location

Prevalence of micronutrient deficiency varies across geographical locations. This is noted from Table 3 for IDA.

• IDA prevalence among pregnant women in 2008 ranged from 22.6% in CAR to 61.5% in Western Visayas. Among lactating women, IDA in Cagayan Valley was 58.2% and 17.3% in the Zamboanga Peninsula. Cagayan Valley and Western Visayas have consistently high anemia problem among pregnant and lactating women. Among children 6-months to 5 years old, IDA was 12.4% in CAR and 39.3% in the Cagayan Valley region.
Table 3. Prevalence of IDA Among Pregnant and Lactating Women and 6- months to 5 years old, NNS 2008

<table>
<thead>
<tr>
<th>Region</th>
<th>Pregnant</th>
<th>Lactating</th>
<th>6 months to 5 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCR</td>
<td>48.0</td>
<td>39.8</td>
<td>23.7</td>
</tr>
<tr>
<td>CAR</td>
<td>22.6</td>
<td>26.8</td>
<td>12.4</td>
</tr>
<tr>
<td>Ilocos</td>
<td>33.3</td>
<td>36.6</td>
<td>29.4</td>
</tr>
<tr>
<td>Cagayan Valley</td>
<td>60.0</td>
<td>58.2</td>
<td>39.3</td>
</tr>
<tr>
<td>Central Luzon</td>
<td>40.7</td>
<td>31.5</td>
<td>21.4</td>
</tr>
<tr>
<td>CALABARZON</td>
<td>37.8</td>
<td>25.6</td>
<td>22.9</td>
</tr>
<tr>
<td>MIMAROPA</td>
<td>49.6</td>
<td>28.1</td>
<td>25.4</td>
</tr>
<tr>
<td>Bicol</td>
<td>51.1</td>
<td>24.3</td>
<td>24.9</td>
</tr>
<tr>
<td>Western Visayas</td>
<td>61.5</td>
<td>44.5</td>
<td>29.1</td>
</tr>
<tr>
<td>Central Visayas</td>
<td>40.4</td>
<td>35.0</td>
<td>20.4</td>
</tr>
<tr>
<td>Eastern Visayas</td>
<td>39.5</td>
<td>23.6</td>
<td>16.1</td>
</tr>
<tr>
<td>Zamboanga Peninsula</td>
<td>34.1</td>
<td>17.3</td>
<td>20.5</td>
</tr>
<tr>
<td>Northern Mindanao</td>
<td>35.7</td>
<td>22.9</td>
<td>16.0</td>
</tr>
<tr>
<td>Davao</td>
<td>22.6</td>
<td>24.1</td>
<td>15.4</td>
</tr>
<tr>
<td>SOCCSKSARGEN</td>
<td>49.8</td>
<td>39.6</td>
<td>34.8</td>
</tr>
<tr>
<td>CARAGA</td>
<td>34.3</td>
<td>25.8</td>
<td>29.0</td>
</tr>
<tr>
<td>ARMM</td>
<td>47.3</td>
<td>29.8</td>
<td>22.7</td>
</tr>
<tr>
<td>Philippines</td>
<td><strong>42.5</strong></td>
<td><strong>31.4</strong></td>
<td><strong>23.7</strong></td>
</tr>
<tr>
<td>Range</td>
<td>22.6 - 61.5</td>
<td>17.3 - 58.2</td>
<td>12.4 - 39.3</td>
</tr>
</tbody>
</table>

D. Contributory factors of the micronutrient deficiency problems

Dietary adequacy and health status are the major categories that describe the causes or factors that lead to micronutrient deficiencies. At the national level, the government’s efforts to reduce the prevalence of key micronutrient deficiencies in the country may be impeded when the food security of the household or the community is challenged as well as during emergencies and disasters.

1. Poor nutrient intake

a. Poor nutrient intake among pregnant and lactating Women

**Pregnant Women**

Overall, pregnant women do not meet the recommended energy and nutrient intakes (RENI, 2000 in Annex 4), except for niacin, which is 109.5%. Iron intake is lowest among all the nutrients (28.7%).
Table 4. Mean One-Day Energy and Nutrient Intake and Percent Adequacy Among Pregnant Women, 2008 NNS

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Mean intake</th>
<th>Percent of RENI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>1733</td>
<td>82.6</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>54.2</td>
<td>82.1</td>
</tr>
<tr>
<td>Iron (g)</td>
<td>9.7</td>
<td>28.7</td>
</tr>
<tr>
<td>Vitamin A (mcg RE)</td>
<td>493.3</td>
<td>61.7</td>
</tr>
<tr>
<td>Calcium (g)</td>
<td>0.39</td>
<td>49.3</td>
</tr>
<tr>
<td>Thiamin (mg)</td>
<td>0.87</td>
<td>62.2</td>
</tr>
<tr>
<td>Riboflavin (mg)</td>
<td>0.80</td>
<td>47.0</td>
</tr>
<tr>
<td>Niacin (mg)</td>
<td>19.7</td>
<td>109.5</td>
</tr>
<tr>
<td>Ascorbic Acid (mg)</td>
<td>56.1</td>
<td>70.2</td>
</tr>
</tbody>
</table>

**Lactating Women**

- The same findings are seen among lactating women with only niacin meeting the reference intake, and iron falling farthest below the reference intake.

Table 5. Mean One-Day Energy and Nutrient Intake and Percent Adequacy Among Lactating Mothers, 2008 NNS

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Mean intake</th>
<th>Percent of RENI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>1820</td>
<td>77.6</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>56.0</td>
<td>71.7</td>
</tr>
<tr>
<td>Iron (g)</td>
<td>9.1</td>
<td>31.8</td>
</tr>
<tr>
<td>Vitamin A (mcg RE)</td>
<td>455.4</td>
<td>50.6</td>
</tr>
<tr>
<td>Calcium (g)</td>
<td>0.37</td>
<td>49.5</td>
</tr>
<tr>
<td>Thiamin (mg)</td>
<td>0.87</td>
<td>58.1</td>
</tr>
<tr>
<td>Riboflavin (mg)</td>
<td>0.72</td>
<td>42.2</td>
</tr>
<tr>
<td>Niacin (mg)</td>
<td>21.1</td>
<td>124.2</td>
</tr>
<tr>
<td>Ascorbic Acid (mg)</td>
<td>47.2</td>
<td>46.3</td>
</tr>
</tbody>
</table>

b. **Low breastfeeding practices**

- Among less than 6 months old, 35.9% are exclusively breastfed. The rate is significantly higher in 2008 (35.9%), compared with 2003 (29.7%).

- The mean duration of exclusive breastfeeding in 2008 is slightly shorter (2.3 months) than in 2003 (3.0 months). This is similar to the findings in the 2008 NDHS, which is 2.8 months. The practice of exclusive breastfeeding fell short of the WHO recommendation, which is from birth to 6 months.

- The average duration of any breastfeeding in 2008 (4.9 months) is significantly lower than the mean duration of breastfeeding in 2003 (5.6. months).
c. Poor nutrient intake among pre-school children

• The children’s mean intake of energy, iron and vitamin A fell short of the Recommended Energy and Nutrient Intake, even if those of riboflavin and niacin were exceeded.

<table>
<thead>
<tr>
<th>Nutrients</th>
<th>Mean intake</th>
<th>Percent of RENI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>843</td>
<td>72.1</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>26.1</td>
<td>87.1</td>
</tr>
<tr>
<td>Iron (g)</td>
<td>5.2</td>
<td>61.5</td>
</tr>
<tr>
<td>Vitamin A (mcg RE)</td>
<td>303.8</td>
<td>75.9</td>
</tr>
<tr>
<td>Calcium (g)</td>
<td>0.33</td>
<td>66.0</td>
</tr>
<tr>
<td>Thiamin (mg)</td>
<td>0.50</td>
<td>94.7</td>
</tr>
<tr>
<td>Riboflavin (mg)</td>
<td>0.59</td>
<td>114.9</td>
</tr>
<tr>
<td>Niacin (mg)</td>
<td>8.4</td>
<td>133.9</td>
</tr>
<tr>
<td>Ascorbic Acid (mg)</td>
<td>23.6</td>
<td>78.8</td>
</tr>
</tbody>
</table>

2. Illness and parasitism

• Micronutrient deficiency is aggravated by the occurrence of an illness or infection. Pneumonia, measles and diarrhea greatly affect the body’s absorption and utilization of essential micronutrients, depleting infants’ and children’s micronutrient stores as they put up a defense against infections.
Although deaths due to pneumonia, diarrhea and measles among infants fell since the 1990s, they remain among the top 10 leading causes of deaths among infants.

Table 7. Leading Causes of Deaths and Infants

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rate/1,000</td>
<td>Leading Cause Rank</td>
<td>Rate/1,000</td>
<td>Leading Cause Rank</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>2.3</td>
<td>2nd</td>
<td>2.0</td>
<td>1st</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>0.6</td>
<td>4th</td>
<td>0.7</td>
<td>8th</td>
</tr>
<tr>
<td>Measles</td>
<td>0.1</td>
<td>10th</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Philippine Health Statistics, 1999-2003, DOH

In the last 5 years, measles has been delisted from the top ten leading causes of infant and under-five deaths due to the intensive, nationwide immunization campaign that started in 2004. However, measles outbreaks/clusters continue to be reported from some localities in various parts of the country.

The 2008 NDHS shows that 5.2% of children under the age of five had symptoms of acute respiratory infection (ARI), and 50% were taken to a health facility for management and treatment.

The rate of diarrhea cases per 100,000 has shown a declining trend from 2002 to 2008 (Fig 8). However, it remains one of the 10 leading causes of morbidity in the general population. In 2008, it still ranked fifth as cause of morbidity.

Figure 8. Rate of Watery Diarrhea Cases/100,000 pop 2004-2008, FHSIS

Infection with hookworms and Trichuris Trichiura is known to lead to blood loss and eventually to IDA. The lack of iron affects cognitive development and may manifest itself in school performance of infected children. The Soil Transmitted Helminthiasis (STH) Survey in 2004 showed that two thirds (66.0%) of children 1-5 years old have STH. Pre-school children (1-5 years old) who are at the most critical period of physical and mental development suffer the greatest morbidity. In 2009, another survey conducted in Davao Del Norte among non-indigenous peoples school children showed that 23.1% have STH.
3. Increasing proportion of low birth weight infants

- The proportion of LBW infants in the country has increased from 9.6% in 1998 to 19.6% in 2008 (Fig. 9). The 2008 figure is higher than the 12% target set by the DOH.

- Newborns who weigh less than 2.5 kilos have a four-fold higher risk of neonatal death than those with birth weight at 2.5 to < 3.0 kilos. LBW infants are also more susceptible to hypoglycemia and birth asphyxia, and have greater risk of suffering from diarrhea and pneumonia in the first month after birth.

![Figure 9. Proportion of Low Birth Weight Infants 1993-2008, NDHS](image)

E. Other challenges and gaps in Micronutrient Supplementation

Assessment of the micronutrient supplementation-related efforts in the country showed various challenges and gaps in the overall design, management and implementation:

1. There is low micronutrient supplementation coverage among the population groups that are most vulnerable, at-high risk to infections and diseases and whose level of deficiency prevalence is still of public health significance.

2. Many target clients for micronutrient supplementation usually do not visit health facilities unless they are ill.

3. Some of the DOH-recommended micronutrient supplementation supplies are not readily available at the local level. For example, the zinc supplement in dispersible tablet form, which is cheaper than syrups and drops, is still not available locally. There are also limited local suppliers at the periphery, and access to foreign suppliers or distributors is difficult to hurdle.
4. Health staff lacks the capability in the diagnosis and management of micronutrient deficiencies. This is compounded by the problem of fast turnover among health personnel. Aside from lack of training, staff has minimal access to assistance in the form of professional aides or tools. Copies of the micronutrient supplementation policy and guide are rarely disseminated at the local level. While forecasting of micronutrient supplementation requirements has been initiated in selected provinces, this still needs to be introduced in the remaining areas.

5. There is poor system of recording and reporting micronutrient supplementation coverage and utilization. The data recording and reporting system is weakened by incomplete and inaccurate data sets, delayed submissions, overlaps (as in GP coverage), and other problems.

6. There is lack of financing schemes to provide for and sustain micronutrient supplementation. There is very limited government funding support for micronutrient supplementation at the national and local level, with the exception of vitamin A supplementation during GP, which so far has been provided by DOH every year.

7. Promotion and advocacy in support of micronutrient supplementation is either non-existent or very low. There is little appreciation among local officials for the benefits of micronutrient supplementation. Similarly, there is little concern for the clinical and economic consequences if micronutrient deficiencies are not addressed. Practices and behaviours of community members still convey low prioritization of personal health issues (e.g. delayed consultations when pregnant, non-completion of treatment, poor hygiene, etc.).

8. Participation of other sectors, including education, labor and employment, religious and local organizations, and the private sector, has not been fully realized. The partnership with the pharmaceutical industry has not been fully explored for the local manufacture and marketing of micronutrient supplementation that follow the DOH recommended technical specifications.
A. Introduction

The prevalence of micronutrient deficiencies is not the same among the population age, physiologic and socio-economic groups. Hence it is important to tailor the MS intervention package and the delivery system for specific age, population, and socio-economic groups.

Section 4 provides in detail the micronutrient supplements recommended for the different age group of the population, for population in certain physiological and other health conditions, and those in special or difficult situations. This section indicates the micronutrient supplements to be provided for the recommended dosage, frequency and duration.

B. Effectiveness of Micronutrient Supplementation Interventions

Several studies have shown the effectiveness of MS intervention in improving micronutrient status and reducing the burden associated with micronutrient deficiencies. These studies provide the basis for the DOH’s and the LGUs’ endeavour to widen and scale up micronutrient supplementation coverage. The following summarizes the effectiveness of these micronutrient supplementation interventions:

1. Vitamin A Supplementation

1.1. Vitamin A Supplementation has been shown to reduce child mortality by 23-34%. It reduces the severity of the disease, thus reducing childhood mortality.
   • It reduces deaths from measles by 50%.
   • It reduces deaths from diarrhea by 40%.
   • It reduces deaths from malaria by 25%.

1.2. It is considered one of the most cost-effective public health measures in improving survival, growth and development of children at an estimated cost of Php 43.00 or $1 per healthy life saved.

1.3. Vitamin A supplementation among high-risk children helps re-establish body reserves lost due to acute, chronic or repeated infectious diseases. It protects children against the severity of subsequent infections. It also reduces the complications of existing infections, and dramatically lowers death from measles.

2. Iron/ Folic Acid Supplementation

2.1. Iron/folic acid supplementation prevents neural tube defects when the supplement is given to women of reproductive age starting from 1 month prior to conception (since the closure of the neural tube is on the 28th day of gestation, deficiencies must be corrected before a woman knows she is pregnant).

2.2. It improves the cognitive and motor development of anemic preschool children.
2.3. It decreases the risk of deaths during childbearing by preventing severe anemia which is highly associated with severe bleeding.

2.4. It prevents IDA and increases work productivity.

3. Iodine Supplementation

3.1. Iodine supplementation for women during pregnancy, particularly during the first trimester, but no later than the second trimester, has been shown to prevent cretinism and other abnormalities.

3.2. In an iodine-deficient area, iodine supplementation can substantially reduce infant mortality.

4. Zinc Supplementation in the management of diarrhea

4.1. Zinc supplementation as an adjunct to the management of diarrhea, such as giving zinc in addition to the reformulated ORS has been shown to significantly reduce the duration and severity of diarrhea compared to ORS alone.

4.2. Correspondingly, there is a reduction of approximately 5% in the total cost of diarrhea treatment as a result of zinc supplementation.

5. Micronutrient Powder (MNP)

5.1 Another form of the MS intervention is the micronutrient powder (MNP). MNP is a premix of vitamins and minerals in powder form which may be sprinkled once daily into any semi-liquid foods without changing the color, taste or texture of the food. The use of MNP was introduced in the Philippines through the World Food Program in 2004 and is currently being pilot-tested in selected areas of the country. Though the initial results of the study are encouraging, the DOH needs time and resources to establish the support mechanisms to ensure its accessibility to targeted clients nationwide.

5.2 The MNP comes in a formulation containing the following 15 micronutrients and the levels indicated, per sachet:

<table>
<thead>
<tr>
<th>Micronutrient</th>
<th>Amount</th>
<th>Micronutrient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td>400 µg RE</td>
<td>Folic Acid</td>
<td>150 µg</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>30 mg</td>
<td>Niacin</td>
<td>6 mg</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>5.0 µg</td>
<td>Iron</td>
<td>10 mg</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>5 mg a-TE</td>
<td>Zinc</td>
<td>4.1 mg</td>
</tr>
<tr>
<td>Vitamin B1</td>
<td>0.5 mg</td>
<td>Copper</td>
<td>0.56mg</td>
</tr>
<tr>
<td>Vitamin B2</td>
<td>0.5 mg</td>
<td>Iodine</td>
<td>90 µg</td>
</tr>
<tr>
<td>Vitamin B6</td>
<td>0.5 mg</td>
<td>Selenium</td>
<td>17.0 µg</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>0.9 µg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3 Evidence has shown that MNP package, which comes in 60 sprinkle-sachets, is adequate to rapidly improve hemoglobin concentrations and iron stores in a large proportion of children.
5.4 Community trials have shown that the MNP intervention has the potential of averting 112 deaths, with a cost per death prevented at Php 17,458\(^4\) and cost per DALY saved at Php 520.34.\(^4\)

5.5 The following are advantages of MNP: (i) easy to prepare and use because it can easily be added to food, (ii) does not conflict with breast-feeding practices, (iii) useful in promoting timely introduction of complementary foods at 6 months of age and proper weaning practices, (iv) light weight, (v) easy to store and transport, and (vi) inexpensive.

C. The Micronutrient Supplementation package by life stage

The general guidelines for the MS intervention are presented in this section, defining the dosage, timing and frequency and duration for the different target groups.

C.1 Infants: 0-11 months old

C.1.1 General guidelines

1. Ensure regular iron and vitamin A supplementation to all 6-11 month-old infants. They have high need for iron and vitamin A due to rapid growth and development. Based on the 2008 NNS results, (i) only one-third of these infants may have been exclusively breastfed from 0 – 6 months of age and may not have adequate micronutrient stores; (ii) more than half of these children are likely iron and vitamin A-deficient, and (iii) iron and vitamin A intake from complementary food by this group is low. Although 0-5 month-old infants also have a high need for the same micronutrients, exclusive breastfeeding promotes adequate stores for these micronutrients to meet their requirements.

2. Start regular vitamin A and iron supplementation at 6 months of age. Their micronutrient stores and vitamin A from breast milk are no longer sufficient to meet their needs.

3. Give a therapeutic dose of iron to 6-11 month-old infants clinically diagnosed with IDA.

4. Give iron supplements to low birth weight (LBW) infants at 2 months, as they are born with a lower iron supply and are at high risk for iron deficiency, even if exclusively breastfed.

5. Give a therapeutic vitamin A dose to infants diagnosed with high-risk conditions such as measles, severe pneumonia, severely underweight, persistent diarrhea, and xerophthalmia. These conditions rapidly deplete vitamin A stores and present increased mortality risk.

6. Treat 0-11 month-old infants with diarrhea with reformulated ORS and zinc.

7. Do not give iodine supplements to infants. Use iodized salt in the preparation of infants’ complementary food.

C.1.2 Micronutrient Supplementation package for 0-11 month-old infants

The following table summarizes the recommended micronutrient supplementation package for 0-11 month-old infants. It specifies the micronutrient supplements to be given, along with the recommended preparation, dosage, frequency, and duration.

\(^4\) Using the exchange rate of Php43= $1
Table 8. Micronutrient Supplementation package for 0-11 month old infants

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Routine Supplementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 6-11 month-old | Iron | Drops, 15 mg elemental iron/0.6 ml MNP | Give 0.6 ml once a day for 3 months. 
Give 60 sachets to consume in 6 months. 
(This maybe provided during the growth monitoring visits of children at the health center) |
| | Vitamin A | Capsule, 100,000 IU | Give 1 capsule once (single dose) |
| **B. Therapeutic Supplementation** | | | |
| Low Birth Weight Infants (< 2.5 kg) | Iron | Drops, 15 mg elemental iron/0.6 ml | Give 0.3 ml once a day starting at 2 months up to 6 months. |
| 6-11 month-old clinically diagnosed with iron-deficiency anemia | Continue with the iron supplement, but infants need to be assessed for further management. | Drops, 15 mg elemental iron/0.6 ml | Give 3-6 mg/kg/d elemental iron in 3 divided doses a day for 3 months. 
Note: After completing 3 months therapeutic supplementation, infants should continue preventive supplementation regimen. 
OR 
Give approximately 0.6 ml two to three times a day for 3 months. |
| 6-11 month-old clinically diagnosed with measles (based on IMCI protocol) | Vitamin A | Capsule, 100,000 IU | Give 1 capsule upon diagnosis regardless when the last dose of VAC was given. Give another capsule after 24 hours. |
| 6-11 month-old with persistent diarrhea | Vitamin A | Capsule, 100,000 IU | Give 1 capsule upon diagnosis except when child was given VAC less than 4 weeks before diagnosis. |
### Target Clients, Micronutrient, Preparation, Dosage/Frequency/Duration

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-11 month-old with severe pneumonia</td>
<td>Vitamin A</td>
<td>Capsule, 100,000 IU</td>
<td>Give 1 capsule upon diagnosis except when child was given VAC less than 4 weeks before diagnosis.</td>
</tr>
<tr>
<td>6-11 month-old severely underweight</td>
<td>Vitamin A</td>
<td>Capsule, 100,000 IU</td>
<td>Give 1 capsule upon diagnosis except when child was given VAC less than 4 weeks before diagnosis.</td>
</tr>
<tr>
<td>6-11 month-old clinically diagnosed with xerophthalmia</td>
<td>Vitamin A</td>
<td>Capsule, 100,000 IU</td>
<td>Give immediately 1 capsule upon diagnosis, 1 capsule the next day, and another capsule 2 weeks after.</td>
</tr>
<tr>
<td>&lt; 6 month-old with diarrhea</td>
<td>Zinc</td>
<td>Drops 27.5 mg/mL (equivalent to 10 mg elemental zinc) 15mL drops</td>
<td>Give 1 ml once a day for not less than 10 days; OR Give ½ tablet once a day for not less than 10 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tablet, 20 mg elemental zinc</td>
<td></td>
</tr>
<tr>
<td>6-11 month-old with diarrhea</td>
<td>Zinc</td>
<td>Syrup, 55 mg/5mL (equivalent to 20 mg elemental zinc) 60mL syrup</td>
<td>Give 20 mg once a day for not less than 10 days. OR Give 1 tablet once a day for not less than 10 days.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tablet, 20 mg elemental zinc</td>
<td></td>
</tr>
<tr>
<td>12-59 month-old with diarrhea</td>
<td>Zinc</td>
<td>Syrup, 55 mg/5mL (equivalent to 20 mg elemental zinc) 60ml syrup</td>
<td>Give 1 teaspoon once a day for not less than 10 days. OR Give 1 tablet once a day for not less than 10 days.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tablet, 20 mg elemental zinc</td>
<td></td>
</tr>
</tbody>
</table>

### C.2 Children 12-59 months old (1-<5 year-old)

#### C.2.1 General guidelines

1. Prioritize 12-23 month-old children for iron and vitamin A supplement. This age group is likely to have deficient iron and vitamin A intakes from inadequate complementary feeding, has increased demand for iron and vitamin A due to rapid growth and higher incidence of illnesses, and has high prevalence of IDA.
2. Give iron to those who are clinically diagnosed with anemia to correct the existing anemia.

3. Ensure that children 12-59 months old receive 2 doses of vitamin A each year. Give the vitamin A supplements every six (6) months.

4. Give vitamin A therapeutic dose to children who are clinically diagnosed with xerophthalmia, severe pneumonia, measles, persistent diarrhea, and severe underweight.

5. Treat 12-59 month-old children with diarrhea with reformulated ORS and zinc.

6. Encourage the use of iodized salt and consumption of other fortified foods with the Sangkap Pinoy Seal.

C.2.2 Micronutrient Supplementation package for 12-59 month-old children

The following table summarizes the micronutrient supplementation package for 12-59 month-old children. It specifies the micronutrient supplements to be given, along with the preparation, dosage, frequency, and duration.

**Table 9. Micronutrient Supplementation package for 12-59 month old children**

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Routine Supplementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-23 month-old</td>
<td>Iron MNP Note: Once MNP becomes locally available, iron requirement will be in the form of MNP instead of iron syrup</td>
<td>Syrup containing 30 mg elemental iron/5 ml Single served sachet 15 micronutrient formulation</td>
<td>Give 1 tsp once a day for 3 months or 30 mg once a week for 6 months with supervised administration. Give 120 sachets in a year.</td>
</tr>
<tr>
<td>12-59 month-old</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give 1 capsule every 6 months</td>
</tr>
<tr>
<td><strong>B. Therapeutic Supplementation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-23 month-old clinically diagnosed with iron deficiency anemia</td>
<td>Iron</td>
<td>Syrup. 30 mg elemental iron/5 ml</td>
<td>Give 3-6 mg/kg per day for 3 months. OR Give approximately 5 ml two to three times a day for 3 months. If available, continue MNP supplementation after 3 months.</td>
</tr>
</tbody>
</table>
C.3 Children 5-9 years old

C.3.1 General guidelines

1. Meet the children’s vitamin A, iron, and iodine needs through diet and use of fortified foods with the Sangkap Pinoy Seal. Regular micronutrient supplementation is not recommended for this age group. While some children may suffer from iron and vitamin A deficiencies, the prevalence is no longer of public health significance based on 2008 NNS.

2. Give vitamin A therapeutic dose to children 5-9 years old clinically diagnosed with xerophthalmia and iron to those who are clinically diagnosed with anemia.

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-59 month-old clinically diagnosed with iron-deficiency anemia</td>
<td>Iron</td>
<td>Syrup. 30 mg elemental iron/5 ml</td>
<td>Give 3-6 mg/kg per day for 3 months. OR Give approximately 5 ml two to three times a day for 3 months. Assess children after 3 months for further management.</td>
</tr>
<tr>
<td>12-59 month-old clinically diagnosed with measles (based on IMCI protocol)</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give 1 capsule upon diagnosis regardless of when the last dose of vitamin A was given. Give another capsule after 24 hours.</td>
</tr>
<tr>
<td>12-59 month-old with severe pneumonia</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give 1 capsule upon diagnosis, except when child was given VAC less than 4 weeks before diagnosis.</td>
</tr>
<tr>
<td>12-59 month-old with persistent diarrhea</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give 1 capsule upon diagnosis, except when child was given VAC less than 4 weeks before diagnosis.</td>
</tr>
<tr>
<td>12-59 month-old who is severely underweight</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give 1 capsule upon diagnosis, except when child was given VAC less than 4 weeks before diagnosis.</td>
</tr>
<tr>
<td>12-59 month-old clinically diagnosed with xerophthalmia</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give immediately 1 capsule upon diagnosis, 1 capsule the next day and another capsule 2 weeks after.</td>
</tr>
</tbody>
</table>
3. Bring the child to a health facility for advice, treatment, and iron supplementation if residing in an area where malaria and schistosomiasis are highly endemic.

C.3.2 Micronutrient Supplementation package for 5-9 year-old children

The following table summarizes the micronutrient supplementation package for 5-9 year-old children. It specifies the micronutrient supplements to be given, along with the preparation, dosage, frequency, and duration.

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapeutic Supplementation</td>
<td>5-9 year-old clinically diagnosed with iron-deficiency anemia</td>
<td>Therapeutic dose of iron based on actual body weight</td>
<td>Give 3-6 mg/kg per day for 3 months. OR Give approximately 5 ml (1 teaspoon) three to four times a day for 3 months.</td>
</tr>
<tr>
<td></td>
<td>5-9 year-old manifesting clinical signs/symptoms of malaria</td>
<td>Iron</td>
<td>Give 10 ml (2 teaspoons) once a day for 2 months.</td>
</tr>
<tr>
<td></td>
<td>5-9 year-old who are infected with schistosomiasis</td>
<td>Iron</td>
<td>Give 10 ml (2 teaspoons) once a day for 2 months.</td>
</tr>
<tr>
<td></td>
<td>5-9 year-old with xerophthalmia</td>
<td>Vitamin A</td>
<td>Give 1 capsule immediately upon diagnosis, another capsule the next day, and another capsule 2 weeks after.</td>
</tr>
</tbody>
</table>

C.4 Female Adolescents (10-14 years old) and Non-Pregnant/Non-Lactating Women of Reproductive Age (15-49 years old)

C.4.1 General guidelines

1. Adolescent girls are at risk of developing iron deficiency and IDA, especially when they start their menstruation.

2. Ensure that adolescent girls receive iron-folic acid supplementation once a week once their menstruation starts, and continue throughout period of reproductive age.
3. Women of reproductive age before and in-between pregnancies have increased demand for iron due to losses from menstruation and to help them prepare for increased demand in pregnancy and childbirth. Adult women should take an iron-folic acid supplement weekly until they become pregnant.

4. Advise non-pregnant and non-lactating women of reproductive age to meet their vitamin A and iodine requirements from adequate, balanced and varied diet and through the use of fortified foods with the Sangkap Pinoy Seal.

5. Give a corresponding therapeutic dose of iron and vitamin A to those who are clinically diagnosed with IDA and xerophthalmia, respectively.

C.4.2 Micronutrient Supplementation package for female adolescents (10-14 years old) and non-pregnant/non-lactating women of reproductive age (15-49 years old)

The following table summarizes the recommended micronutrient supplementation package for female adolescents (10-14 years old) and non-pregnant/non-lactating women of reproductive age (15-49 years old).

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-49 year-old women</td>
<td>Iron/Folic acid</td>
<td>Tablet, 60 mg elemental iron with 2.8 mg folic acid</td>
<td>Give 1 tablet once a week once menarche starts and until one gets pregnant.</td>
</tr>
<tr>
<td>B. Therapeutic Supplementation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-49 year-old women manifesting clinical signs/symptoms of malaria.</td>
<td>Iron/Folic acid</td>
<td>Tablet, 60 mg elemental iron with 400 ug folic acid</td>
<td>Give 1 tablet once a day for 2 months. Note: Give malaria drugs first and after at least 24 hours, administer iron supplements. Treatment and control program for malaria should be in place in the community.</td>
</tr>
<tr>
<td>10-49 year-old women who have moderate to severe schistosomiasis in endemic areas</td>
<td>Iron</td>
<td>Tablet : 60 mg elemental iron with 400 ug folic acid</td>
<td>Give 2 tablets once a day for 30 days. Note: In schistosomiasis-endemic areas, administer the Praziquantel 15-30 days after giving the iron supplement.</td>
</tr>
<tr>
<td>10-49 year-old women clinically diagnosed with IDA</td>
<td>Therapeutic dose of iron/Folic acid</td>
<td>Tablet, 60 mg elemental iron with 400 ug folic acid</td>
<td>Give 2 tablets once a day until hemoglobin reaches normal level.</td>
</tr>
</tbody>
</table>
C.5 Pregnant and Post-Partum/Lactating Women

C.5.1 General guidelines

1. Micronutrient Supplementation is essential for pregnant and lactating women because:

   1.1 Physiological changes during pregnancy through post-partum result in increased requirements for iron, vitamin A, and iodine.

   1.2 The increased physiological requirements for these micronutrients are difficult to meet through the usual diet.

   1.3 The prevalence of iron deficiency anemia among pregnant (41%) and lactating women (33%), and of vitamin A deficiency among lactating women (20.1%) are of public health scale. The same is true for the proportion of pregnant and lactating women with UIE levels < 50 ug/L.

2. Give iron-folic acid to women once their pregnancy is determined.

3. Continue to provide iron-folic acid supplementation at post-partum, including vitamin A and iodine supplements to support them in their child-rearing tasks.

4. Give therapeutic dose of iron/folic acid to pregnant or post-partum women who are clinically diagnosed with IDA.

5. Provide therapeutic dose of vitamin A to pregnant and lactating women upon clinical diagnosis of xerophthalmia, regardless of age of gestation.

6. Give an iodine supplement to pregnant and lactating women. According to 1996 WHO Guidelines, the use of iodized oil for pregnant women should be considered in any of the following situations:

   (i) IDD prevalence is classified as moderate or severe (UIE is <20ug/L – 49ug/L);
   (ii) Cretinism and neonatal hypothyroidism are present;
(iii) Iodine supplementation may be given during pregnancy in areas where < 90% of households are using iodized salt, and the median urinary iodine excretion is less than 100 ug/L among school children.

C.5.2 Micronutrient Supplementation package for pregnant and lactating women

The following table summarizes the micronutrient supplementation package for pregnant and lactating women.

**Table 12. Micronutrient Supplementation package for pregnant and lactating women**

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Routine Supplementation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant Women</td>
<td>Iron/Folic acid</td>
<td>Tablet, 60 mg elemental iron with 400 ug folic acid</td>
<td>Give 1 tablet once a day as soon as pregnancy is determined. Give at least a total of 180 tablets administered once a day to be taken for the whole duration of pregnancy.</td>
</tr>
</tbody>
</table>
| Pregnant Women | Iodine | Capsule, 200 mg elemental iodine | Give 2 capsules single oral dose once a year, only in any of the following situations:
  1. IDD prevalence is classified as moderate or severe (UIE is <20ug/l – 49ug/l);
  2. Cretinism and neonatal hypothyroidism are present;
  3. Iodine supplementation may be given during pregnancy in areas where < 90% of households are using iodized salt and the median urinary iodine is 100 ug/l among school children.

Note: Give iodine supplementation during the first trimester, but no later than the second trimester. This has been shown to prevent cretinism and other abnormalities.

| Post-Partum or Lactating Women | Iron/Folic acid | Tablet, 60 mg elemental iron with folic acid 2.8 mg | Give 1 tablet once a week until one gets pregnant again. |
| Lactating Women | Vitamin A | Capsule, 200,000 IU | Give 1 capsule within 1 month after delivery. |
| Lactating Women | Iodine | Capsule, 200 mg elemental iodine | Give 2 capsules single oral dose if not given in the past 12 months. |
C.6 Adults (50-59 years old)

C.6.1 General guidelines

1. Meet the micronutrient needs of adults through the consumption of an adequate, balanced and varied diet and of fortified foods.

2. Give a therapeutic dose of iron and vitamin A, respectively, to those who are clinically diagnosed with IDA and xerophthalmia.

3. For those in malaria-endemic areas, give an iron supplement of 60 mg. elemental iron with 400 mcg folic acid once a day for 2 months after the first dose of the antimalarial drugs is given.

<table>
<thead>
<tr>
<th>Target Clients</th>
<th>Micronutrient</th>
<th>Preparation</th>
<th>Dosage/Frequency/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnant, Post-partum/ Lactating Women clinically diagnosed with iron-deficiency anemia</td>
<td>Iron</td>
<td>Tablet, 60 mg elemental iron with 400 ug folic acid</td>
<td>Give 2 tablets once a day for 3 months. Evaluate after 1 month. If there is adequate response to therapy (defined as an increase in hemoglobin by 1 to 2 g/dL), continue supplementation and re-evaluate after 2-3 months. If there is no adequate response to one month of oral iron therapy, evaluate for other possible causes of anemia. Note: After completing 3 months of therapeutic supplementation, pregnant women should continue preventive supplementation regimen.</td>
</tr>
<tr>
<td>Pregnant Women clinically diagnosed with xerophthalmia</td>
<td>Vitamin A</td>
<td>Capsule, 10,000 IU</td>
<td>Give 1 capsule of 10,000 IU once a day for four weeks upon diagnosis, regardless of age of gestation. However, if the pregnant woman is currently taking multivitamins with vitamin A, do not give the 10,000 IU VAC.</td>
</tr>
<tr>
<td>Post-partum/ Lactating Women clinically diagnosed with xerophthalmia</td>
<td>Vitamin A</td>
<td>Capsule, 200,000 IU</td>
<td>Give 1 capsule upon diagnosis, 1 capsule the next day, and another capsule 2 weeks after.</td>
</tr>
</tbody>
</table>
4. For those in schistosomiasis-endemic areas who have moderate to severe schistosomiasis, give an iron supplement of 60 mg. elemental iron with 400 mcg folic acid twice a day, before administering the praziquantel drug. Give iron supplement for 30 days.

C.7 Older Persons (60 years old and above)

C.7.1 General guidelines

1. The macro and micronutrient requirements of older Filipinos are not met by dietary intake.

2. Micronutrient supplementation is recommended to older persons to address their nutrient deficiencies. However, this must be based on an individual assessment considering the absence of population-based data.

3. Provide micronutrient supplementation on a long-term basis (at least 6 months), for those with established need for supplementation, since the factors causing deficiency are likely to persist.

4. Normal, healthy elderly Filipinos who are capable of meeting most of their nutrient requirements through diet do not need micronutrient supplementation, except for those in the following conditions:
   
   4.1 Calcium (~1000 g/d) and Vitamin D (400 to 900 IU/d) supplements in post-menopausal women (with caution/warning for those at risk of calcium stone formation) to prevent further decrease of bone density and minimize hip fractures.
   
   4.2 Antioxidants (Vitamin C and Vitamin E at 5 to 15 times the requirement) with zinc (10 times the requirement) to prevent progression of intermediate-stage age-related macular degeneration.

5. For older persons, the ultimate aim should still be for an adequate, balanced and varied diet, regular physical activity, and continued mobility and social engagement to contribute towards a more productive and satisfying senior life.

D. Micronutrient Supplementation package during disasters and emergency situations

Deficiencies in micronutrients can develop or become aggravated during disasters and emergencies. It is important that the micronutrient needs of everyone are adequately met during disasters and emergencies. One way to meet the recommended daily intake of micronutrients is to provide foods fortified with micronutrients during disasters.

1. Ensure that infants, children, pregnant and lactating mothers, and women of reproductive age continue to receive the recommended routine micronutrient supplementation.
2. Give additional vitamin A to 6-11 month-old infants (100,000 IU) and 12-59 month-old children and post-partum women (200,000 IU), unless they have received a similar dose in the past 4 weeks. Children with measles should be given VAC regardless when the last dose of VAC was given.

3. Ensure that 6-23 month-old children receive the MNP supplement, if available. In addition, expand the provision of MNP to 24-59 month-old children as well as to pregnant and lactating women.

4. If a child has diarrhea, give reformulated ORS and zinc. Zinc supplement should be given for not less than 10 days.

5. Ensure that micronutrient supplementation supplies are available during disasters and emergencies. Evacuees must be provided with adequate supplies of required micronutrient supplementation once they return to their residences to ensure continuity of supplementation until they have settled back home.

6. Conduct monitoring of the delivery of supplements to assess coverage and health impact.

E. Side effects and contraindications to micronutrient supplementation

1. Vitamin A Supplementation
   
   1.1. Among Children
   
   a. Generally there are no side effects when vitamin A supplement is given in the recommended dose. However, if, in isolated cases the child complains of loss of appetite, vomiting, headache, or nausea, explain to the child’s mother that these are temporary and will disappear within 24 hours. No specific treatment is necessary.
   
   b. Always ask when the last dose of vitamin A supplement was given to the child to avoid overdose following the guidelines indicated above.

   1.2. Among Pregnant
   
   a. Never give vitamin A supplement to a pregnant woman except when she is clinically diagnosed with xerophthalmia.
   
   b. Observe proper dosage of vitamin A for pregnant women with xerophthalmia. Large doses, >25,000 IU daily, may result to abortion, miscarriage and/or congenital abnormalities of the unborn child. If the pregnant woman is currently taking multivitamins with vitamin A, do not give the 10,000 IU VAC.
2. Iron Supplementation

2.1. Iron is better absorbed in an empty stomach, but taking the supplement in an empty stomach may cause side effects. Advise patient to:

- take ½ dose daily for one week, then resume full dosage
- take the iron supplement during or after meals

2.2. When stool turns black, advice patient not to be alarmed and explain that the color is due to the ferrous sulfate.

2.3. Some may complain of constipation. Advise these patients to take in more fiber-rich vegetables and fruits and water.

3. Iodine Supplementation

3.1. The benefits of giving Iodized Oil Capsule (IOC) far outweigh the complications that may occur.

3.2. Complications in giving iodized oil capsule, e.g. hypothyroidism and transitory thyrotoxicosis (Jod Basedow syndrome), are rare.

3.3. Acute iodine poisoning caused by ingestion of 2-3 grams causes gastrointestinal irritation, abdominal pain, nausea, vomiting, and diarrhea.
A. Introduction

The MS packages must be available and accessible to the identified priority population groups and utilized by them according to the regimen described in the earlier section. Service delivery settings must therefore ensure the availability, accessibility and appropriate utilization of the MS interventions.

Local health officials and health care providers should be aware of the different best practices in ensuring the availability, accessibility and appropriate utilization of MS intervention packages. The integration of the MS interventions in the existing health delivery systems has been proven to be viable and efficient. As there may be peculiar or unique characteristics in each target group, the most appropriate settings and specific interface or contact points between the health care providers and the specific target group or clients must be identified and used.

This section provides various settings and health services that can be utilized to provide the micronutrient supplementation packages in and outside the health facility to ensure access of the MS interventions.

B. The overall service delivery settings for the micronutrient supplementation packages

The delivery of the MS Packages shall be integrated in: (1) the existing MNCHN service delivery settings; (2) other on-going health programs and services such as malaria, and schistosomiasis, prevention and control programs, among others; and, (3) other avenues that may best reach the target clients, such as in schools, malls, markets, or churches. In general, there are four major delivery settings for MS packages: health care facilities, outreach programs, campaigns, and temporary shelters.

1. Integrate the MS packages in MNCHN service delivery settings particularly during or in:

- 1.1 Premarital counselling and family planning consultations of women of reproductive age.
- 1.2 Prenatal check-up, post-partum visits of women at the health facility.
- 1.3 Post-natal check-up, growth monitoring visits, well-baby clinics/check-up, immunization days, and sick consultations at the health facility.
- 1.4 In-patient and outpatient services offered to confined children with high-risk conditions like measles, severe pneumonia, and persistent diarrhea in hospitals.

Ensure that MS services provided are recorded appropriately in the Individual Treatment Records (ITRs), Patient Records, Mother and Child Book (MCB), Family Health Book (FHB), Home-Based Mother’s Record (HBMR), and Early Childhood Care and Development (ECCD) Card.
2. Integrate MS package in outreach activities such as:

2.1 Regular growth monitoring at the community level
2.2 House-to-house visits by health care workers
2.3 Scheduled visits of itinerant or mobile teams such as Malaria, Schistosomiasis and EPI in some regions
2.4 Medical missions/ Reaching Every Barangay Plus (REB+)
2.5 Evacuation centers/ temporary shelters
2.6 Cross-border operations such as in the prevention and control of malaria and schistosomiasis

3. Deliver MS packages in other outlets outside the health facility to reach target individuals who do not normally consult the health facilities unless they are sick such as:

3.1 Schools
3.2 Day Care Centers
3.3 Teen Centers
3.4 Workplaces
3.5 Churches
3.6 Community Centers
3.7 Municipal/Barangay Halls
3.8 Bus/Boat Terminals
3.9 Health and Nutrition Posts
4.0 Temporary Shelters/ Evacuation Centers
The following table summarizes the recommended avenues or mechanisms in reaching the targeted clientele:

**Table 13. Service delivery setting and contact points for the integration of Micronutrient Supplementation packages**

<table>
<thead>
<tr>
<th>Service Delivery Setting</th>
<th>Target Clients</th>
<th>Services</th>
</tr>
</thead>
</table>
| Health Facility: BHS, RHUs, health centers, private clinics, public/private hospitals-In and Out patient services | • 6-59 month children  
• Low birth weight infants  
• Women of reproductive age  
• Pregnant women  
• Lactating women  
• High risk conditions and clinically diagnosed clients  
• Older Persons | • Regular consultations  
• Routine immunization visits  
• Growth Monitoring and Promotion  
• Pre/post-natal care |
| Health and Nutrition Posts (HNP) or other institutions (barangay/city/municipal hall)/outreach areas | • 6-59 month children  
• Low birth weight infants  
• Women of reproductive age  
• Pregnant women  
• Lactating women  
• High risk conditions and clinically diagnosed clients  
• Older persons | • Home visits, outreach services  
• Pre-marriage counselling  
• Health and nutrition classes  
• Medical missions |
| Health and Nutrition campaign posts/sites                                                | • 6-59 month children  
• Low birth weight infants | • GP campaign  
• Annual OPT |
| Adolescent/ Teen Centers                                                               | • Female Adolescents (10-14 year old);                                   | • Consultation visits  
• Counselling sessions |
| Preschools/schools/day care centers                                                     | • 3-5 year old children  
• 6-9 year old children  
• Female adolescents (10-14 year old) | • GP campaign  
• Routine health services  
• School entry  
• School events |
| Work place                                                                               | • Women of reproductive age and their children | • Annual medical check-up, Health events |
| Temporary shelters and evacuation centers                                               | • 6-59 month children  
• Low birth weight infants  
• Pregnant women  
• Lactating women  
• High risk conditions and clinically diagnosed clients  
• Older persons | • Medical check up/consultation  
• Health services to high risk groups  
• Risk health assessment |
C. **Supplementation of Iron for 0-11 month-old Infants**

1. Ensure that every baby born, whether in the hospital, in lying-in or birthing clinics, or delivered at home, is weighed upon delivery and that his/her weight is recorded in the MCB or Early Childhood Care and Development (ECCD) Card. If these are not available, record it in the TCL or family folder.

2. Determine if the newborn baby is of low birth weight (LBW). Infants with birth weight below 2.5 kgs. are considered to be of low birth weight.

3. Advise the mother to bring her LBW infant to the health facility for monthly monitoring of weight and length, immunizations, and check-up. In case the mother fails to show up at the health facility, follow-up the mother and child at home, and provide the necessary iron drops.

4. During home visits, monitor the administration of iron drops and the use of MNP (when available) in the 6-11 month-old baby’s complementary feeding.

5. Ensure that the iron supplements (drops or MNP) are recorded in the child’s MCB, ECCD card and FHSIS.

6. Follow micronutrient supplementation package dosage guidelines as presented in Section 4.

D. **Routine Iron Supplementation for 12-23 month old children**

1. Identify 12-23 month old children for iron supplementation during OPT.

2. Children who fail to participate in regular weighing sessions should be followed up at home and given the necessary iron supplements or MNP (when available).

3. Ensure that actual iron supplement or MNP utilization is recorded in his/her MCB, ECCD card and FHSIS.

4. On a regular basis, monitor the distribution, preparation and use of the micronutrient supplementation at the household level.

5. Validate if the mothers/caregivers are using the micronutrient supplementation according to recommended protocol when feeding their 12-23 month-old children.

6. Follow micronutrient supplementation package dosage guidelines as presented in Section 4.
E. Supplementation of Vitamin A for 6-59 month-old children

The main channel of vitamin A supplementation for 6-59 month-old children is through the New Garantisadong Pambata (GP) National Campaign. Children who fail to receive the dose in the GP campaign must be followed up at home or through outreach activities.

1. Expanded Garantisadong Pambata (EGP)

For the past 17 years, the national government and LGUs have carried out the distribution of high-dose 100,000 IU VAC among 6-11 month-old infants and 200,000 IU VACs to children aged 12-59 months through the GP campaign. The vitamin A supplementation during GP Campaign is carried out to cover at least 95% of the targeted 6-59 month-old children. Recently, the DOH has reprogramed GP to cover 0-14 years old dubbed as EGP. The EGP package includes dissemination of healthy behaviors and making health services on child health, nutrition and environment available everyday at various settings such as home, school, health facility, and communities by government and non-government organizations, private sector and civil groups.

- Provide the entire EGP package to all children 0-14 years at home through the outreach activity, house-to-house visit and even at cross-border operations, i.e. prevention and control of all diseases. For vitamin A capsule, it is given to children 6-59 months every 6 months.

- Deliver EGP package in schools as part of the annual check-up in school clinics and Day Care Centers.

- Provide EGP package during the premarital counselling sessions, post-natal check up, growth monitoring and promotion visits, well baby clinics/check up, immunization and sick consultation at the health facility/center.

- Include EGP package in hospitals as part of in- patient and out-patient services to children sick with measles, severe pneumonia or persistent diarrhea.

- Expand the EGP package to a wider set of targeted population in the community through outreach activities in partnership with community groups such the sari-sari store/grocery/supermarket owners, vendors association, tricycle operators and drivers associations, women’s groups, civic and/or religious organizations, etc.

The following activities may be done to implement the EGP in a community:

1.1. Local health care providers need to prepare prior to the actual administration of VAC and other EGP services and information in designated centers/areas. Preparatory activities include the update of the master list of 6-59 month-old children in the area; identification and arrangement of the area for the EGP and the VAC distribution; organization of volunteers, assignment of staff and volunteers to manage designated stations; promotion of the event; and, acquisition of the VAC and other commodities for distribution.
1.2. Set up the following stations/sub-stations to ensure an orderly and systematic flow of activities during outreach particularly in geographically isolated depressed areas. The stations/sub-stations are:

- **Station 1**: Registration
- **Station 2**: Growth Monitoring and Promotion
- **Station 3**: Patak for services like vitamin A and deworming tablets
- **Station 4**: Health promotion and counseling
- **Station 5**: Injections, such as immunizations
- **Station 6**: Evaluation

1.3 Measure the children’s weight and length/height. Growth monitoring for children 0-24 months of age should be done monthly and every six months for older children.

1.4 Integrate health messages on breastfeeding, complementary feeding, iron supplementation, use of fortified foods and iodized salt, oral health, use of safe toys, and hand washing during the administration of VAC and other services.

1.5 After the EGP activities, assess coverage, and conduct mop-up operation at the household level if coverage is below 95% of target children.

1.6 Submit EGP coverage report, including children reached during the outreach and in the mop-up operation, to RHU for the barangays. Community volunteers like the sari-sari store/grocery/supermarket owners, vendors association, tricycle operators and drivers associations, women’s groups, civic and/or religious organizations, etc., maybe tapped to assist in providing the EGP package.

Annex 5 describes the distribution of vitamin A capsules thru a campaign and the tools/forms to be used. The guideline for the EGP will be forthcoming.
2. Micronutrient Supplementation as part of routine services in health facilities

Make vitamin A supplements available as part of the routine services at the health center.

2.1. Assess when VAC was last given to all well children 6-59 months during consultation at the health facility.

2.2. Give VAC to well 6-59 month-old children who did not receive for more than six months.

2.3. Give VAC and other micronutrient supplements to 6-11 month old infants/children during immunization sessions. The dose is one capsule of vitamin A (100,000 IU) for 6-11 month-old infants.

2.4. Assess sick children brought for consultation if they need to be given vitamin A and other micronutrient supplements (as part of the IMCI protocol).

2.5. Give VAC also to hospitalized children with high-risk conditions, provided that hospital staff are trained on micronutrient supplementation. Physicians should include VAC and other micronutrient supplementation in the Physician Order Sheet.

2.6. Record and report children given VAC through the FHSIS.

3. Micronutrient Supplementation during outreach activities/missions

3.1. Give vitamin A and other micronutrient supplements to other children missed during outreach activities, such as the regular growth monitoring at the barangay level, house-to-house visits, medical missions, itinerant team visits, etc.

3.2. Ensure that all health staff involved in the outreach are properly trained on micronutrient supplementation administration.

3.3. Always bring micronutrient supplements whenever you undertake outreach activities.

3.4. Assess every child for his/her micronutrient supplementation status.

3.5. Validate the Micronutrient Supplementation status of the child by referring to the MCB or ECCD Card, and provide the appropriate micronutrient supplementation as necessary.

3.6. For any micronutrient supplementation given, record the information in the MCB/GMC/ECCD Card and TCL.
F. Iron/Folate Supplementation for adolescent females (10-14 years old) and non-pregnant/non-lactating women of reproductive age (15-49 years old)

Female adolescents, as well as non-pregnant and non-lactating women of reproductive age, usually do not go to the health facility unless they are sick. Therefore, it is important that innovative mechanisms are identified to reach them. The following are recommended avenues on how to reach these target groups:

1. Give iron folate supplementation to female adolescents in schools, particularly in high school and college departments.

2. Give iron folate supplementation to female adolescents who are members of youth organizations in the community, teen centers, and religious organizations.

3. Give iron folate supplementation for non-pregnant and non-lactating women of reproductive age who are employed or are working in the informal sector (e.g. market vendor associations, home-based industries, agricultural groups, etc.).

4. Offer iron folate supplementation to women of reproductive age during pre-marriage counselling sessions.

5. Initiate partnerships with these institutions by training their key staff. If the LGU has the available resources, then the partnership may also include the provision of iron/folic acid supplements, and allow the concerned institutions facilitate the intake of iron/folic acid supplements.

6. Orient concerned institutions that could provide iron/folic acid supplementations to women of reproductive age.

7. Follow micronutrient supplementation packages as presented in Section 4.

G. Micronutrient supplementation for pregnant and lactating/post-partum women

1. Pregnant Women

1.1 Identify pregnant women through the pregnancy tracking form and health use plans established by the community-based health teams.

1.2 In case pregnant women do not show up at the health facility, follow them up at home and give the necessary supplements.

2. Lactating/Post Partum Women

2.1 Provide the necessary supplement during post-partum visit to the health facility.

2.2 If they fail to consult the health facility, follow up through the network of the BHWs/BNSs or other volunteer workers assigned in the area, or during the GP campaign.
2.3 For those who deliver in the hospital, birthing clinic, or lying-in center, be sure to give them iron/folic acid supplement before they leave the facility. This can also be reimbursed from PhilHealth as part of the cost of drugs and medicines, if MCP accredited.

2.4 Ensure that lactating/post-partum women record the supplements they have taken in their MCB’s.

2.5 Follow micronutrient supplementation package dosage guidelines as presented in Section 4.

H. Micronutrient Supplementation for older persons

1. Diagnose and screen older persons consulting the facility relative to their needs for micronutrient supplementation.

2. If the diagnosis warrants the provision of a particular micronutrient supplement, provide or prescribe the necessary supplement.

3. Note that the intake of calcium and Vitamin D supplement is recommended for older persons who are at risk of osteoporosis. This is to prevent further decrease of bone density and minimize hip fractures.

I. Micronutrient Supplementation for persons with high-risk clinical conditions

There are four special conditions that must be noted in the provision of Micronutrient Supplementation packages for persons with high-risk clinical conditions;

• Infants and children with high-risk conditions like severe pneumonia, measles, persistent diarrhea, severely underweight
• Children and women clinically-diagnosed with xerophthalmia
• Pregnant and lactating women clinically-diagnosed with anemia
• Infant, children, women and men in malaria and schistosomiasis-endemic areas

1. Infants and children with high-risk conditions

1.1. Identify infants and children with high-risk conditions when consulting the health facility. Apply the integrated management of childhood illness (IMCI) to identify children with high-risk conditions.

1.2. Engage infants and children during outreach activities at the community.

1.3. Ensure that every sick infant and child confined in the hospitals is thoroughly assessed using the IMCI protocol.

1.4. Follow micronutrient supplementation packages as presented in Section 4.
2. Children and women clinically-diagnosed with xerophthalmia

2.1. Ensure that children, women and men have been screened and clinically diagnosed with xerophthalmia before giving a therapeutic dosage vitamin A.

2.2. Follow micronutrient supplementation package dosage guidelines as presented in Section 4.

3. Pregnant and lactating women clinically diagnosed with anemia

3.1. Ensure that pregnant and lactating women have been screened and clinically diagnosed with anemia at the health facility before giving a therapeutic dosage of iron/folic acid.

3.2. If response to therapy after one month is adequate (defined as an increase in hemoglobin by 1 to 2 g/dL), continue iron supplementation. Re-evaluate after 2-3 months.

3.3. If there is no adequate response after one month of oral iron therapy, evaluate for other possible causes of anemia.

3.4. Follow micronutrient supplementation package dosage guidelines as presented in Section 4.

4. Infants, children, adults (women and men) in malaria and schistosomiasis-endemic areas

4.1. In malaria and schistosomiasis-endemic areas, ensure that diagnosis for the presence of anemia is part of the routine services in health care facilities.

4.2. Follow micronutrient supplementation package dosage guidelines as presented in Section 4.

J. Zinc Supplementation for children with diarrhea

1. Give zinc supplementation in addition to reformulated ORS as an adjunct to the management of diarrhea.

2. Initiate giving the reformulated ORS with zinc in the health facility and instruct the mothers/caregivers on how to administer the same at home for the duration of the treatment following the steps below

2.1 Give reformulated ORS and zinc as soon as diarrhea starts. Reformulated ORS (and recommended home fluids) will replace the water and electrolytes lost due to diarrhea, and prevent or treat dehydration. Zinc will reduce the duration and severity of diarrhea.
2.2 Give as much fluid as the child wants until diarrhea stops.

2.3 Continue giving zinc, even if there is no more diarrhea. By taking zinc for no less than 10 days, the zinc lost during diarrhea is fully replaced and the risk of the child having new episodes of diarrhea in the following 2-3 months is reduced.

2.4 Do not give commercial juices, carbonated beverages, or fluids with stimulant or diuretic effects. These can cause osmotic diarrhea and hyponatremia (or can worsen the diarrhea).

2.5 Bring your children for follow-up visits if diarrhea gets worse.

3. Follow micronutrient supplementation package dosage guidelines as presented in Section 4.

K. Micronutrient Supplementation provision during disasters and emergencies

1. Deliver the micronutrient supplementation packages during emergencies and disasters in designated evacuation centers where most of the people affected are housed.

2. Follow-up with those families who are not in the evacuation centers, in the households or in families who are hosting them during the disaster period.

3. Integrate the delivery of the micronutrient supplementation packages with the other health and nutrition packages that are provided during these situations.

4. Establish the provision of micronutrient supplementation supplies to meet the requirements of the affected population after the disaster and emergency period. Ensure that these supplies are adequate to last until they have been resettled back to their homes and communities.
A. Introduction

Health Promotion (HP) is the process of enabling people to increase control over the determinants of health and thereby improve their health (Ottawa Charter for Health Promotion, WHO). Health communication is a key strategy to inform the public about health concerns and to maintain important health issues on the public agenda (Adapted from Communication, Education and Participation: A Framework and Guide to Action, WHO (AMRO/PAHO).

HP is carried out through advocacy, empowerment of people and building social support systems that enable people to make healthy choices and live healthy lives. It uses various communication strategies to inform and influence the way individuals and communities think, feel, behave, and make informed decisions about their health.

Section 6 is primarily designed to guide LGU health service managers (P/M/CHOs) and providers (PHNs, RHMs) in planning, implementing and monitoring health promotion and communication activities to ascertain behavior change in micronutrient supplementation awareness and utilization. Specifically, this Section aims to provide guidance on the following:

1. Principles, Goals, and Strategies of Micronutrient Supplementation Program promotion and communication
2. Key messages as a basis in developing local communication materials
3. Formulation of a local health promotion plan and monitoring its implementation

B. Principles, Goals and Strategies of HPC by Area of Action 5

B.1 Principles

Health Promotion and Communication (HPC) should be effective, efficient and sustainable. To ensure this, DOH recommends the following principles to guide HPC efforts:

- Community participation in health promotion and decision-making processes shall be encouraged to foster acceptance and promote sustainability.
- Health promotion practitioners shall be knowledgeable and skilled in HPC strategies and tactics and should facilitate the peoples’ participation and access to health education and information.
- All health facilities and agencies in the health sector shall maximize every effort to undertake HPC activities.

5 Department of Health AO. No. 58, series, November 2001. National Policy on Health Promotion (draft of the revised version)
HPC programs and materials shall be developed based on communication research and other prescribed guidelines. Materials will be pretested and should consider local and cultural sensitivities.

HPC processes (activities and materials) and results (outcome) shall be evaluated periodically.

**B.2. Goals of Health Promotion and Communication**

Health promotion and communication is behavior-centered, with the following goals:

(1) to create a supportive environment
(2) to ensure provision of accessible, user-friendly micronutrient supplementation services
(3) to increase demand for micronutrient supplementation services

**B.3. Strategies by HPC Area of Action**

To achieve the abovementioned goals, the following key strategies will be pursued.

**B.3.1. Building Healthy Public Policy**

Building healthy public policy activities are intended for local government officials as well as policy makers at the national, sub-national and local levels. It requires advocacy for the development and issuance of the following policy instruments to support health: (i) laws, local resolutions and ordinances; (ii) executive orders; (iii) memorandum circulars; (iv) administrative orders; and, (v) memorandum of agreement. The prevention and control of micronutrient deficiencies and promotion of micronutrient supplementation program require healthy public policy efforts in the following areas primarily through local policies supported by resolutions/ordinances:

- **Service Delivery**
  - Adherence of public and private health facilities to DOH protocols and standards
  - Private institutions or companies to provide Micronutrient Supplementation as part of employee benefits

- **Governance**
  - Adoption of the national Micronutrient Supplementation policy
  - Passage of local ordinances and resolutions of selected micronutrient supplementation interventions

- **Financing**
  - Budget allocation for micronutrient supplementation commodities, TEVs, and hiring/training of health staff
  - Maternity Care Package (MCP) Accreditation of health facilities
  - Enrolment of indigents to PhilHealth

- **Regulations**
  - Procurement of MS based on DOH specifications

A strategy used to build healthy public policy is advocacy.
ADVOCACY

Advocacy is the process of convincing local government officials and other partners to support programs in the form of legislation, policy formulation, financing and other resource mobilization efforts.

Steps in Advocacy:

1. Collect and review existing data/information related to the Micronutrient Supplementation Program:
   
   a. magnitude of the micronutrient deficiency problem in the area and its consequences
   b. existing policies, guidelines and proven effective interventions to alleviate the problem
   c. current budget allocation for micronutrient supplementation programs and activities
   d. capability of the local government to implement micronutrient supplementation
   e. profile of policy makers e.g. political priorities, their power to effect change, background information, what influences their decision and best ways to reach them
   f. social and cultural orientation of targeted clients and their demand for micronutrient supplementation services

2. Identify micronutrient supplementation problems requiring advocacy and chart plan of action
   
   a. Select the most critical problem/s that needs decisions and interventions.
   b. Specify the desired decision and the target audience involved to whom advocacy will be directed.
   c. Identify and mobilize partners and alliances that can support advocacy.
   d. Select most appropriate channels for advocacy e.g. dialogues, summit/conferences, round table discussions, news/articles, etc.
   e. Identify necessary materials required to support advocacy.
   f. Chart actions/activities including timetable and budgetary requirements.
   g. Decide on the procedure for assessing advocacy performance and results.

3. Design and prepare advocacy materials/tools needed. The following are examples of tools that can be used:

   a. **Advocacy Kit.** This may contain briefers, slide presentations about the problems, situations, success stories, best practices, and the necessary actions.

   b. **Policy Briefs/Popular Version.** This may be used for advocating support for issuances of local ordinances/resolutions.

   c. **Feature Articles/Press or Photo Releases.** This is most effective in advocating for wider adoption and replication of success stories or practices that work in other areas.

4. Undertake advocacy activities among targeted audiences as designed/planned.
### ADVOCACY Activities for MS Program Implementation

**o Service Delivery and MS Promotion**
- Conduct of outreach activities
- Adherence of private health facilities to DOH protocols and standards
- Private institutions or companies to provide MS as part of employee benefits
- Delivery of MS services in the private hospitals/clinics workplace, schools, teen centers, etc.
- Training and continuing education for health staff and community volunteers
- Design/reproduction of IEC materials
- Participation in national events/campaigns
- Organize local events/promotion for MS

**o Governance**
- Adoption of the national MS policy
- Passage of local ordinances and resolutions of selected MS interventions

**o Financing**
- Budget allocation for MS commodities, TEVs, and hiring/training of health staff
- MCP Accreditation of health facilities
- Enrolment of indigents to PhilHealth

**o Regulations**
- Procurement of MS based on DOH specifications

### B.3.2. Creating Supportive Environment

A supportive environment has three aspects: physical, organizational and political.

- **Physical Environment.** Improving accessibility (physical, social, and economic) of health services by clients, e.g. low-cost supplies, roads or transport to Health Center.

- **Organizational Environment.** Creating or tapping of coalitions, networks, interagency committees and alliances makes for an organizationally supportive environment. This ensures the steady increase of people promoting the use of micronutrient supplementation.

- **Political Environment.** Issuances of local policies and allocating the necessary resource allocations for micronutrient supplementation. Local government officials and policy makers are the key players in creating a supportive political environment.

A strategy used to create a supportive environment is social mobilization.
SOCIAL MOBILIZATION

Social mobilization is a process that engages people to take action for the common good. The common good is something that has an impact on the greatest number of people in a community.

Steps in Social Mobilization

1. **Review/Conduct Situational Analysis.** Determine social, physical, cultural, and political factors that affect behaviors. It is important to come up with an analysis of the problem that is clear and easy to communicate to others. Refer to Annex 6 for the details on the conduct of HPC assessment.

2. **Identify Champions.** Champions are individuals who have shown a natural interest in health promotion and are able to immediately take the lead among different stakeholders by mobilizing communities and individuals to take action. The following is a checklist for identifying a Health Promotion Champion:

   - Respected in the community
   - Identified with positive activities/projects or campaigns in the past
   - In a position of “positive” influence within his/her sector
   - Known to be able to carry through on commitments
   - Widely known to support activities/projects and/or campaigns for the common good or is service-oriented

3. **Establish and Sustain Partnership.** Initiate and sustain partnerships with and among the government, private sector and community.

   a. Stay focused on common points of interest. Look for shared objective/s among partners. Communicate this to partners and refer to it every time a conflict arises.

   b. Listen to the suggestions of others. Partners may hold views contrary to your own. While you may be initially convinced that your perspective is better, it will be more helpful to learn how to listen first and reflect on what a partner says than to comment immediately and close the door on opportunities to improve.

   c. Be receptive to initiatives of your partners that may not be part of your agenda. Partners will respect you if you show that you can give as well as take.

   d. Be realistic in tasking. Do not assign tasks outside the areas of competence of the health promotion champion. Do not set expectations that cannot be met or tasks that are not feasible. If tasks or expectations are not met, refrain from discussing this in the absence of the person involved.

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e. Go for short-term success stories. Involve your health promotion champions in a series of successful short-term activities instead of asking them to make several years of commitments. Before you know it, your partnerships will have evolved to a level where trust and respect is automatic and you can rely on each other for support in a variety of health promotion activities even without making commitments.

### SOCIAL MOBILIZATION Activities
**In support to Micronutrient Supplementation Delivery**

- Conduct of outreach activities
- Engagement of private institutions or companies to provide Micronutrient Supplementation as part of employee benefits
- Delivery of Micronutrient Supplementation services in private hospitals/clinics, workplaces, schools, teen centers, etc.
- Training and continuing education for health staff and community volunteers
- Design/reproduction of IEC materials
- Participation in national events/campaigns
- Organization of local events/promotion for micronutrient supplementation

### B.3.3. Strengthening Community Action

Health Promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies, and implementing to achieve better health. At the heart of this process is empowerment of communities— their ownership and control of their own endeavours to achieve health.

Community development draws on existing human and material resources in the community to enhance peer and social support towards self-help, and to develop flexible systems for strengthening public participation in direction of health matters.

The main strategy for strengthening community action is community mobilization.

### Community Mobilization

Community mobilization is aimed at informing and getting/gathering the support of local political, religious and traditional leaders as well as local government agencies, non-government organizations, cooperatives, basic sector organizations (women’s groups, youth groups, indigenous people, others). It is a process by which the people, health providers and partner agencies in the community are brought together to identify their common problems, to plan the kind of action needed to solve these problems and to act on this basis. Support groups are needed to reinforce desired health seeking behaviours of clients.
Steps in mobilizing the community:

1. Call a meeting with community leaders to decide on the individuals and groups to be approached, who need to be involved, and how to conduct a preliminary dialogue and planning on the issue/problem/or community concern;

2. Conduct a problem-solving and planning session with all the leaders of the community. The health worker gives to the group the data and information gathered on the current community concern on micronutrient supplementation or other health-related concern. The health worker engages the leaders to a preliminary discussion on the information provided. This enables the group to begin working on the various features of the micronutrient supplementation and undertake responsibility for the planning.

3. Formulate a plan for community presentation and consideration to be attended by the important sectors in the community (leaders, basic sector representatives, and residents), ensuring that all sectors are represented.

4. Present the health concern, the preliminary analysis and the draft plan of action to important sectors in the community (leaders, basic sector representatives, and residents).

5. Finalize the plan with the community by identifying and agreeing on the activities to be done, the resources needed and people or officials to be responsible for each activity and time frame.

Activities to Promote Community Participation

- Conduct of community assembly to present the micronutrient problem and plan strategies to address the problem
- Group discussion with the different audiences, i.e., mothers, caregivers, adolescents, elderly
- Recruit community volunteers to promote micronutrient and/or provide micronutrient supplementation
- Orienting community volunteers on how to promote micronutrient supplementation packages
- Campaign for volunteers to participate in community mobilization activities especially in information dissemination in hard to reach areas & far flung barangays
- Creating nutrition committee at city/province/municipality/barangay level
B.3.4. Developing Personal Skills

A. Capability-building on Health Promotion and Communication

To effectively promote micronutrient supplementation, health care providers and managers should have basic communication skills and HPC management skills. Capability-building can be done through formal and informal means. Formal activities include: (i) training, (ii) seminars, (iii) workshops, and (iv) briefings and orientation. Informal methods include mentoring, coaching, supervision and role modelling.

<table>
<thead>
<tr>
<th>Capability Building To Improve Micronutrient Supplementation Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improve capability in health promotion plan development</td>
</tr>
<tr>
<td>• Improve competency in inter-personal communication and counselling, social mobilization and advocacy</td>
</tr>
<tr>
<td>• Improve ability to (i) adapt IEC materials to suit local needs and preferences; (ii) integrate service delivery in all existing contact points; and, (iii) network with other service outlets for the promotion of micronutrient supplementation (e.g. private clinics, schools, NGOs, etc.)</td>
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</tbody>
</table>

B. Promotion of Micronutrient Supplementation Services Using Various Communication Channels

Increased demand for micronutrient supplementation services is largely dependent on the awareness of the target clients regarding the benefits of micronutrient supplementation and the negative consequences of micronutrient deficiencies. It is also influenced by their knowledge of the specific target groups that need micronutrient supplementation, the available micronutrient supplementation service package, their sources and proper utilization.

To improve micronutrient supplementation-related health seeking behaviors of clients, the following key strategies will be undertaken

• Inter-personal Communication and Counselling (IPC/C)

• Health Events

• Media

• Non-traditional media like outdoor advertising
B.1. Interpersonal Communication and Counselling (IPC/C)

*Interpersonal communication* (IPC) is the face-to-face, verbal and non-verbal exchange of information. It is how we learn from others and find out their opinions/feelings/knowledge, and life situation. It is also how we share our opinions/feelings and knowledge to others. This is done both verbally and through body language (non-verbal communication). IPC is done during home visits, bench conferences, cooking demonstrations, meetings, dialogues, and lectures.

*Counselling* is an interpersonal process that assures that each client is guided to make a well-informed and voluntary choice of action that is best suited to address his or her individual health need(s). It is also defined as a person-to-person interaction in which the health service provider gives adequate information which will enable a client to make an informed decision about his/her health.

**Steps in IPC/C:**

1. **Establish and maintain rapport.** Good rapport sets the tone for a positive and productive one-on-one session.

2. **Assess.** The health worker assesses the situation of the client by determining:
   - The health issue which prompted the visit to the health facility.
   - What she/he is doing or has done about the health issue.

   To come up with correct assessments, the following IPC core skills practised in a sequential manner is necessary:
   - Asking/questioning/probing
   - Active listening
   - Clarifying

3. **Discuss problem-solving actions/options.** After a valid assessment, an appropriate remedial action to address the health concern will be facilitated by information-giving telling.

4. **Discuss alternatives or negotiate for feasible behavior to take immediate action.** In many instances, the client is not ready or is unwilling to take action. Most of the time, there are strong barriers that cause this. At times, the reason for inaction or unwillingness to take action is low motivation. In this case, no amount of information-giving will solve the health problem. Health providers need to negotiate for the client to perform actions or behaviors that will lead to the solution of the health issue. Effective negotiation for feasible behavior entails an understanding of the determinants of the behavior and how these determinants interact to influence behavior.

5. **Summarize.** By the end of the session, the health service provider should summarize main points of interaction and highlight the key messages related to the health issue. To emphasize the movement towards behavior change, the health service provider should end with a call to action and solicit the client’s commitment to practice the behavior.
B.2. Health Events

A health event is a one-time event that stirs up and generates public awareness on health and/or nutrition. It is focused on a specific purpose such as a kick-off activity, groundbreaking ceremony, grand celebration, or other significant health activities. Health events may also be created for other targeted purposes such as a health fair, awards day, health contests and other similar one-time event, or at least done on an annual or semi-annual basis. The special event should be important enough to merit the time and expense needed to properly stage, publicize and evaluate it. The conduct of health events may be influenced by global or national events or thrusts mandated by the DOH and adapted by LGUs. Health events may also be an LGU initiative based on their specific or emerging need to address local health issues.

B.3. Media Based Activities

Media are channels of communication that serve many diverse functions, such as offering a variety of entertainment with either mass or specialized appeal, communicating news and information, or displaying advertising messages. The media carry the advertisers’ messages and serve as the vital link between the seller of a product or service and the consumer.

Available types of media include:

1. Print media refers to newspapers and magazines but also includes directories, school and church yearbooks and newsletters, and programs at sporting events and theater presentations.

2. Electronic media refers to as broadcast media, or radio and television, including cable.

3. Out-of-home media are designed almost exclusively to serve only an advertising function, and include billboards, transit advertising, and posters in public places such as stadiums, airports, and train stations, as well as flying banners (banners towed by airplanes) and skywriting.

4. Direct mail media are advertisements that are mailed directly to prospects.

5. As technology advances, new forms of media are being discovered every day, such as movie-house advertising and special automatic telephone devices with prerecorded advertising messages. Any single form of communication is known as a medium.
B.3.5 Reorienting Health Services

The local health system has to be reoriented to make quality micronutrient supplementation accessible to target clients. This requires a change in the mind-set and perspective of health care providers to go beyond the provision of clinical/curative services and give equal importance to health promotion and communication. It also encompasses considerations of the peculiarities, cultural differences and local preferences in the delivery of micronutrient supplementation services. It is necessary to continually review, update and redesign communication interventions to ensure effectiveness.

C. Key Messages to Targeted Audiences

1. Ensure that all clients are given proper counselling/advice/ information on proper nutrition and diet. Refer to Annex 7: FNRI Food Pyramid with practical conversions for age group.

2. Ensure that the following key messages are highlighted when giving MS services to identified target groups.

Table 14. Key Messages to Identified Target Groups

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Desired Behavior</th>
<th>Key Message</th>
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</thead>
</table>
| 1. Mothers and Caregivers of 0-5 month-old Infants | 1. Infants are exclusively breastfed from birth to six months  
2. Infants with birth weight below 2.5 kg are given iron supplements starting at age 2 months | 1. Exclusively breastfeed your child from birth up to six months. Do not give water, juice, am, extracts, no fresh or processed milk, solid food to the baby until he/she is six months old. Breast milk meets all the nutrient needs of the infant in the first six months of life.  
2. Breast milk is the best milk for infants from birth up to 2 years and beyond. It is an excellent source of iron for infants necessary for their rapid growth and development so there is no need to give 0-5 month-old infants iron supplements.  
3. However, if your infant has a weight below 2.5 kg at birth, he/she needs to be given iron supplements at 2 months because he/she was born with |
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<tr>
<th>Target Audience</th>
<th>Desired Behavior</th>
<th>Key Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Mothers and Caregivers of 6-23month old Infants</td>
<td>1. Babies are continually breastfed up to 2 years and beyond</td>
<td>very low iron supply and is high-risk for iron deficiency anemia and his/her increased needs for iron cannot be supplied by breast milk alone.</td>
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<td></td>
<td>2. Babies are given complementary foods starting at 6 months.</td>
<td>4. Give iron drops, 15 mg elemental iron/0.6 ml preparation at 0.3 ml once a day starting at 2 months up to 6 months old. Bring your child to the Health Center for weight and length measurement regularly (Reference: Child Growth Standards (CGS))</td>
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<td></td>
<td>3. Children are brought to the health center to get Vitamin A and iron supplements and other services including growth monitoring</td>
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<tr>
<td></td>
<td>1. Breast milk is still the best food for your infants up to 2 years and beyond.</td>
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<td></td>
<td>2. At 6 months, breast milk is no longer enough to sustain the nutritional needs of your infants, so, you should give complementary foods at this time.</td>
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<td></td>
<td>3. Complementary foods are lugaw, flaked fish or meat and mashed vegetables like squash, carrots, sayote, etc. Practice safe preparation of complementary foods. Use fortified rice, oil and iodized salt and other fortified products with the Sangkap Pinoy seal.</td>
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<td></td>
<td>4. Vitamin A and iron stores of your infants will no longer be adequate to meet his/her increased needs for growth and development at age 6 months so they would need supplements</td>
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<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
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<td>5. Vitamin A increases your child’s resistance (immunity) so that he/she will not easily get sick, helps in growth and development and proper functioning of the eyes.</td>
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<tr>
<td>6. Bring your infants to the health center for vitamin A supplement every six months. The child should also continue to receive iron supplement in the form of iron drops, syrup or micronutrient powder (MNP) up to 23 months.</td>
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<tr>
<td>7. Have your child weighed and measured for height regularly (following the CGS) so you will know if the child is growing well. If there is no weight or height gain that means that the child is not getting enough nutrition or may have other conditions affecting his/her nutrition.</td>
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<tr>
<td>8. Your child will be dewormed every 6 months, starting 1 year old. This will help expel worms/intestinal parasites that can cause anemia which will slow down your child’s growth and development.</td>
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<td>3. Mothers and Caregivers of 24-59 month old Children</td>
<td>1. Children are brought to the health center regularly for Vitamin A and iron supplements and other services like immunization, growth monitoring, deworming, etc.</td>
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<td>2. Children are fed with a variety of food in adequate amounts as recommended in the Food Pyramid for</td>
<td>1. At this age, there is still an increased need for vitamin A and iron critical because of the child’s rapid growth and development. Vitamin A increases your child’s resistance (immunity) so that he/she will not easily get sick and ensures growth and development and proper functioning of the eyes. Iron helps build red blood cells and boost immune system.</td>
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<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
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<tr>
<td>children 1-6 years old (FNRI Food Pyramid for 1-6 years old)</td>
<td>2. Bring your child to the health center every 6 months to receive a dose of vitamin A and to be dewormed.</td>
<td>3. Your child’s nutritional needs increase because of rapid growth and development during this age. Make sure that your child eats a variety of food in adequate amounts everyday and when he/she is sick. To get enough amounts, it may be necessary to feed your child 5 times a day.</td>
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<td></td>
<td>4. Have your child weighed and measured for height regularly so you will know if the child is growing well. If there is no weight or height gain that means that the child is not getting enough nutrition or may have other conditions affecting his/her nutrition.</td>
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<td></td>
<td>5. Submit your child for deworming every 6 months. This will help expel worms/intestinal parasites that can cause anemia which will slow down your child’s growth and development.</td>
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<tr>
<td>4. Mothers and Caregivers of 5-9 year old children</td>
<td>1. Children are fed with a variety of foods in adequate amounts everyday (FNRI Food Pyramid for 7-12 years old)</td>
<td>1. 5-9 year old children do not need regular micronutrient supplementation. Their micronutrient needs can be met by giving them variety of foods everyday. It is important that you serve them with meals like (Annex 7: FNRI Food Pyramid):</td>
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<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
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<td></td>
<td>a. liver, egg and small fish, yellow fruits and vegetables and dark green leafy vegetables rich in vitamin A rich.</td>
<td>a. Fats and oil such as butter, margarine, vegetable oil and animal fats to enhance vitamin A absorption.</td>
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<tr>
<td></td>
<td>b. Fats and oil such as butter, margarine, vegetable oil and animal fats to enhance vitamin A absorption.</td>
<td>c. animal products: liver, kidney, spleen, heart, blood, meat, chicken and fish/ shellfish, and; plant sources: legumes, dark green leaves that are rich in iron.</td>
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<td></td>
<td>c. animal products: liver, kidney, spleen, heart, blood, meat, chicken and fish/ shellfish, and; plant sources: legumes, dark green leaves that are rich in iron.</td>
<td>d. fruits (e.g. guava, atis, pineapple, papaya, aratiles, mango, orange/dalanghita, guyabano, kamatsile, sinigwelas, etc.) and orange and yellow vegetables (e.g. tomatoes, bell pepper, etc.) that are rich in vitamin C to facilitate the absorption of iron in the body.</td>
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<td></td>
<td>d. fruits (e.g. guava, atis, pineapple, papaya, aratiles, mango, orange/dalanghita, guyabano, kamatsile, sinigwelas, etc.) and orange and yellow vegetables (e.g. tomatoes, bell pepper, etc.) that are rich in vitamin C to facilitate the absorption of iron in the body.</td>
<td>2. Allow your child to take deworming tablets</td>
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<tr>
<td>5. Mothers and Caregivers of sick children (0-59)</td>
<td>1. Sick children are brought to the health facility for check-up and treatment, especially if they have: • difficult or rapid breathing (pneumonia) • watery stools for more than 3 times in a day (diarrhea) • fever (measles, dengue etc)</td>
<td>1. Bring your sick child to the nearest health center for treatment. Sickness can use up your child’s energy and protein stores supposed to be used for growth and development. Early treatment will avoid further depletion and eventual malnutrition.</td>
</tr>
<tr>
<td></td>
<td>1. Sick children are brought to the health facility for check-up and treatment, especially if they have: • difficult or rapid breathing (pneumonia) • watery stools for more than 3 times in a day (diarrhea) • fever (measles, dengue etc)</td>
<td>2. Follow medical advice and give the prescribed medicines to restore your child’s health.</td>
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<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
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<tr>
<td>2. Medical advice on the treatment of common childhood illnesses is followed by parents/caregivers</td>
<td>3. When your child has severe pneumonia, persistent diarrhea, and measles or is severely underweight, he/she should be given vitamin A. This helps decrease the severity of the infection.</td>
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<tr>
<td>3. Children are continually fed even when sick</td>
<td>4. When your child has diarrhea, he/she should also be given zinc supplement for not less than 10 days as an addition to reformulated ORS. Zinc reduces the severity and duration of diarrhea and the occurrence of further diarrheal episodes.</td>
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<td>4. Children are given extra meals after illness</td>
<td>5. A sick child has no appetite so he/she should be encouraged to eat by preparing appropriate food and feeding him/her often to help increase the body’s ability to fight infection and replenish lost nutrients.</td>
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<tr>
<td>6. Mothers and caregivers of 5-9 year old children who are severely underweight and anemic, especially those living in malaria and schistosomiasis-endemic areas</td>
<td>6. When the child gets well, give extra meals to replace the protein/energy lost during illness and help to restore the body’s normal protein/energy reserves for continued growth and development.</td>
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<tr>
<td>1. Bring child to the health center for check-up and treatment</td>
<td>1. If your child is severely underweight he/she also lacks important micronutrients like iron and vitamin A. Vitamin A and iron supplements should be given to boost the immune system and to treat iron-deficiency anemia.</td>
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<tr>
<td>2. Give extra meals to improve nutritional status</td>
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<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
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<tr>
<td>7. Mothers and caregivers of under-five children, pregnant and lactating women during disasters and emergencies</td>
<td>1. Parents bring their children to the designated health service station in the evacuation center or temporary shelter to receive appropriate health and nutrition services for you and your under-five children 2. Parents/caregivers observe food safety measures 3. Proper personal hygiene is practiced in evacuation centers</td>
<td>1. Women and children affected by natural and man-made disasters and other emergency situations are more vulnerable to malnutrition, sickness and even death. 2. Micronutrient deficiencies can develop or made worse if already present during disaster and emergency. 3. Go to the designated health service station in the evacuation center or temporary shelter so you and your children can receive appropriate health services and micronutrient supplements like vitamin A, iron and MNP, if available.</td>
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<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
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<tr>
<td>8. Female adolescents (10-14 years old) and non-pregnant/non-</td>
<td>1. Adolescents eat a variety of foods everyday (FNRI Food Pyramid 13-19 years old)</td>
<td>4. Continue breastfeeding because breast milk is the most nutritious and safest food for your baby especially during disasters and emergencies.</td>
</tr>
<tr>
<td>lactating women of reproductive age (15-49 years old)</td>
<td>2. Fortified food products (iodized salt, fortified rice, oil and sugar) are used when preparing the family food</td>
<td>5. Practice safe preparation of complementary foods in the evacuation center to prevent occurrence of illness like diarrhea. Practice proper hand washing, toothbrushing, wearing of footwear as much as possible to avoid infections.</td>
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<td>3. Fortified foods with Sangkap Pinoy Seal are consumed/eaten</td>
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<td>4. One tablet of iron-folic acid is taken once a week</td>
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<td>5. Women visit the health center as soon as menstruation stops.</td>
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<tr>
<td>9. Pregnant women</td>
<td>1. Pregnant women visit health center at least 4 prenatal check up and avail of prenatal services like iron folic acid supplementation</td>
<td>1. At least 4 prenatal visits are needed to monitor you and your baby’s health.</td>
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<td>Target Audience</td>
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<tr>
<td>2. Pregnant women take iron-folic acid everyday for 6 months</td>
<td>2. Take iron and folic acid as regularly as required. During pregnancy, the increased need for iron and folate cannot be met by diet alone so you need to take iron and folic acid supplementation.</td>
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<tr>
<td>3 Intake of food rich in iron and vitamin A is increased.</td>
<td>3. Iron and folic acid supplementation will help avoid iron-deficiency anemia which may lead to pregnancy complications (e.g. severe bleeding, low birth weight infant.)</td>
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<td></td>
<td>4. Taking iron and folic acid tablets may have side effects such as nausea, constipation, gastric upset and black stool. Do not worry, these are normal and will usually stop soon except having black stool.</td>
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<td>5. Tips to minimize side effects:</td>
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<td>• To avoid stomach upset, take ½ dose daily for one week, then resume full dosage. Take the iron supplement during or after meals.</td>
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<tr>
<td></td>
<td>• To avoid nausea, take iron and folic acid tablets with meals or at night. To avoid constipation take plenty of fiber-rich fresh fruit, green vegetables and drink 8 or more glasses of water per day.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• When stool turns black, do not be alarmed. The black color is due to the ferrous sulfate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Continue eating foods like (Annex 7: Food Pyramid for pregnant women):</td>
<td></td>
</tr>
<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 10. Lactating Women | 1. Postpartum women visit health facility for postnatal check-up to get health and nutrition services like vitamin A and iron folic acid supplements and counselling  
2. Postpartum women eat a variety of foods everyday in the required amounts (FNRI Food Pyramid for Lactating Women)  
3. Postpartum women iodized salt, fortified rice, oil and sugar | a. Animal products: liver, kidney, spleen, heart, blood, meat, chicken and fish/shellfish, and; plant sources: legumes, dark green leaves which are rich in iron.  
b. Fruits (e.g. guava, atis, pineapple, papaya, aratiles, mango, orange/dalanghita, guyabano, kamatsile, sinigvelas, etc.) and orange and yellow vegetables (e.g. tomatoes, bell pepper, etc.) that are rich in Vitamin C to facilitate the absorption of iron in the body.  
7. Start breastfeeding soon after you give birth. This will protect your baby from deadly infections and your body will provide the warmth he/she needs to survive. It will also help stimulate milk production and minimize bleeding.  
1. Lactating women have increased nutritional needs that cannot be met by diet alone.  
2. Take one dose of vitamin A supplement. Vitamin A improves and protects the vitamin A status of women after child-birth and during lactation. These are times when maternal stores of vitamin A can be depleted.  
3. Continue to take iron and folic acid supplement regularly. This will help to replace blood loss during delivery. |
<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Desired Behavior</th>
<th>Key Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpartum women</td>
<td>4. Postpartum women consume/eat fortified foods with Sangkap Pinoy Seal</td>
<td>4. Breastfeeding mothers have higher nutritional requirements because she has to produce breast milk which will double her baby’s weight at 6 months old.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Continue intake of the following foods (Annex 7: FNRI Food pyramid for lactating women);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. Meat, liver, eggs, dark green leafy vegetables that are rich in iron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Dark green leafy and yellow vegetables, lima beans, black beans and chick peas are rich in folate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Dark green leafy and yellow vegetables and fruits those are rich in vitamin C. Vitamin C increase iron absorption.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Meat, eggs, milk, green leafy and yellow vegetables rich in vitamin A for improved vitamin A status and increase resistance to infection.</td>
</tr>
<tr>
<td>Adults (50-59 year old)</td>
<td>1. Adults eat a variety of food in correct amount every day (FNRI Food Pyramid for Adults).</td>
<td>1. A variety of foods when taken in adequate amounts will give you all the nutrient requirement of the body.</td>
</tr>
<tr>
<td></td>
<td>2. Adults use iodized salt, fortified rice, oil and sugar</td>
<td>2. Your micronutrient needs can be met through regular diet and consumption of fortified foods.</td>
</tr>
<tr>
<td></td>
<td>3. Adults consume/eat fortified foods with Sangkap Pinoy Seal</td>
<td>3. Eat high fiber foods (e.g. fruits and vegetables, whole grain cereals) to prevent constipation.</td>
</tr>
<tr>
<td>Target Audience</td>
<td>Desired Behavior</td>
<td>Key Message</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4. Those at risk of hypertension, cardiovascular disease and diabetes mellitus eat foods which are low in sodium, low fat and low sugar. Ideal weight is maintained by proper diet and exercise.</td>
<td>4. Choose foods like:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Milk, small fishes and sardines that are rich in calcium (e.g.) for stronger bones</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Meat, liver, eggs, dark green leafy vegetables are rich in iron to prevent anemia.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Dark green leafy and yellow vegetables, lima beans, black beans and chick peas are rich in folate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Vitamin C-rich foods to increase iron absorption.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Meat, eggs, milk, green leafy and yellow vegetables are rich.</td>
<td></td>
</tr>
<tr>
<td>5. If you are at risk of heart disease, limit your intake of table salt and salty foods, fat and fatty meals.</td>
<td>5. If you are at risk of heart disease, limit your intake of table salt and salty foods, fat and fatty meals.</td>
<td></td>
</tr>
<tr>
<td>6. If you are at risk for diabetes, limit your intake of sugar or sweet foods.</td>
<td>6. If you are at risk for diabetes, limit your intake of sugar or sweet foods.</td>
<td></td>
</tr>
<tr>
<td>7. Maintain your body weight by doing exercises 3 to 5 times a week for 20-30 minutes</td>
<td>7. Maintain your body weight by doing exercises 3 to 5 times a week for 20-30 minutes</td>
<td></td>
</tr>
<tr>
<td>12. Older Persons (60 years old and above)</td>
<td>Older persons visit the health care provider for check-up to determine the need for micronutrient supplements</td>
<td>1. Continue to eat variety of foods everyday (Annex 7: FNRI Food Pyramid for ages 60-69 years).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Visit the health center or health providers to determine if there is need to take micronutrient supplements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Take the micronutrient supplements as per doctor’s prescription. Have a regular physical activity and social activities to have a more productive and satisfying senior life.</td>
</tr>
</tbody>
</table>
D. Desired Behaviors and Action Points for Other Target Audiences (see Annex 8)

E. Formulation of Local Health Promotion and Communication Plan (HPCP)

The local HPCP is a sub-plan of the planning described in Section 7 (Management of Micronutrient Supplementation Program Section). It follows the prescribed steps of the program planning process but specifically looks into client behavior.

Step 1. Review the identified priority gaps and issues in micronutrient supplementation. This review will result in a situational analysis for health promotion. It will look at how events, personalities and human behavior result to a situation over a period of time.

Change in human behavior does not occur overnight. The situation is a product of many small unnoticed events and behaviors/decisions of people.

1.1. Identify HPC-related issues and target audiences.
1.2. Determine micronutrient supplementation service coverage.
1.3. Identify the factors affecting current behavior of target clients, both barriers and motivators.
1.4. Validate results of assessment with concerned audiences.
1.5. Prioritize HPC-related issues and gaps.

Step 2. Setting Communication Objectives and Monitoring & Evaluation Indicators

Communication objectives are the desired state to be achieved within a given time period through the use of different communication strategies and resources. It articulates the aim to respond to and improve the issues and problems prioritized above.

2.1. Consider the actual situation vis-à-vis the national targets of the Micronutrient Supplementation Program.
2.2. Specify the desired behavior of the target audience as a result of the campaign.
2.3. Formulate objectives to respond and improve the MS situation
2.4. Identify monitoring and evaluation indicators for service coverage and specific communication objectives.

Step 3. Identify Target Audience – based on the critical or important actors in the implementation of micronutrient program

Identify the primary and secondary target audiences or groups;

Primary Audience: These are the direct beneficiaries of services

- mothers/parents/caregivers with/caring for children 0-5 yrs old
- school children
- adolescents
- pregnant & lactating women
- elderly
Secondary Audience: these are the other stakeholders who influence the behavior of the primary audience like the local officials, health workers, other stakeholders like NGOs, development partners, other government agencies, and manufacturers of micronutrient supplements.

Step 4. Identify Key Messages

4.1. Choose the appropriate messages to address the identified behavior gap (see Table 13).

4.2. Modify the messages as necessary to ensure relevance with local situation and culture.
4.3. Take note of the following in modifying the messages:

- Should address the key motivations
- Must be simple and understandable
- Consider both content and image that affect emotions, perceptions and attitudes
- Must be technically correct
- Must be pretested
- Messages must be consistent in all communication materials

Step 5. Identify activities and timeframe

Multiple communication channels, both mass and interpersonal media, have a complementary effect, and can carry different types of information addressing various stages in the behavior of the target audience.

5.1. Identify different types of health promotion activities. Refer to HPC strategies discussed above for possible activities.

5.2. Consider the following in selecting the most appropriate channels:
- Use audience-preferred medium or channels of promotion
- Note that mix-channels are more effective than just single channel for complementary effect
- The use of mass media however needs to be determined if justifiable in terms of costs and benefits compared to other channels

5.3. Indicate the expected timelines of each activity to be implemented which can be expressed in terms of months or quarters per year.
Step 6. Specify Locus of Responsibility

The locus of responsibility is the specific individual directly responsible for the conduct or completion of the planned activity. This is the individual tasked to take lead in each particular action point. It is important that the lead person responsible will be specified and not the office/agency per se.

Step 7. Determine Required Resources

Health promotion activities require resources which include human resource, communication materials, supplies and logistics, and financial support.

7.1. Conduct an inventory of available resources within the LGU that can be allocated for the health promotion efforts.

7.2. If the LGUs resources are limited, tap external sources which include the DOH national and sub-national offices, other government institutions, development partners or other external projects of assistance.

7.3. Maximize use of indigenous resources from the community and special groups within the LGU.

Step 8. Identify Activity Key Markers

8.1. Go through each health promotion activity in the plan and establish benchmarks or standard action steps that signify progress of the particular activity. Example:

Activity: Health classes
Key markers: Micronutrient supplementation class module designed, micronutrient supplementation class schedules for each barangay established.

8.2. Ensure that the activity key markers provide direction for actions.

D. Monitoring of HPC

To monitor Micronutrient Supplementation HPC activities, it is important that an HPC monitoring and evaluation system is installed. It could be integrated into an existing system for general health and nutrition HPC or it could follow the monitoring and evaluation system being developed by the National Center for Health Promotion.

In USAID-assisted project sites, an HPC tracking system has been developed to help health service providers to document, track and report HPC activities from the community up to the provincial level at least. The tools in the system are designed to interface with existing documentation work done by Health Service Providers and the tools themselves are limited
to one-page forms to facilitate reproduction. These are designed to allow not only counting and tracking individuals reached with HPC, but allow for a simple disaggregation by sex, by health themes, health topics and types of HPC activities. Furthermore, the form is designed not only as a reporting mechanism, but is useful for the Midwife, Nurse and HEPO in targeting, monitoring and planning purposes. [Annex 9: HPC Tracking Tools]. Tracking of Micronutrient Supplementation HPC can be integrated under the Child Health section of the tools.

Monitoring and evaluation of health promotion activities shall be conducted at all levels. Monitoring refers to the continuing review and supervision of activities and the use of the findings to improve implementation. It provides tools to identify and correct program problems, direction, and priorities early enough to make changes and maximize the impact of programming efforts. It is therefore important that regular monitoring be undertaken to keep track of the progress of the planned activities and allow timely intervention before situation worsens. Evaluation is equally essential in any health promotion activity to determine the outcome or impact of the health promotion efforts and their contributions to improving the health status of the targeted population.

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7 Catalyzing Change One Step at a Time. 10-Step Toolkit to Design and Implement an effective Promotion Program. Revised edition, September, 2008.
A. Introduction

Improvement of management support systems of both the national and local levels will facilitate the provision of quality micronutrient supplementation services to families and communities. A local health system supportive of micronutrient supplementation intervention should have health facilities compliant to micronutrient supplementation policy and standards and with:

- Competent and responsive health service providers
- Continuous availability of micronutrient supplementation supplies
- Efficient health information system
- Quality and organized client care for micronutrient supplementation services

B. Planning

The implementation of micronutrient supplementation intervention requires careful planning to ensure high coverage and good outcomes. With the available resources, health service providers need to:

- Identify and assess the micronutrient deficiency problems in the community
- Focus their micronutrient supplementation intervention to the identified priority groups of the population
- Use a variety of approaches to draw up the necessary response to the identified gaps and issues.
- Integrate action points into the LGU’s overall Annual Operational Plan (AOP) and into their respective Province/City/Municipal -Wide Investment Plan for Health (P/C/MIPH).

Planning involves selecting interventions that meet the population’s needs and making arrangements to implement these interventions effectively. Because conditions are constantly changing, plans should not be a one-time effort, but a continuing process that must be monitored and periodically evaluated, particularly if there appears to be a change in the nature or magnitude of nutrition problems, if new resources become available, and during routine health program planning cycles. In planning, health managers are made to decide how to allocate available resources among nutrition and other health priorities. Planning happens at the provincial, city and municipal level and follows the same planning process.

Step 1. Identify priority gaps and issues on micronutrient supplementation

1.1 Assess the MS situation by looking at the MS service coverage which can be sourced from annual accomplishment reports/FHSIS. Compare actual performance with performance standards. Below is a comparison of MS service coverage by municipality (if planning is done at provincial level) or by barangay (if planning is done by city/municipal level).
Table 15. Assessment of MS Service Coverage by Area

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Performance standard</th>
<th>Service Coverage</th>
<th>Province/ City/ Municipality</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-11 months given VAS (April)</td>
<td>95%</td>
<td>Mun1/ Brgy 1</td>
<td>Mun2/ Brgy 2</td>
</tr>
<tr>
<td>6-11 months given VAS (October)</td>
<td>95%</td>
<td>Mun3/ Brgy 3</td>
<td>Mun4/ Brgy 4</td>
</tr>
<tr>
<td>12-59 months given VAS (April)</td>
<td>95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-59 months given VAS (October)</td>
<td>95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-59 months given VAS 2 doses a year</td>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBW given iron supplements</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-11 months given iron drops</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-23 months given iron syrup</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhea cases given ORS (0-59 months)</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhea cases given ORS and Zinc (0-59 months)</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High risk cases given VAS</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PP women given VAS</td>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant women given iron</td>
<td>80%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.2 Based on the table above, identify which particular area is at risk of micronutrient deficiency. These are the areas with service coverage below target. In addition, other areas that maybe at risk are the following:

a. hard-to-reach/remote and whose population is of relatively low-socio-economic status
b. with indigenous people
c. endemic for malaria and/or schistosomiasis.
d. with a high prevalence of malnutrition based on the recent OPT

Photo source: SHIELD Project of USAID
Photo source: A2Z Project of USAID
1.3 Identify which particular MS interventions has the lowest coverage

1.4 Identify which particular age group are least covered

1.5 Assess the existing behavior of target clients and stakeholders towards the Micronutrient Supplementation Program in terms of the following:

a. level of awareness of micronutrient supplementation
b. current practices related to micronutrient supplementation
c. preferences and attitudes towards micronutrient supplementation

1.6 Identify the most appropriate channels/avenues that identified priority groups can be reached.

Step 2. Set up local objectives to be achieved

A critical step in planning is defining the expected results that your locality wants to achieve given the above priority deficiencies, population groups and areas affected.

2.1 Set up the objectives considering the performance standards in achieving the National Objectives for Health. These objectives may be focused on each type of micronutrient deficiency or the specific outcome you want to achieve in a given target population. These can also be aligned to the different aspects of the micronutrient supplementation program you want to enhance/strengthen or scale up.

2.2 Set SMART objectives: Specific, Measurable, Attainable, Realistic and Time-Bound.

Step 3. Set targets to be met based on local objectives

It is important to set targets by which you can measure the achievements of local objectives over the period covered.

3.1 Compare your performance coverage with the national objective. If your performance is far below the national objectives, set a reasonable target for the year.

3.2 Consider current levels of coverage or existing prevalence, including the potential increase that can be achieved given additional efforts and resources.

3.3 If local plan is multi-year, set targets for each year.

Step 4. Identify key strategies to be pursued

Strategies are the key approaches to be pursued in order to attain the goal and objectives. They are focused and purposive actions to undertake in order to improve or sustain a good micronutrient supplementation situation in a given locality.

Based on the priority gaps and issues identified during the program review, strategies are determined and developed. These can be drawn up by looking at what worked well with them and in other areas recommended by the national policy/programs. There are the different ways in identifying strategies:
4.1 Who are the key players in micronutrient supplementation whose roles, decisions and actions need to be mobilized? e.g. clients, service providers, local officials, development partners

4.2 What are the specific bottlenecks in the provision of micronutrient supplementation that need to be addressed in order for the micronutrient supplementation interventions to move?

4.3 Are there issues that require financing, regulatory, and governance measures?

4.4 Are there support systems that need to be in place? procurement, inventory, referral?

4.5 Are there behaviors/perceptions that need to be corrected or promoted?

Step 5. Operationalize the key strategies into major activities

For every strategy, identify specific actions or activities that must be carried out to operationalize each strategy.

5.1 Specify those activities that must be undertaken on the first year of operation. This list of activities may have to be updated on an annual basis.

5.2 Specify the timeline for completion of each activity completed.

5.3 Identify the specific staff assigned (locus of responsibility) to ensure that the activity is implemented.

Step 6. Estimate Required Resources and Identify Sources

Estimate the amount of resources needed to implement the activity. Identify the sources where these requirements should come from.

6.1 For commodity requirements, use the tool in estimating micronutrient supplementation requirements (see Annex 10). It is also essential to look into the updated inventory of stocks in each health facility to determine the quantity to be procured.

6.2 For training requirements, determine the number of staff to be trained under a specific training course, the length or duration of training and other training requirements to be expensed (e.g. training materials, transportation cost, etc.).

6.3 For other activities, ensure that the key elements required to make the activity happen are identified and properly costed.

6.4 Identify the sources of the needed requirements. Consider the assistance being provided by the DOH/CHD, PHO and other external sources.
Step 7. Integrate Micronutrient Supplementation Plan into the LGU’s Overall Health Plan/ Annual Investment Plan/MIPH/PIPH

Micronutrient deficiency is just one of the nutrition problems encountered by the LGU.

7.1 Integrate the action points addressing these problems with the other measures being pursued to improve the overall health and nutrition status of the population.

7.2 Incorporate action points into the overall health plan of the area. Obtain a copy of the approved plan as guide for implementation.

Please refer to Annex 11 for the Micronutrient Supplementation Plan Format as reference.

C. Supply Management

1. Estimating Micronutrient Supply Requirements

Once the types of micronutrients to be provided are determined, there is a need to estimate the number of clients to be given micronutrients over a period of one year. Refer to Annex 10 for estimating the micronutrient supplementation requirement. Micronutrient needs for 3 years should be forecasted and reviewed annually. The forecasted total annual requirements for the different micronutrient supplements can be used in advocating for support from the local executives and other partners.

a. Estimate the total number of the target population group to be given micronutrient supplementation by multiplying the total population with the estimated proportion of that target population.
b. Compute the quantity of micronutrients required based on the recommended dosage and duration.
c. Add a buffer stock of 10% to the total micronutrients requirement.
d. If resources are limited, prioritize the provision of micronutrient supplementation to the poor segment of the population or those with certain high risk or disease conditions (e.g. high prevalence of diarrhea cases, severe pneumonia, measles, LBW, etc.).
d.1. Estimate the requirement for the poor population by multiplying the poverty incidence to the total requirement. Use the latest available poverty incidence data of the locality or any existing segmentation tool like the Means Test, Community Based Monitoring Survey, and the segmentation of the poor used by DSWD or the CHLSS for determining how many need to be subsidized by the government.
d.2. For the marginalized population, identify the geographically isolated depressed areas (GIDAs) and estimate the total number of targeted beneficiaries.
e. Cost out the total requirement needed by multiplying the cost/unit to the total quantity required.
f. If you have a computer, use the micronutrient estimating tool in Excel format provided in this manual.
g. Refer to Annex 10.A for the instructions on how to accomplish the MN estimating tool.
2. Procurement

Procurement of micronutrients can be carried out either by the national DOH, CHDs or by the LGUs depending on the sharing scheme agreed between the LGU and the DOH. The mode of procurement also varies depending on the availability and cost of the micronutrients involved.

Regardless of the mode of procurement, all micronutrient supplements to be procured must follow the technical specifications recommended by the DOH. Refer to Annex 12 for the technical specifications.

Likewise, all micronutrient supplements/products to be procured are those included in the list of the PNDF.

2.1. National Procurement

   a. The DOH procures Vitamin A requirements for 6-59 month old children. If resources are available, DOH also procures iron supplements to augment the supplies of the LGUs.
   b. The DOH may opt to dialogue with local suppliers to make the product available or procure from the international market if micronutrients are not locally available.
   c. Even if some micronutrients are available locally, the government may still decide to source out these supplies abroad because of lower cost.

2.2. Local Procurement

   a. LGUs can procure micronutrients through local distributors. These could include the vitamin A, 100,000 IU, 200,000 IU, iron drops, iron syrup, iron with folic acid and iodine capsules.
   b. Refer to Annex 13 for the list of available commercial preparations of micronutrient supplementation in the market.

3. Allocation and distribution of micronutrients

Allocation of micronutrients must be based on the needs and inventory of actual stocks at various levels.

3.1. For nationally-procured micronutrients

   a. Micronutrients procured by DOH shall be distributed to the regions according to the estimated requirements.
   b. The CHDs are expected to deliver the same supplies to the different provinces/cities or they may be requested to pick up their supplies.
   c. PHO/CHO are expected to deliver the supplies to the different RHUs/BHSs/MHCs or they may be requested to pick up their supplies.
   d. The supply officer should notify the designated program coordinator of the delivery.
3.2. **For locally-procured micronutrients**

a. Allocation must be based on the computed requirements per health facility.
b. PHO/CHO are expected to deliver the supplies to the different RHUs/BHSs/MHCs or they may be requested to pick up their supplies.

4. **Receiving of micronutrients**

4.1. Upon arrival, the Supply Officer should conduct standardized verification procedures to confirm that the deliveries are in order. This is done by comparing the specifications, quantity, brand and country of origin (if donated) indicated in the Purchase Order/Contract/Deed of Donation with the Delivery Receipt. The Receiving Officer should also check the expiry date, date of manufacture, specifications and quantity of items being received.

4.2. Upon arrival at the storage facility, the contents should be counted, checked against the initial request and checked for date of expiration.

4.3. All deliveries must be officially received by the receiving officer and must be properly recorded.

5. **Storage and handling of micronutrients**

5.1. The storage facility for micronutrients should meet the following conditions:

a. Adequate ventilation to prevent spoilage due to excess heat.
b. Adequate lighting for better product identification of marks and labels. Avoid direct exposure to sunlight or fluorescent light which can reduce shelf life of micronutrients.
c. Dry or free from moist to prevent from destroying the micronutrient supplies and their packaging. Roofs should be checked for leaks on a regular basis.
d. Appropriate use of shelves for better air circulation and facilitate movement of stock and cleaning. These also protect from damage if flooding occurs.
e. Neat and dust-free with a regular cleaning schedule for roofs, walls and floors.
f. Pest-free with regular disinfection and spraying against insects. Rodents and insects will eat supplies or boxes.
g. With good record keeping as well as accurate and updated inventory records.
5.2. **Adopt the First-to-Expire, First Out (FEFO) policy to prevent micronutrients from expiring on the shelf.**

a. Boxes with the earliest expiration dates should be distributed first; boxes with later dates should not be distributed until all earlier dated supplies have been exhausted.
b. Make sure that all boxes are clearly marked with their expiration date in large, easy-to-read numerals.
c. Supplies should be stacked separately by year and month of expiration.
d. When new supplies arrive, the expiration dates should be marked and added to the existing stock with corresponding dates.
e. All boxes are also marked with a lot number in addition to the expiration date.

5.3. **Proper handling and storage of micronutrients**

**Vitamin A, Iron and Iodine Supplements**

- Store in dark colored bottles
- Keep in a cool, dry place away from heat and direct sunlight to maintain its maximum potency
- Keep away from the reach of children
- Label the container to include the **name** of the drug, **dosage** and its **expiry date**
- When iodine capsules are transferred from the original container, make sure the fingers do not touch the tablets to prevent the growth of molds. (Iodine capsules easily develop molds during long stocking storage)

**Zinc**

- Keep zinc sulphate tablets and zinc oral solutions in a well-closed container
- Store zinc sulphate tablets and oral solutions in accordance with the directions given by the manufacturer
- Place zinc sulphate tablets and oral solutions away from light

6. **Transporting micronutrients**

Proper and timely transportation of micronutrients is essential for the program to serve its intended clients. Program managers/coordinators must ensure to allocate adequate resources for transporting micronutrients.

7. **Inventory and maintenance of adequate supply levels**

Conduct inventory of micronutrients every quarter and maintain stock record to determine adequate stock level. If the current stock level is below the required level, there is a need to reorder or advocate for additional support. Refer to Annex 14 for the inventory form of micronutrient supplements.
D. Organizing the delivery of quality micronutrients services

The organization of client care services in health facilities is important in the provision of quality micronutrient supplementation. It should consider how micronutrient supplementation can be best facilitated and performed with no/less inconvenience to both clients and health service providers. These include:

- Physical Set-up and Client Service Flow
- Schedule of Clinic Services for Clients, and
- Staff Responsibilities and Tasks in Micronutrient Supplementation Management

D.1. Physical set-up and Client Service Flow

In general, physical set-up of each health facility must provide a space for the following client functions: (a) waiting area for children and caregivers; (b) registration; (c) assessment; (d) treatment/supplementation; and, (e) counselling.

The Client Service Flow aims to provide smooth flow of clients to ensure immediate care and short waiting time. It will depend on the physical set-up and available staff tasking.

A good client flow is considered accomplished, when each client receives appropriate micronutrient supplementation needed within a short waiting time.

Ensure that all micronutrient interventions are integrated in every point of client contact as stated in section 5.

D.2. Schedule of clinic services for clients

An important element in micronutrient supplementation provision is its accessibility and service utilization based on the micronutrient supplementation guidelines.

a. The clinic schedule should be responsive to the needs of the clients. There should be regular clinic/center/BHS schedules for consultation of sick children at any time and any day; follow-up care on specific illnesses and urgent follow-up for serious signs, if any.

b. Health service providers should also schedule regular outreach visits to priority areas such as those living in geographically isolated depressed areas (GIDAs) and those areas identified as a result of the situational analysis/performance standards (Table 15).
D.3. Staff responsibilities and tasks in micronutrient supplementation management

a. Health service providers should be organized with specific and clear tasks to deliver micronutrient supplementation. At any point in time, there should always be a staff member that can provide micronutrient supplementation even if the assigned staff is not available.

b. Trained BHWs and BNSs can assist the RHM in the provision of micronutrient supplementation to identified clients.

E. Improving the quality of micronutrient supplementation services

Improvements in the delivery of micronutrient supplementation services require certain strategies directed at achieving and sustaining provision of quality micronutrient supplementation services for clients in all health facilities. These include the following:

- Formulation/Compliance to micronutrient supplementation policy and standards
- Training on Micronutrient Supplementation
- Regular supervision and monitoring of facility services and staff performance

E.1. Formulation/Compliance to micronutrient supplementation policy and standards

Health service providers should comply with national micronutrient supplementation policies and guidelines as set forth by the DOH. However, they can suggest to their Local Health Officials to pass local policies and ordinances for effective and efficient implementation of micronutrient supplementation Interventions in their localities. The following are some areas where policies and guides are needed:

1. Overall policy to adopt the national micronutrient supplementation policy and package of interventions suited according to their local health situation;

2. Local budget allocation for micronutrient supplements for their constituents particularly those that cannot be provided by the DOH such as:

   - Iron for LBW infants and 6-11 months, iron/MNP for 12-23 months old children, iron with folic acid for pregnant and lactating women as well as non-pregnant/non-lactating women of reproductive age; and the therapeutic dose of iron for those found anemic;

   - Zinc supplements in addition to ORT in the treatment of diarrhea cases among children;

   - Vitamin A for children with high-risk conditions, postpartum women, and pregnant and post partum women clinically diagnosed with xerophthalmia

   - Iodine capsules for pregnant and post-partum women

3. Participation of local health facilities during the GP campaign and other micronutrient supplementation activities.
4. Support for related interventions to micronutrient supplementation such as the iodization of salt, conduct of regular iodized salt testing, food fortification, environmental sanitation, promotion of healthy lifestyle, etc.

5. Reporting of clients given micronutrient supplements during routine and universal supplementation to concerned RHU/CHO/PHO.

6. Support for the conduct of regular outreach services

E. 2. **Staff Training on micronutrient supplementation program management**

1. Health workers such as midwives, nurses and doctors should be trained on micronutrient supplementation interventions to be able to provide effective and efficient implementation of micronutrient supplementation services.

2. Available training programs developed by the DOH include the 3.5-day training on Improving Implementation of Micronutrient Supplementation Program. Other related training activities like Community Based Planning and Management of Nutrition Program (CBPM-NP), IMCI training and VAD-IDA-IDD training can also be considered.

3. BHWs/BNSs and other community workers should be trained in their specific tasks in the delivery of micronutrients intervention, health promotion, masterlisting, distribution of micronutrient supplementation, follow-up and referrals.

4. In order to complement the training interventions, strengthening of skills of staff through regular supportive supervision should be conducted. This may include regular technical updates, in-depth orientations, on-the-job training, and other appropriate learning methods that can be feasible in the field.

E.3. **Supportive supervision and monitoring**

3.1. **Supportive supervision**

   a. A supportive supervisor is someone who

   - Has certain qualities and competencies that will equip him/her to deliver responsibilities responsive to the needs of the staff being supervised
   - Is a leader, good communicator, good decision-maker and human relations, facilitator, and a team player
   - Has the knowledge, attitudes and skills required to perform the jobs in a competent and caring manner.

   b. Health staff will be more effective and efficient if their performance is reviewed based on their performance targets. Supervisory visit reinforces the importance of the staff and provide opportunity for the supervisor to identify strengths and weaknesses in the micronutrient supplementation implementation.
c. All supervisors should conduct supportive supervision to promote sustainable and efficient program management by encouraging two-way communication between health providers and supervisors toward performance planning and monitoring.  

8 Marquez and Kean, 2002

c.1. Prepare a supervisory plan or schedule of all health staff under her supervision. He/she should prioritize conducting supportive supervision to:

- Staff that is new to the health facility, or those who have not undergone any formal training;
- Staff with low performance;
- Those with highest number of children 6-59 months not given Vitamin A or missed during universal supplementation,
- Those with incomplete, late, or no report,
- Those with few or no visits,
- Those with recent outbreaks of measles, diarrhea or pneumonia,
- Those with stock-out problems,
- Those with good coverage in the past but drop in coverage now, and
- Those with coverage rates above 100%.

c.2. Adopt a participatory approach in problem-solving and decision-making whereby the health provider freely communicates to the supervisor the problems and concerns being experienced in the workplace and the latter giving feedback/technical assistance to resolve such problems and concerns.

c.3. Review and verification of records and reports (monthly progress report, FHSIS, LGU records and other sources) and allows actual observation of the staff’s performance/client activities and working conditions.

c.4. Discuss with the health worker the results of his/her supervisory observations.

- Feedbacks about his/her performance: strengths and weaknesses
- Operational issues and problems that need to be responded to
- Action points that both the supervisor and health staff agreed to undertake
- Support that the supervisor needs to provide to the staff to further improve her performance

c.5. Use the supervisory checklist on micronutrient supplementation provided in Annex 15.

3.2. Monitoring and evaluating micronutrient supplementation program

Micronutrient supplementation program must be monitored and evaluated regularly to further improve its coverage, performance and outcomes. Monitoring is the process of continuous observation and data collection of an activity to ensure that it is proceeding according to plan. Evaluation refers to the systematic collection of information about the activities, characteristics and outcomes of programs and to track progress in achieving program goals.
The table below (Table 16) lists the Micronutrient Supplementation indicators that need to be monitored and evaluated on a regular basis. This includes input, process and output indicators for monitoring progress at municipal/city/provincial/regional level and outcome and impact indicators at the regional and national level.

**Table 16. Monitoring and Evaluation Matrix**

<table>
<thead>
<tr>
<th>Description</th>
<th>Indicators</th>
<th>Target</th>
<th>Target Data Source</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of mortality</td>
<td>infant under five and maternal mortality rate</td>
<td>MDGs: (1990-2015) Reduce under five mortality rate by two thirds: from 80 deaths per 1000 live births in 1990 to 26.7 deaths per 1000 live births in 2015</td>
<td>NDHS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduce maternal mortality ratio by three fourths: from 209 deaths per 100,000 live births in 1990 to 52.3 deaths per 100,000 live births in 2015</td>
<td>NDHS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Prevalence of VAD among 6 months to 5 years,</td>
<td>By 2016 &lt;15%</td>
<td>National Nutrition Survey (NNS)</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>Pregnant women and</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Lactating women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevalence of IDA among Infants 6-11 months</td>
<td>&lt;40%</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>Children 1-2 years old</td>
<td>&lt;40%</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>Pregnant women</td>
<td>&lt;40%</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>Lactating women</td>
<td>&lt;40%</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>Description</td>
<td>Indicators</td>
<td>Target</td>
<td>Target Data Source</td>
<td>Frequency</td>
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<tr>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Elimination of micronutrient deficiency as a public health problem (IDD)</td>
<td>Prevalence of IDD Iodine deficiency based on urinary iodine excretion (UIE) among Children 6-12 years old Median UIE</td>
<td>At least 100 µg/L</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>% Moderate and severe</td>
<td>&lt; 20 %</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>Pregnant women Median UIE</td>
<td>At least 150 µg/L</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>% Moderate and severe</td>
<td>&lt; 20 %</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>Lactating women Median UIE</td>
<td>At least 100 µg/L</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>% Moderate and severe</td>
<td>&lt; 20 %</td>
<td>NNS</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>Outputs</td>
<td>Proportion of 6-59 month old preschoolers given Vitamin A 1st dose,</td>
<td>95%</td>
<td>GP Accomplishment Reports</td>
<td>April</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FHSIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of 6-59 month old preschoolers given Vitamin A 2nd dose</td>
<td>95%</td>
<td>GP Accomplishment Reports</td>
<td>October</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FHSIS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of 6-59 month old preschoolers given Vitamin A 2 doses a year</td>
<td>80%</td>
<td>GP Accomplishment Reports</td>
<td>Annual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FHSIS</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Indicators</td>
<td>Target</td>
<td>Target Data Source</td>
<td>Frequency</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Proportion of 6-59 month old preschoolers with high-risk conditions given</td>
<td>Vitamin A</td>
<td>100%</td>
<td>FHSIS (Summary</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Table)</td>
<td></td>
</tr>
<tr>
<td>Proportion of post-partum women given Vitamin A four weeks after delivery</td>
<td></td>
<td>80%</td>
<td>FHSIS (Summary</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Table)</td>
<td></td>
</tr>
<tr>
<td>Proportion of pregnant mothers given complete iron with folic acid</td>
<td></td>
<td>80%</td>
<td>FHSIS (Summary</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Table)</td>
<td></td>
</tr>
<tr>
<td>Proportion of lactating mothers given complete iron supplements</td>
<td></td>
<td>80%</td>
<td>FHSIS (Summary</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Table)</td>
<td></td>
</tr>
<tr>
<td>Proportion of low birth weight infants given complete iron supplementation</td>
<td></td>
<td>100%</td>
<td>FHSIS (Summary</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Table)</td>
<td></td>
</tr>
<tr>
<td>Proportion of 6-59 month old anemic children given iron( syrup or MNP)</td>
<td>Supplements</td>
<td>50%</td>
<td>To be established</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of pregnant mothers given iodine supplements in endemic areas</td>
<td></td>
<td>100%</td>
<td>To be established</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of lactating mothers given iodine supplements in endemic areas</td>
<td></td>
<td>100%</td>
<td>To be established</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of 0-59 month old children with diarrhea given ORS/ORT and zinc</td>
<td></td>
<td>100%</td>
<td>FHSIS Summary</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Table</td>
<td>every 5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NDHS</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Indicators</td>
<td>Target</td>
<td>Target Data Source</td>
<td>Frequency</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Inputs</strong></td>
<td>Proportion of health facilities with health promotion activities on micronutrient supplementation</td>
<td>100%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td></td>
<td>Proportion of health facilities with staff trained on micronutrient supplementation</td>
<td>100%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td></td>
<td>Proportion of health facilities with non-stock outs (Vitamin A, iron, iodine, zinc)</td>
<td>80%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td><strong>Process</strong></td>
<td><strong>Governance</strong> - health facilities with updated master list (0-59 mos., pregnant women, lactating mothers, WRA adolescent 10-14 yrs)</td>
<td>80%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td></td>
<td>- MHO/PHO/CHO with micronutrient supplementation covered in their annual operational plan</td>
<td>100%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td>Description</td>
<td>Indicators</td>
<td>Target</td>
<td>Target Data Source</td>
<td>Frequency</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>- MHO/PHO/CHO with SDIR/PIR</td>
<td></td>
<td>80%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td>- health facilities with supportive supervision in place</td>
<td></td>
<td>50%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td>- health facilities with timely, complete, and accurate data on micronutrient supplementation</td>
<td></td>
<td>50%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td>- LGUs with resolution/ordinance for support of micronutrient supplementation</td>
<td></td>
<td>50%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- LGU with budget for micronutrient supplementation</td>
<td></td>
<td>50%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td>- LGUs enrolling indigents to PhilHealth</td>
<td></td>
<td>80%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
<tr>
<td><strong>Regulations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- health facilities procuring according to FDA/PNDF guidelines / AO 0010</td>
<td></td>
<td>80%</td>
<td>Field Monitoring Reports</td>
<td>Semi-annual</td>
</tr>
</tbody>
</table>

3.2.1. **Monitoring**

The micronutrient supplementation monitoring should be integrated in the MNCHN monitoring using the MNCHN monitoring checklist.

At the national and CHD level, monitoring teams will be organized composed of DOH representatives and program coordinators either from the Department of Health, Center for Health Development. Monitoring will be done quarterly.
At the provincial/city levels, monitoring teams will be composed of DOH representatives and program coordinators and heads of unit. Monitoring should be done on an agreed schedule and as the need arises.

The monitoring team can adopt two basic approaches in keeping track of the micronutrient supplementation program. These include routine submission of reports, conduct of field monitoring visit and program implementation review.

a. Routine

Another form of monitoring is through routine data reporting such as FHSIS, MS accomplishment report.

b. Field Monitoring Visit

During field monitoring visit, the following methods can be used:

1. Review of records and reports as prescribed by the Field Health Services Information System (FHSIS). These include the following:
   - GP accomplishment reports,
   - Target Client Lists (TCL)
   - FHSIS annual accomplishment report on micronutrient supplementation provision,
   - Individual treatment records (ITR) or patient records.

2. Verification of certain information can be done through the review of selected clients’ records such as:
   - Mother and Child Book (MCB) issued to both mothers and children
   - ECCD Card
   - Hospital records, particularly for clients with high-risk conditions and those who developed complications as a result.

3. Focus group discussions/interviews of health staffs/target beneficiaries - Assessment of Micronutrient Supplementation Program status can be supported through conduct of focus group discussions with community volunteer workers or interviews of selected health staff and exit interviews of caregivers at facilities to assess certain aspects of the micronutrient supplementation interventions.

4. Observation of activities at the health facilities – micronutrient supplementation program can also be assessed if it is integrated in the regular activities and routines of the health facilities through observation.

Feedback as a result of the monitoring activity can be done:

- Right after the monitoring activity with the concerned staff at the health facility.
• At the local level, results of monitoring can be relayed to health managers and staff during the regular monthly staff meetings

• Immediately at the end of the monitoring visit during feedback conferences with the concerned heads of health offices and facilities.

• Thru written Monitoring Reports which document the results and findings of monitoring activity. Copies of the report must be disseminated to all concerned offices not later than 2 weeks after completing the monitoring visit.

c. Program Implementation Review

Program Implementation Review is conducted to determine the status of program implementation in an area or facility. PIR is aimed to establish current status of the locality, identify issues and concerns and make recommendations of the identified gaps. It is usually undertaken at least annually as part of the overall health and nutrition program review of the health office/facility. The scope and steps in micronutrient supplementation implementation review are in Annex 16.

3.2.2. Evaluating Micronutrient Supplementation Program

Evaluation refers to the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program. For micronutrient supplementation, this is undertaken to

• track progress toward the micronutrient supplementation program goals and objectives,
• compare health outcomes among groups,
• measures the impact in terms of behavioral changes,
• justify the need for further funding and support and
• find opportunities for continuous quality improvement.

a. The impact and outcome of the Micronutrient Supplementation interventions shall be evaluated through the conduct of national surveys such as:

• NSO-National Demographic Health Surveys or NDHS (every 5 years)
• FNRI- National Nutrition Surveys or NNS (every 5 years)
• UNICEF- Multiple Indicator Survey or MICS
• Health Facility or Household Surveys
• Family Planning Survey

b. Local government units can mount their own evaluation if their resources allow it.

c. Impact and effects of health promotion activities and efforts on the micronutrient supplementation program should also be evaluated. DOH-NCDPC, DOH-NCHP
and their regional counterparts should come up with a research agenda on micronutrient supplementation.

d. Dissemination of evaluation and research activities to stakeholders should be done through technical conferences and dissemination fora.

F. Recording and reporting micronutrient supplementation coverage and utilization

The proper recording and reporting of data/information on micronutrient supplementation provision, coverage and utilization is essential in the effective and efficient implementation of the micronutrient supplementation. Coverage is the number of children or mothers given micronutrients while utilization is the number of actual micronutrients used. Recording micronutrient supplementation data is necessary to check the status/progress of the program.

1. Case identification – The micronutrient supplementation master list is a complete listing of all the target clients for micronutrient supplementation by population groups. They also serve as references for determining if there are clients being missed in the supplementation.

   • BHWs are responsible for preparing the Micronutrient Supplementation masterlist of 0-11 month old children, 12-59 month old children, pregnant and lactating and updating it regularly or on a quarterly basis. Data can be obtained from the Operation Timbang, pregnancy tracking form, and Office of the Civil Registry.

   • Submit the updated masterlist to the midwife who is responsible for transferring data to the TCL

2. Recording - Micronutrient supplementation should be recorded in the different regular recording forms such as the ITR, TCL, summary tables, and monthly consolidation tables.

3. Reporting Forms- The forms used to report micronutrient supplementation provision are Monthly FHSIS, FHSIS Quarterly Form for Program Report, FHSIS Annual Report and GP Forms

G. Multi-sectoral collaboration

The implementation of Micronutrient Supplementation in each area requires the participation of different groups of stakeholders. While service delivery remains the primary responsibility of health care facilities, other essential measures in support to micronutrient supplementation can be provided or carried out by development partners and other offices in the LGU.

1. Undertake an inventory of the existing institutions/organizations or offices in your locality, identify possible assistance needed. These are financial in nature or technical in the form of policy and guideline formulation, health promotion, training, service delivery, monitoring and evaluation.
2. Mobilize the organizations indicated below:

- Private health care facilities for package of micronutrient supplementation services to their clients using the DOH-recommended protocol and standard.

- Other service outlets like the school clinics, company clinics, and commercial establishments and in-the-work settings for the delivery of micronutrient supplementation to wider groups of clients;

- Pharmaceutical companies for supplying micronutrients that follow the DOH-recommended dosage and preparations;

- Other local government offices like the DSWD, Dep Ed, DILG, local nutrition office, educational institutions (schools), and DOLE for better coordination of efforts and integration of services;

- Non-government organizations for service delivery, advocacy or promotion of micronutrient supplementation, financial and technical assistance;

- Provincial/city/municipal government and barangays to pitch in resources for micronutrient supplementation in the area including other officials (e.g. congressmen, senators, governors, mayors, etc.) for their support;

3. Ensure that these groups of stakeholders are regularly updated on the status of micronutrient supplementation and are given feedback on the support that they provide or contribute.
A. Introduction

The continuous provision of micronutrient supplementation is largely dependent on the available resources that the national and local governments can mobilize for the procurement of micronutrients. Given the huge amount needed to meet the micronutrient supplementation requirements of the identified priority population groups, there is a need to exhaust all possible schemes that could generate funds to finance micronutrients. In addition, funds are also needed for the following micronutrient supplementation interventions:

- Orientation/training of staff
- Regular conduct of prevalence surveys, preferably with provincial breakdown, as helpful guide in prioritizing areas and population groups to be assisted
- Development of diagnostic tools
- Design and production of IEC materials and conduct of other health promotion activities
- Program implementation review and planning
- Other operational requirements (e.g. transport cost of micronutrient supplements, monitoring and evaluation, etc.)

The role of regulations in the provision of micronutrient supplementation cannot be overemphasized. The delivery of quality micronutrient supplementation is safeguarded through the procurement of micronutrient supplements that have undergone testing and registration by the Food and Drug Agency (FDA), and to ensure the absence of poor quality micronutrient supplements in the local market. Regulating the price of micronutrient supplements can likewise facilitate the access of clients to the micronutrient supplements they need.

B. Financing micronutrient supplementation requirements

As provided for in the 1991 Local Government Code, the LGUs are primarily responsible for the provision of basic services to their constituents. Each LGU must be able to mobilize and establish financing schemes to support micronutrient supplementation interventions in their respective localities. Financing micronutrient supplementation interventions can be addressed through the following five (5) tracks that need to be organized and harmonized to ensure more efficient use of resources:

(i) Budget allocation for health
(ii) Establishing local financing schemes
(iii) Accreditation to PhilHealth Benefit Packages (e.g. Outpatient Benefit package, Malaria Outpatient Benefit Package, Newborn Care Package, etc.)
(iv) Provision of DOH grant assistance
(v) Mobilization of external donors funds
1. Local financing

1.1. Advocate to local officials to allocate budget for micronutrient supplementation interventions in their regular and supplemental budget or in their 20% development fund.

1.2. Source additional funds from the provincial governments including contributions from the barangays.

1.3. Design and implement other local financing schemes in support to micronutrient supplementation interventions as long as it does not deprive or discourage clients from accessing and availing themselves of commodities and services.

1.4. Mobilize funds directly from other officials or benefactors within and outside one’s respective jurisdictions; (e.g. local industries, balikbayan).

1.5. Coordinate with other government offices (e.g. DSWD, DepEd, etc.) for technical assistance and other contributions they can provide.

2. DOH assistance

As provided for in the newly issued AO on Micronutrient Supplementation Guideline, the provision of micronutrient supplements is a shared responsibility between the national and the local governments for micronutrient deficiency which has reached levels of public health significance. For this purpose, it is important to become aware of the local government’s role in as far as procurement of micronutrient supplements is concerned. On the other hand, one must be able to mobilize the assistance of the DOH and other development partners to meet micronutrient supplementation requirements.

2.1. Mobilize the following micronutrient supplements from the DOH
   • Vitamin A, 100,000 IU for 6-11 month-old children (during GP)
   • Vitamin A, 200,000 IU for 12-59 month-old children (during GP)
   • Iron supplements for LBW infants

2.2. Prioritize procurement for the following micronutrient supplements requirements through your own LGU budget
   • Vitamin A for children with high-risk conditions
   • Vitamin A for lactating/post-partum women
   • Therapeutic dosages of vitamin A for those with xerophthalmia
   • Iron/folic acid for children, pregnant and lactating women including adults with anemia
   • Zinc supplements for children with diarrhea
   • Iodine capsule for pregnant and lactating women

2.3. Coordinate with DOH, CHDs, provincial government units, and development partners for a rationalized sharing of resources for the following micronutrient supplementation requirements:
   • Iron drops/syrup or Micronutrient Powder for 6-23 month-old children
   • Iron/Folic acid for pregnant women and lactating women
   • Iron/Folic acid for non-pregnant and non-lactating women of reproductive age
   • Iodine supplements for pregnant and lactating women
3. PhilHealth reimbursements

3.1 Maximize the different PhilHealth Benefit Packages to help finance Micronutrient Supplementation needs. The following are PhilHealth Benefit Packages which can be tapped:

a. Outpatient Benefit Package. You can use a portion of the 80% of the capitation funds received from PhilHealth to procure additional Micronutrient Supplementation needs;

b. Maternal Care Package. You can finance the micronutrient supplementation requirement of your PhilHealth-enrolled pregnant and post-partum women who delivered in MCP-accredited health facilities through reimbursement from PhilHealth;

c. Malaria Outpatient Benefit Package. The micronutrient supplements supply of malaria clients can also be reimbursed through this benefit package from PhilHealth.

3.2 To avail of the above packages, one must undertake the following:

a. Ensure that the facility has met and sustained the accreditation requirements of PhilHealth;

b. Advocate among local officials to enrol indigent clients to the PhilHealth Indigency Program to make them eligible for PhilHealth reimbursements;

c. Ensure that the micronutrient supplementation supplies procured are the ones listed in the Philippine National Drugs Formulary (PNDF) to make these eligible for reimbursement by PhilHealth.

3.3 Advise clients to avail themselves and utilize the services of their health facilities and the benefits from PhilHealth.

4. Resource mobilization from development partners, NGOs and the Private Sector

Mobilize resources from the donor community and other development partners.

a. Develop capability or skills in formulating project proposals which can be forwarded to the donor community for funding support;

b. Mobilize the private sector. Negotiate with the employers (e.g. private companies, private institutions, HMOs, CBAs, etc.) to finance the micronutrient supplementation requirement, particularly iron supplement and vitamin A, of employed women, especially the pregnant and lactating women and also the non-pregnant/non-lactating of reproductive age as part of the company’s staff incentive program;
c. Coordinate with school authorities, particularly high school and college departments in the private sector if they can subsidize the iron/folic acid supplementation of their students who are female adolescents (10-14 years old) and non-pregnant/non-lactating women of reproductive age (15-49 years old);

d. Do the same for religious organizations to support their youth groups as well as NGOs running and operating teen centers.

C. Regulations for micronutrient supplementation

The overall purpose of regulatory measures in support of micronutrient supplementation is to ensure the quality of micronutrient supplementation provision by health care providers, and ascertain that the costs of micronutrient supplements in the local market are within the reach of the clients. Regulatory measures which can be promoted among concerned health offices and stakeholders include the following:

1. Procurement of quality micronutrient supplements

1.1. Ensure that procurement of micronutrient supplements adhere to DOH standards. Patronize only micronutrient supplements that have passed the DOH standards, and those listed in the Philippine National Drug Formulary (PNDF);

1.2. Establish own list of essential drugs which includes micronutrients following the technical specifications recommended by DOH;

1.3. Ensure that every micronutrient supplement LGU procured is reviewed and tested by local therapeutic committee.

2. Pricing of micronutrient supplements

Coordinate with DTI for the regular monitoring of micronutrient supplements in terms of price/cost in the local market to improve clients’ access to these products.

Support the implementation of other regulations that indirectly support the implementation of micronutrient supplementation:

2.1 Health facilities meeting the licensing requirements of DOH

2.2 Adherence of health facilities and health staff to the Milk Code provision

2.3 Compliance of salt manufacturers/importers to iodize their salt products; and,

2.4 Compliance of health facilities and households with the provisions of the Environmental Sanitation Code.
A. Introduction

The efficient and effective management and implementation of micronutrient supplementation interventions necessitates the strong coordination across all levels of administration (national-regional-local) and collaboration among multi-sectoral groups. The roles and functions of agencies and groups of stakeholders involved in the design, management and implementation of micronutrient supplementation interventions in the country are outlined for reference and guide.

B. Strengthening Coordination Among Implementing Agencies/Offices

The implementation of the micronutrient supplementation interventions across levels and at each level can be further improved through the following mechanisms:

1. Regular National Consultative Meetings. Annual or semi-annual consultative meeting between the national DOH and the CHDs is central to the unified direction and well-coordinated implementation of plans for micronutrient supplementation in the country. The GP Summit, organized once every 2 years, serves as a venue to disseminate new policies and directions on the micronutrient supplementation program, provides technical updates on micronutrient supplementation interventions, and allows the sharing of experiences from the field and across related projects and innovative efforts.

2. Regional/Local Consultative Meetings. The same consultative conferences can be organized by each region with their respective provincial/city Nutritionists or Nutrition Program Coordinators. Provinces are encouraged to replicate the activity with their respective municipal managers and implementers.

3. Integration of Micronutrient Supplementation Updates with Related Events. Coordination across levels of administration can be further strengthened by integrating micronutrient supplementation updates with other events or conferences organized on related programs. One event that is celebrated at all levels of administration is the Nutrition Month during the month of July, where micronutrient supplementation updates are promoted and disseminated. Coordination issues and concerns can also be made part of technical conferences organized to disseminate results of surveys and special studies.

4. Orientation of Newly-Elected Officials. The CHDs, through the DOH Representatives or members of the Local Health Boards, in partnership with their local counterparts, usually organize orientations and briefings to newly-elected local officials on health programs and concerns. Micronutrient Supplementation should be part of this orientation and briefing.
C. **Strengthening Multi-Sectoral Coordination for MS**

Efforts in the prevention and control of micronutrient deficiency problems in the country must also be well-coordinated among the various groups of stakeholders, both the health and non-health sectors.

1. **Technical Working Group at the National Level.** The DOH has long established the National Technical Working Group on Micronutrient Supplementation composed of representatives from the DOH, other government agencies such as the National Nutrition Council (NNC) and Food and Nutrition Research Institute (FNRI), as well as representatives from the private sector and development partners, namely: Nutrition Center of the Philippines (NCP), World Health Organizations (WHO), UNICEF, Helen Keller International (HKI), and the USAID-funded A2Z Project. Members of professional organizations, the academe and other national government agencies like DSWD and DILG are from time to time invited to participate in the TWG particularly on agendas relevant to their mandate and expertise. This TWG has been an effective mechanism for coordination of micronutrient supplementation efforts and assistance for the country. The TWG’s link with the Food Fortification Technical Working Group and the Maternal Newborn Child Health and Nutrition (MNCHN) Task Force must be strengthened.

2. **Coordination Between DOH and the Pharmaceutical Industry.** The DOH at the national level needs to further strengthen its collaborative work with the pharmaceutical industry, primarily for the local manufacture of micronutrient supplements that meet the DOH technical recommendations, facilitate micronutrient supplements registrations, and widen the delivery and distribution channels from Metro Manila to the provinces and municipalities. On the other hand, micronutrient supplements that are not locally available can be sourced out from abroad through the Philippine Trading Importation Center (PITC). With the PITC’s network of Botika ng Bayan (BNB) in the country, micronutrient supplement products from abroad can be channelled through these outlets.

3. **Coordination at the sub-national and local levels.** Existing Provincial/City/ Municipal Nutrition Committees serve as the technical working group at the local level which can oversee and coordinate MS-related activities in the area. Regular meetings of new committee need to be strengthened. Other LGUs without committees can tap other existing avenues (e.g. local health board), where other stakeholders discuss MS issues and concerns.

4. **Collaboration With Other Government Agencies and Other Non-Health Institutions.** The provision of micronutrient supplementation as mentioned in the earlier chapters would benefit from a strengthened, coordinated effort between DOH, LGUs, other local government offices, other institutions in the private sector, and development partners.

4.1. Foremost is the coordination with the education sector where micronutrient supplementation is not only to be integrated in the school curriculum, but also for school campuses and organizations to serve as venue in reaching out to the adolescents and women of reproductive age for iron/folate provision.
4.2. Coordination between the local health office and the social welfare office can result in better integration of micronutrient supplementation provision with the ongoing programs and interventions of the social welfare office. Opportunities that can be explored will include the provision of micronutrient supplementation to the pre-schoolers and the integration of micronutrient supplementation during regular nursery classes. At the national level, DOH and DSWD can also expand the coverage of the Conditional Cash Transfer to include micronutrient supplementation provision.

4.3. Provision of micronutrient supplementation can also be expanded in the workplace. Employers of women of reproductive age, whether pregnant, lactating or not, can be instruments in providing micronutrient supplementation as one of their staff benefits and incentives. The DOH and LGUs alike can establish partnerships with the different institutions for this purpose.

4.4. Participation of the church, other youth organizations in the area (e.g. Sanggunian Kabataan), and the teen centers put up by NGOs could be a venue for reaching out to adolescent females for their iron supplementation requirements.

4.5. Coordination with the Municipal/Barangay Sangguniang Pangkabataan (SK) and Barangay Captains could be tapped to facilitate budget allocation of SK for micronutrient supplements like iron tablets for female adolescents.

D. Roles and Functions

The following summarizes the roles and functions of groups of stakeholders involved in the design, management and implementation of micronutrient supplementation interventions in the country.

D.1 Department of Health at the National Level

1. National Center for Disease Prevention and Control (NCDPC)

1.1. Lead in the dissemination of the Revised Micronutrient Supplementation Policy and Guidelines and advocate for its adoption and implementation among concerned stakeholders.

1.2. Coordinate and provide technical inputs in the design, installation and operationalization of management systems (e.g. staff training, logistics management, recording/reporting system, referral, etc.) and other micronutrient supplementation initiatives (e.g. New Garantisadong Pambata, health promotion for micronutrient supplementation).

1.3. Allocate funds for micronutrient supplement requirements and advocate for additional resources to strengthen and expand coverage of the micronutrient supplementation program.
1.4. Coordinate with the DOH-Procurement Service for the timely procurement, allocation and delivery of micronutrient supplementation to CHDs.

1.5. Coordinate with DOH Food and Drug Agency, pharmaceutical industry and other concerned agencies to facilitate the availability and accessibility of affordable and quality micronutrient supplementation nationwide.

1.6. Monitor LGU compliance to the revised micronutrient supplementation policy and Guide together with CHDs.

1.7. Review and revise Micronutrient Supplementation Policy and Guide based on body of technical evidences.

1.8 Organize panel of micronutrient supplementation experts and other relevant multi-sectoral bodies to help in setting policies, directions and technical guidelines on micronutrient supplementation.

2. National Center for Health Promotion

2.1 Develop prototype materials on micronutrient supplementation in coordination with DOH-NCDPC.

2.2 Provide technical assistance to CHDs to help LGUs adopt and implement health promotion for behavior change (HPBC) activities for micronutrient supplementation.

2.3 Produce, distribute and disseminate (including placement in various media outlets) limited copies of all types of HPBC materials to CO, CHDs, DOH hospitals, and other development partners and stakeholders.

2.4 Take the leadership in the planning and implementation of HPBC for micronutrient supplementation programs, including partners and stakeholders meetings.

2.5 Serve as a clearing unit for all HPBC plans, programs and activities and all HPBC materials that carry the DOH Logo developed in-house, by outsourced service providers, development partners and/or other stakeholders.

3. National Epidemiology Center

3.1 Provide accurate, timely and complete data as basis for policy decisions, strategic actions and prioritization of resources and efforts.

3.2 Enhance FHSIS to include other micronutrient supplementation indicators based on the new MS policy.

3.3 Design tools to improve data collection and skills of regional/ local health managers/staff, including development of compliance monitoring mechanisms.
4. Health Emergency Management Staff

4.1 Lead in integrating plans for implementation of micronutrient supplementation during an emergency/disaster into existing platform.

4.2 Coordinate with the Nutrition Cluster Partners for micronutrient supplementation Service Delivery during emergency/disaster.

4.3 Mobilize resources to augment micronutrient supplementation supply during emergency/disaster.

4.4 Facilitate the conduct of capacity building of health workers and/or private providers on micronutrient supplementation in emergency/disaster.

4.5 Participate in the conduct of monitoring coverage, compliance, and improved feeding practices in emergency/disaster.

4.6 Recommend strategy, based on results of formative research, to select channels, identify “doable actions”, design messages and develop materials for micronutrient supplementation in emergency/disaster.

5. Procurement Service/Material Management Division

5.1 Ensure timely procurement of micronutrient supplements.

5.2 Ensure proper storage, timely distribution and delivery of commodities to all CHDs.

6. Foods and Drug Administration

6.1 Facilitate registration of micronutrient supplements.

6.2 Monitor compliance of LGUs and other organizations to procure DOH-recommended micronutrient supplements.

7. PhilHealth

7.1 Review the use of micronutrient supplementation provision as a quality consideration during the assessment of renewal of the health facilities’ accreditation to Out-patient Benefit Package (OPB).

7.2 Intensify promotion for LGUs’ enrolment to PhilHealth, and to buy into the accreditation for various benefit packages.

8. National Nutrition Council

8.1 Mobilize resources in support of micronutrient supplementation.
8.2 Coordinate nutrition activities, as these have an impact on the micronutrient supplementation program and vice versa.

8.3 Evaluate progress of the Micronutrient Supplementation Policy and Guide implementation as part of Monitoring and Evaluation of Local Level Program Implementation (MELLPI).

8.4 Check whether local budget for nutrition includes procurement of micronutrient supplements.

9. Food and Nutrition Research Institute

9.1 Undertake Research and Development (R and D) and Science and Technology (S and T) activities related to micronutrient deficiencies.

9.2 Generate resources to conduct National Nutrition Surveys and other R and D and S and T activities.

9.3 Disseminate results of R and D and S and T activities to all concerned partners as bases for development planning.

9.4 Participate in the review and update of the Micronutrient Supplementation Policy and Guidelines.

D.2. Centers for Health Development (CHD)

1. Disseminate the revised Policy and Guidelines on Micronutrient Supplementation and advocate for its adoption and implementation by LGU health systems in the different localities within their respective regions.

2. Ensure availability of micronutrient supplements in coordination with the DOH-NCDC and LGUs by: (i) facilitating the distribution of supplements according to the allocation requirements; (ii) quarterly monitoring of supplement stocks and utilization; (ii) allocating their CHD budget for micronutrient supplementation; and, (iv) maintaining stock of micronutrients for emergency situations.

3. Provide technical assistance to LGUs in organizing micronutrient supplementation activities and developing relevant technical references and IEC materials.

4. Adapt, add/or reproduce micronutrient supplementation materials for distribution and dissemination including placement in various media outlets.

5. Generate additional resources to strengthen the implementation of the revised policy and guidelines.

6. Establish network with media, GOs, NGOs, faith based organizations, local commercial and industrial companies, LGUs, and other development partners.
7. Formulate and implement advocacy plans to generate stakeholders’ support, particularly the local officials.

8. Provide technical leadership in the development and implementation of micronutrient supplementation health promotion for behavior change plans and activities in the region including appropriation of resources.

9. Monitor the implementation of the revised policy and guide in both the public and private hospitals, and in different localities in their respective regions.

10. Undertake regular review with LGUs on the progress of the micronutrient supplementation policy and guidelines.

D.3 Local Government Units

1. Provincial/City Health Office (P/CHO)
   1.1 Orient/train private and public health workers on the revised micronutrient supplementation policy/guidelines.
   1.2 Advocate with municipalities/cities and other concerned agencies and stakeholders to adopt and implement the revised policy and guidelines.
   1.3 Generate and allocate resources in support to micronutrient supplementation provision (e.g. counterpart funds for training, procurement of additional micronutrient supplementation, etc.).
   1.4 Ensure proper storage, regular inventory of stocks, allocation and timely distribution of micronutrient supplements in hospitals and municipalities/cities.
   1.5 Ensure hospitals to include micronutrient supplementation guides in the hospitals treatment/care protocols.
   1.6 Ensure timely reporting of utilization and coverage.
   1.7 Monitor and supervise the different activities of nurses, midwives and other health personnel in the implementation of micronutrient supplementation.
   1.8 Consolidate and analyze records and reports of micronutrient supplementation.
   1.9 Conduct data quality checks of micronutrient supplementation reports and records;

2. Rural Health Units/Health Centers
   2.1 Prepare/update master list of targeted clients
   2.2 Screen and identify clients to be given micronutrient supplementation.
   2.3 Provide the necessary micronutrient supplements according to protocol.
2.4 Identify other service channels where micronutrient supplementation provision can be integrated.

2.5 Conduct follow-up visits and provide necessary supplements needed in case they did not visit the health facility.

2.6 Organize health staff and mobilize all concerned to participate in GP.

2.7 Forecast micronutrient supplementation requirements of identified targets and develop a plan for meeting the micronutrient supplementation requirements, and incorporate into the annual operational plan and procurement plan.

2.8 Allocate and do timely distribution of supply to the barangay.

2.9 Advocate among LCEs and other local officials to allocate budget for micronutrient supplementation, i.e logistics, transportations and health promotion activities.

2.10 Segment, if necessary, to identify clients to be fully subsidized from those who could pay.

2.11 Ensure proper storage of micronutrient supplementation supply and do regular inventory of stocks.

2.12 Train health staff and community volunteers on micronutrient supplementation.

2.13 Ensure proper recording of micronutrient supplementation provision and utilization and the timely submission of reports to appropriate levels.

2.14 Plan/update, implement health promotion for behavior change activities on micronutrient supplementation, including development of local micronutrient supplementation promotion materials and/or reproduce materials from CHDs.

2.15 Monitor and supervise provision, utilization and coverage of micronutrient supplementation and health promotion for behavior change activities on micronutrient supplementation.

D.4. Regional, Provincial and District Hospitals

1. Integrate the updated Micronutrient Supplementation policy and guide into their treatment protocol.
2. Provide budgetary allocation for the procurement of micronutrient supplements and conduct of health promotion for behavior change activities on micronutrient supplementation.
3. Participate in the nationwide campaign – *Garantisadong Pambata*.
4. Conduct orientation/training of hospital staff on the Micronutrient Supplementation policy and guide.
5. Organise and conduct patient-integrated nutrition education in the out-patient and in-patient departments.
6. Coordinate with PHO/RHUs regarding referral and follow-up of clients.
D.5. Development Partners (professional organizations, donors, NGOs, civic organizations, academe, private partners, etc.)

1. Participate in the review and revision of the Micronutrient Supplementation Policy and Guide.

2. Help promote PIPH process at the local level as basis for determining LGUs’ requirements for micronutrient supplementation assistance.

3. Mobilize or provide resources to augment micronutrient supplementation supply at the local level.

4. Assist in the review and update of training programs on micronutrient supplementation.

5. Participate in monitoring the utilization and coverage of micronutrient supplementation.

6. Support the national micronutrient supplementation campaigns like GP.
ANNEXES
ANNEX 1. ADMINISTRATIVE ORDER NO. 2010-0010: REVISED POLICY ON MICRONUTRIENT SUPPLEMENTATION TO SUPPORT ACHIEVEMENT OF 2015 MDG TARGETS TO REDUCE UNDER-FIVE AND MATERNAL DEATHS AND ADDRESS MICRONUTRIENT NEEDS OF OTHER POPULATION GROUPS

Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

ADMINISTRATIVE ORDER
2010 - 0010

APR 19 2010

SUBJECT: Revised Policy on Micronutrient Supplementation to Support Achievement of 2015 MDG Targets To Reduce Under-five and Maternal Deaths and Address Micronutrient Needs of Other Population Groups

I. RATIONALE

Several developments have taken place since the current version of the Micronutrient Supplementation (MS) Guideline was formulated five years ago. New preparations of micronutrient supplements that could lead to control of the deficiencies have been developed and are now available in the country. In 2007, zinc supplementation was introduced as an essential adjunct to oral rehydration therapy (ORT) in the management of diarrhea among children. New scientific evidence on the efficacy of specific MS, changes in the nutrient adequacy levels of the population and both national prevalence surveys require that a review and updating of the current policy on targeting and prioritization of MS be undertaken. It is necessary that the target populations for micronutrient supplementation identified in the past be updated given the new data on the prevalence of micronutrient deficiencies.

MS alongside with diet diversification and food fortification comprise the three-pronged strategy identified by the government to combat micronutrient deficiency problems in the country. The MS Program is dependent on the progress of diet diversification, food fortification efforts, and the level of public health significance of the prevailing micronutrient deficiencies. Diet diversification which aims to provide essential micronutrients needed by the body through diet enhancement remains the cornerstone of this strategy. The use of fortified foods on the other hand remains uneven among the general population. Since both interventions have yet to generate the desired level of micronutrient adequacy among the general population, there is a need to further strengthen the micronutrient supplementation with the aim of contributing to the overall improvement of nutritional status of Filipinos. In that light, the DOH’s current policies and guidelines pertinent to its MS Program need to be updated.

II. DECLARATION OF POLICY


III. GUIDING PRINCIPLES

The updated MS Policy and Guidelines is governed by the following principles:
A. Rights-Based Approach. MS in the country is anchored on our respect of the rights of children and women as stipulated in our Philippine Constitution, the Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination Against Women.

B. Systems Approach. Sustained MS provision is contingent on the adoption of a systems approach that institutes fundamental reforms in health service delivery, governance, financing and regulations.

C. Life-Cycle Based Intervention. The MS policy must be aligned with the requirements and conditions of individual clients at various stages of the life-cycle.

D. Equity. Population groups with the least capacity to access MS and those most vulnerable to the deficiency must be given top priority in MS assistance.

E. Complementation of Interventions. MS yields maximum results if complements other parallel but integrated interventions like deworming, environmental sanitation, healthy lifestyle promotion, immunization and other relevant measures.

F. Evidence-Based Interventions and Approaches. Policies and guidelines shall be developed based on recent data gathered through prevalence surveys, efficacy studies and other research findings done locally and globally. Recommendations from international organizations will also be utilized but in consideration of the appropriateness with the local context.

G. Integrated Service Delivery. Service integration in MS delivery must be observed in four tracks. First is the alignment of MS with the other existing public health program packages cascading from the national to local level. Second is the conscious and purposive integration of MS at each service delivery point and interface between the health care provider and client both in public and private facilities. Third is the continuity in provision of MS through appropriate referrals and follow-up of clients especially those that require extended period of supplementation over time. Fourth is for MS provision to take place in the health and non-health sector settings, particularly in schools, workplaces, malls, etc.

IV. OBJECTIVES

In general, this policy and guide aims to ensure the appropriate provision of quality MS in the country. Specifically, it aims to:

(1) Guide health workers and providers in administering micronutrient supplements to identified population groups and client needs;

(2) Promote the compliance and adherence among DOH offices, the LGUs and private sector to the revised policy and guidelines; and

(3) Generate the support of other stakeholders in implementing the MS policy and guide throughout the country.

V. SCOPE OF APPLICATION

This order shall apply to all national, regional and local government offices, public and private health facilities, NGOs, development partners and other stakeholders whose functions and activities contribute to the delivery and provision of MS nationwide.
### VI. DEFINITION OF TERMS

1. **Diet Diversification**
   - It is the changing of dietary practices that affect young children, pregnant and lactating mothers, toward consumption of foods adequate in energy and rich in micronutrients, especially those in short supply in the current diet carried out through nutrition information and education.

2. **Emergency**
   - It is an extraordinary situation wherein people are unable to meet their basic survival needs, due to serious and immediate threats to human life. These usually result from disaster, environmental degradation, among others.

3. **Elderly**
   - These are persons who are more than 60 years old as defined by the Senior Citizen’s Act in the Philippines.

4. **Food Fortification**
   - It is one of the interventions to reduce micronutrient deficiencies. It is the “process whereby nutrients are added to foods to maintain or improve the quality of the diet of a group, a community or a population. Examples are flour fortified with Vitamin A and iron, sugar and oil with Vitamin A, rice with iron, and salt with iodine.

5. **Health providers**
   - Refers to individual health staff or any health care facilities (BHS, RHU/health center, private clinics, hospitals, lying-in/birthing clinics, school clinics, corporate clinics, etc.) that provides MS.

6. **Iodine Deficiency Disorders**
   - Refers to the ill-effects of iodine deficiency in a population that can be prevented by ensuring that the population has adequate intake of iodine. It is the most common cause of preventable mental retardation. It also affects the mother’s reproductive functions and impedes children’s learning ability.

7. **Iron Deficiency Anemia**
   - It is a disorder resulting from the decrease in the number of red blood cells due to lack of iron. It is the most common nutritional deficiency in the world and occurs if the amount of iron absorbed is too little to meet the body’s needs.

8. **Micronutrient**
   - A dietary element essential only in small quantities.

9. **Micronutrient Supplement**
   - Vitamin and mineral supplements are sources in concentrated forms of those nutrients alone or in combinations, marketed in forms such as capsules, tablets, powders, solutions, etc. that are designed to be taken in measured small-unit quantities but are not in a conventional food form and whose purpose is to supplement the intake of vitamins and/or minerals from the normal diet.

10. **Micronutrient Supplementation**
    - It is a short term intervention intended to correct high levels of micronutrient deficiencies by providing large doses of micronutrients immediately until more sustainable food-based approaches (e.g. food fortification and diet diversification) are put in place and become effective.
11. Public Health Importance

Refers to the cut-off points recommended by WHO where a micronutrient deficiency is to be considered a public health concern necessitating the state or country to intervene.

<table>
<thead>
<tr>
<th>- for Iron Deficiency Anemia</th>
<th>Category of Public Health Significance</th>
<th>Prevalence of Anemia</th>
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<tbody>
<tr>
<td>Severe</td>
<td></td>
<td>≥ 40%</td>
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<tr>
<td>Moderate</td>
<td></td>
<td>20.0-39.9%</td>
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<tr>
<td>Mild</td>
<td></td>
<td>5.0- 19.9%</td>
</tr>
<tr>
<td>Normal</td>
<td></td>
<td>&lt; 5.0%</td>
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- for Vitamin A Deficiency

More than 15% deficient to low with Vitamin A is considered of public health importance.

Deficient: Plasma Retinol (Vitamin A) less than 10 μg/dL/0.35 Umol/L
Deficient to Low: Plasma retinol (Vitamin A) less than 20 μg/dL/0.70 umol/L

- for Iodine Deficiency Disorders

The indicator of iodine deficiency “elimination” is a median value of 100 μg/L, in the general population, and not more than 20% of the UIE should be below 50 μg/L (ICC-IDD). The UIE levels for adequacy among pregnant women is 150 μg/L.

12. Vitamin A Deficiency

A level of depletion of total body stores of retinol and its active metabolites such that normal physiologic function is impaired.

13. Xerophthalmia

A term used to include all signs and symptoms affecting the eye that can be attributed to Vitamin A Deficiency.

VII. GENERAL GUIDELINES

A. Micronutrient supplementation shall be adopted as an intervention to address micronutrient deficiency given the following conditions:

- population groups with micronutrient deficiency prevalence that is at a level of public health importance,
- micronutrient needs of population groups cannot be met through regular diet and use of fortified foods,
- use of MS is proven efficacious and safe, and
- administration of MS has significant effects on health and welfare at each stage in the life cycle and on the next generation.

B. Micronutrient supplementation is recommended for the following priority age and physiological groups:

- 0-59 months old children
- pregnant and lactating women
- non-pregnant and non-lactating women of reproductive age (15-49 years old)

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C. A package of micronutrient supplements in the right dosage, timing, frequency and duration shall be provided to the above priority groups according to their needs at various stages of their life cycle.

D. Priority shall also be given to population groups and individuals in special situations or with particular conditions:
- during emergencies
- those residing in areas endemic with malaria and schistosomiasis
- individuals who are clinically diagnosed with micronutrient deficiencies e.g. xerophthalmia

E. Therapeutic dosage may be given to individuals with established deficiencies even if micronutrient supplementation is not recommended for the following age groups:
- 5-9 years old children
- adults, 50-60 years old
- elderly, > 60 years old

F. Delivery of the MS Packages shall be integrated into the existing Maternal, Newborn and Child Health and Nutrition (MNCIIN) service delivery channels and through other avenues that could best reach the targeted clients. These may include non-traditional service settings such as the schools, the workplaces, etc. to widen reach and coverage.

G. LGU’s capacity to provide quality MS to priority population groups shall be enhanced particularly in the area of MS program management, diagnosis and MS administration, counseling and information, and systems design and establishment for client referral, recording and reporting, follow-up and tracking.

H. Financing of essential MS must be sustained and secured.

I. MS information management shall be strengthened for better planning and implementation.

J. Promotion of MS shall be intensified to generate the desired behaviors of targeted clients and other groups of stakeholders. Promotion efforts shall be focused towards improving the targeted clients’ awareness and appreciation of MS benefits and its negative consequences if deficiencies remained uncorrected, wider adoption by LGUs of the recommended MS packages.

K. Continuous availability of MS supply shall be ascertained at the local level.

L. Monitoring and evaluation of the MS program must be improved by expanding the coverage of scope to be tracked, integrating MS as part of the regular supervision visits at the local level, and inclusion of the review of the MS intervention in the regular Program Implementation Review (PIR).

A Manual of Operations on Micronutrient Supplementation shall be developed to detail the standards and protocols to operationalize the above policies and guidelines.
VIII. ROLES AND RESPONSIBILITIES

A. Department of Health at the National Level

1. National Center for Disease Prevention and Control (NCDPC)

The DOH-NCDPC is primarily responsible in the overall execution of the revised policy and guidelines on Micronutrient Supplementation. It will undertake the following tasks:

1.1 Lead in the dissemination of the Revised MS Policy and Guide and advocate for its adoption and implementation among concerned stakeholders;
1.2 Coordinate and provide technical inputs in the design, installation and operationalization of management systems (e.g. staff training, logistics management, recording/reporting system, referral, etc.) and other MS initiatives (e.g. Garantisadong Pambata, health promotion for MS);
1.3 Allocate funds for micronutrient supplement requirements based on National Objectives for Health (NOH) targets that should be interpreted yearly and on the Medium Term Expenditure Framework (MTEF);
1.4 Include micronutrient package in its procurement plan and submit the necessary documents (annual procurement plan (APP), allocation list, among others) in a timely manner to the DOH-Procurement Service to ensure timely procurement, allocation and delivery of MS to CHDs;
1.5 Coordinate with FDA, pharmaceutical industry and other concerned agencies to facilitate the availability and accessibility of affordable and quality MS nationwide;
1.6 Monitor LGU compliance to the revised MS Policy and Guide together with CHDs;
1.7 Review and revise MS Policy and Guide based on body of technical evidences;
1.8 Organize panel of MS experts and other relevant multi-sectoral body to provide support in reviewing and updating policies, directions and technical guides on MS.

2. National Center for Health Promotion

2.1 Develop prototype materials on MS in coordination with DOH-NCDPC;
2.2 Provide technical assistance to CHDs to help LGUs adopt and implement behavioral change measures towards desired MS behaviors;

3. Procurement Service/Material Management Division

3.1 Ensure timely procurement of micronutrient supplements;
3.2 Ensure proper storage, timely distribution and delivery of commodities to all CHDs.

4. Food and Drug Administration

4.1 Facilitate registration of MS products as deemed appropriate;

5. PhilHealth

5.1 Review the use of MS provision as a quality parameter during the assessment of renewal of the health facilities’ accreditation to Outpatient Benefit Package (OPB);
5.2 Intensify promotion for LGUs’ enrollment to PhilHealth, and to buy-in to the accreditation for various benefit packages;
5.3 Promote accreditation of all Rural Health Units for Mother and Child Package and Out Patient Benefit packages;
5.4 Intensify enrollment campaign for sponsored program and individually-paying program


6.1 Mobilize resources in support to MS;
6.2 Coordinate nutrition activities as these impact on the MS program and vice versa;
6.3 Evaluate progress of the MS Policy and Guide implementation as part of Monitoring and Evaluation of Local Level Plan Implementation (MELLPi);
B. Food and Nutrition Research Institute
1. Undertake Research and Development (R and D) and Science and technology (S and T) activities related to micronutrient deficiencies;
2. Generate resources to conduct national nutrition surveys and other R and D and S and T activities/studies;
3. Disseminate results of R and D and S and T activities to all concerned partners as basis for development planning;
4. Participate in the review and update of the MS Policy and Guide.

C. Centers for Health Development (CHD)
1. Disseminate the revised Policy and Guidelines on Micronutrient Supplementation and advocate for its adoption and implementation by LGU health systems in the different localities within their respective regions;
2. Ensure availability of micronutrient supplements in coordination with the DOH-NCDPC and LGUs by: (i) facilitating the distribution of supplements according to the allocation requirements; (ii) quarterly monitoring of supplement stocks and utilization; and (iii) maintaining stock of micronutrients for emergency situations;
3. Provide technical assistance to LGUs in organizing MS activities and developing relevant technical references and IEC materials;
4. Generate additional resources to strengthen the implementation of the revised policy and guidelines;
5. Formulate and implement advocacy plans to generate stakeholders’ support, particularly the local officials;
6. Monitor the implementation of the revised policy and guide in both public and private hospitals, and in different localities in their respective regions;
7. Undertake regular review with LGUs on the progress of the MS policy and guide.

D. Local Government Units

1. Provincial/City Health Office (P/CHO)
   1.1 Orient/train private and public health workers on the revised MS policy/guide;
   1.2 Advocate with municipalities/cities and other concerned agencies and stakeholders to adopt and implement the revised policy and guidelines;
   1.3 Generate and allocate resources in support to MS provision (e.g. counterpart funds for training, procurement of additional MS, etc.);
   1.4 Ensure proper storage, regular inventory of stocks, allocation and timely distribution of MS hospitals and municipalities/cities;
   1.5 Ensure hospitals to include MS guides in the hospitals treatment/care protocols;
   1.6 Ensure timely reporting of utilization and coverage;

2. Rural Health Units/Health Centers
   2.1 Prepare/update masterlist of targeted clients;
   2.2 Screen and identify clients to be given micronutrient supplementation;
   2.3 Provide the necessary micronutrient supplements according to protocol;
   2.4 Identify other service channels where MS provision can be integrated;
   2.5 Organize health staff and mobilize all concerned to participate in GP;
   2.6 Forecast MS requirements of identified targets and develop a plan for meeting the MS requirements, and incorporate into the annual operational plan;
   2.7 Advocate among LCEs and other local officials to allocate budget for MS;
   2.8 Segment if necessary clients to be fully subsidized from those who could pay;
   2.9 Ensure proper storage of MS supply and do regular inventory of stocks;
   2.10 Train health staff and community volunteers on MS;
   2.11 Ensure proper recording of MS provision and utilization and the timely submission of reports to appropriate levels;
2.12 Disseminate essential information on MS to clients and community members.
2.13 Monitor and supervise provision, utilization and coverage of MS

E. Regional, Provincial and District Hospitals
1. Integrate the updated MS policy and guide into their treatment protocols;
2. Provide budgetary allocation for the procurement of MS;
3. Participate in the nationwide campaign – Garantisadong Pambata;
4. Conduct orientation/training of hospital staff on the MS policy and guide;
5. Conduct integrated nutrition education activities to patients;
6. Coordinate with PHO/RHUs on referral and follow up of clients.

F. Development Partners (professional societies, donors, NGOs, civic organizations, academe, private partners, etc.)
1. Participate in the review and revision of the MS Policy and Guide;
2. Help promote PIPHI process at the local level as basis for determining LGUs’ requirements for MS assistance;
3. Mobilize or provide resources to augment MS supply at the local level;
4. Assist in the review and update of training programs on MS;
5. Participate in monitoring the utilization and coverage of MS;
6. Support the national MS campaigns like GP;

VIII. REPEALING CLAUSE
Administrative Order 19 s.2003 and all other orders and related issuances inconsistent with the provisions of this issuance are hereby rescinded.

IX. EFFECTIVITY
This order takes effect immediately.

ESPERANZA I. CABRAL, MD
Secretary of Health

ADMINISTRATIVE ORDER
No. 2007-0045

SUBJECT: Zinc Supplementation and Reformulated Oral Rehydration Salt in the Management of Diarrhea among Children

I. RATIONALE

Diarrhea remains to be the leading cause of morbidity and mortality in children under five years old around the world. It is estimated to cause more than 3 million deaths of children in developing countries each year (Bhutta et al., 2000). It also contributes to malnutrition among children who survived the disease. In the Philippines, diarrhea is one of the ten leading causes of death among children and the prevalence has not improved in the last five years. The National Demographic and Health Survey (NDHS) in 2003 reported that 11 percent of the children under five years of age had diarrhea and this figure indicated an increase of 57% from the 7% level in the 1998 NDHS data. The 2006 Dept of Health Field Health Service Information System reported that in 2006, Acute Watery Diarrhea is second among the ten leading causes of morbidity. There were 572,256 cases with a rate of 707.7 per 100,000 population of children under five years of age. Death due to acute diarrhea is usually due to severe dehydration which can be prevented with proper management.

The WHO and UNICEF recommends to Member States the new guidelines in the management of acute diarrhea that will shorten its duration, lessen the episodes and prevents immediate recurrence. Thus, an updated guideline is needed to adequately manage the disease.

The potential goals in the management of diarrhea are correction of dehydration and electrolyte imbalance, reduction of diarrheal dehydration and stool output, prevention of recurrence, prevention of malnutrition related complications, improvement of mucosal barrier and maximization of nutrient bioavailability. (Sathiyasekaran, 2005).

For over 25 years, Oral Rehydration Salts (ORS) solution has been used to prevent and treat dehydration from diarrhea, as recommended by WHO and UNICEF. This single formulation of glucose-based ORS has successfully contributed to the global reduction in mortality from diarrhea during that period. But despite this significant contribution of the standard ORS, it has been well established that it does not reduce stool output or duration of diarrhea. For this reason, researches have been made to develop an “improved” or “newly formulated” ORS. This would be at least as safe and effective as the standard ORS but, in addition, it would reduce the stool output.

Smoking will kill you!
The newly formulated ORS contains reduced amount of glucose and salts and total osmolarity to increase water and electrolyte adsorption. Hypomolar solution will shorten the duration of diarrhea and the need for unscheduled intravenous fluids. Studies have shown that this newly formulated ORS solution reduces the need for supplemental IV fluid therapy, the incidence of vomiting and stool volume by 33%, 30% and 20%, respectively. This recent improvement in the management of diarrhea is officially recommended by WHO and UNICEF.

In addition, another important advancement in the management of diarrhea is now being recommended by WHO and UNICEF as an adjunct to the use of newly formulated ORS. This is the incorporation of zinc supplement in the management of diarrhea. Zinc supplements given during an acute diarrhea reduce the duration and severity of the disease and prevent subsequent episodes of diarrhea. Studies show that 10 – 20 mg of zinc for 14 days reduced the number of episodes of diarrhea within 2 – 3 months after the supplementation regimen.

This new approach is based on a number of scientific evidences from 17 efficacy studies, 12 on acute and 5 on persistent diarrhea (Harvey, 2005). These studies have demonstrated that zinc in addition to the newly formulated ORS reduces both the duration and severity of acute diarrhea as compared to the use of ORS alone. The incorporation of zinc supplement reduces the duration of acute diarrhea by 25%, duration of persistent diarrhea by 29% and treatment failure or death in persistent diarrhea by 40%.

Vomiting is the only reported adverse effect of zinc but at the dose used in the zinc tablet, there is only a small chance of nausea or vomiting. In addition, the recommended dosage of 20 mg per day for 10-14 days showed no threat of toxicity.

The most economical form of zinc is the 20 mg dispersible, scored tablets which quickly disintegrate in less than a minute with small amount of clean water or breast milk (5ml) in a spoon. This form is suitable for children. Zinc drops and syrups are also available (WHO/UNICEF/USAID/JHSPH 2006)

The cost of Zinc supplementation for 14 days ranges from Php 62.00 (tablet) to Php130.00 (syrup). This amount is very negligible as compared to the cost of hospitalization that will be incurred when the child develops diarrhea with severe dehydration. The hospitalization expenses will range from Php2,100.00 (government hospital) to Php 9,000.00 when the sick child is confined in a private hospital.

These two recent advances in managing diarrheal disease – newly formulated ORS and zinc supplementation – can drastically reduce the number of child deaths and therefore, considered cost-effective. Global studies have noted significant reductions in the need for expensive hospitalization and use of unnecessary antibiotics and other drugs.

With the complete implementation of these new recommendations, it has been estimated that deaths due to diarrhea can be prevented by almost 90%. This can contribute significantly to the attainment of the Millennium Development Goal 4 – reduce child mortality of under-five children by two thirds.
II. LEGAL MANDATES

The government's commitment to protect the health of children is embodied in international covenants and in the national strategy like Child 2021-2025 and the Millennium Development Goals. The adoption of the IMCI strategy which combines curative and preventive strategies is considered a factor in the decline in mortality of young children.

The following laws and administrative issuances provide the mandate for the appropriate support and promotion on the use of zinc supplementation and reformulated ORS in the management of diarrhea:

A. Under Article 24 of the 1989, the United Nations Convention on the Rights of the Child emphasized the social responsibility of the member of the States to protect children and to provide them with appropriate support and services, emphasizing their right to the highest attainable level of health care services and guarantees the provision of and access to adequate nutrition for all infants and young children.

B. The National Objectives for Health 2005-2010 emphasized the need to reduce the mortality of under-five year old children due to diarrhea from the baseline data of 5.3 deaths per 100,000 (Philippine Health Statistics 2000) under five children to less than 1 death per 100,000 under-five children.

C. One of the components of Formula One F1) as the implementation framework for the Health Sector Reform in the Philippines is Health Service Delivery. It is aimed at improving availability of basic service, particularly for the poor. The inclusion of inexpensive zinc (with ORS) in the armamentarium in Integrated Management of Childhood Illness ensures availability of basic and essential care for one of the leading preventable causes of under-five mortality in the Philippines.

D. The creation of the Food and Waterborne Diseases Prevention and Control Program (AO no.29-As. 1997; Section V) under Program Components and Strategies provides that clinical care of Food and Waterborne Diseases (FWBD) will focus on case management using ORS and rational use of diagnostic tests for FWBD. This strategy necessitates the Maternal and Child Health Service (MCHS) to provide policies and guidelines in the control of diarrheal diseases (CDD) in children 5 years and below, particularly in case management.

E. Department Circular no. 179 s. 1993 emphasized the Policies and Guidelines for the National Control of Diarrheal Disease Program which stresses the Assessment of Dehydration, Rehydration with ORS solution, Assessment of bloody stools and recommendation for antibiotics and limitation of use of drugs to Amoebiasis and Giardiasis.
III. OBJECTIVES

This Administrative Order aims to contribute to reduced child malnutrition and child deaths through more effective management of diarrhea among young children. More specifically, it aims to:

1. Transform all health institutions in both the government and the private sector and other health facilities into facilities that can promote and support the new advances/recommendations in the management of diarrhea.
2. Build critical capacity and commitment of health care staff in promoting, providing support and using the new recommendations in the management of diarrhea.
3. Link all levels of health care, including primary health care facilities with community support groups to adopt the new recommendations in the management of diarrhea as a routine practice both in the home and health facility.
4. Improve/strengthen the system of procurement, distribution and utilization system of logistics particularly Zinc and ORS.

IV. COVERAGE AND SCOPE

These guidelines shall apply to all government, private and other health facilities nationwide.

V. DEFINITION OF TERMS

A. Dehydration – loss of a large amount of water and salt from the body.

B. Diarrhea – the passage of unusually loose or watery stools, usually at least three times in a 24-hour period.

C. Dysentery- also called acute bloody diarrhea, the passage of unusually loose or watery stools with the presence of blood.

D. Persistent diarrhea- the passage of unusually loose or watery stools, which lasts for 14 days or longer.

E. Reformulated ORS- a new formula with reduced concentration of glucose and salt (NaCl) to avoid the possible effects of hypertonicity on net fluid absorption. It has a composition of 75meq/l sodium, 75 mmol/l glucose, and a total osmolarity of 245 mOsm/l

F. Zinc – an essential mineral that is found in almost every cell in the body. It stimulates the activity of approximately 100 enzymes, which are substances that promote biochemical reactions in the body. It also supports a healthy immune system, is needed for wound healing, helps maintain your sense of taste and smell,
and is needed for DNA synthesis. Zinc also supports normal growth and development during pregnancy, childhood, and adolescence.

G. Zinc deficiency – one of the major risks to child health, linking deficiency to 10% of diarrhea, 6% of lower respiratory tract infections, and 18% of malaria morbidity.

VI. IMPLEMENTING GUIDELINES

The revised clinical guidelines on the management of diarrhea in children include the following:

A. The objectives of the treatment of diarrhea are to:

1. Prevent dehydration, if there are no signs of dehydration;
2. Treat dehydration, when it is present;
3. Prevent nutritional damage, by feeding during and after diarrhea; and
4. Reduce the duration and severity of diarrhea, and the occurrence of future episodes, by giving zinc supplements.

B. Use of reformulated Oral Rehydration Salts (ORS) for oral rehydration therapy

The new formulation has lower osmolarity ORS solution, with reduced glucose to prevent undesirable effect of hypertonicity on net fluid absorption (Implementing the new recommendation on the clinical management of diarrhea WHO/UNICEF/USAID/JHSPH 2006).

Composition of Reformulated ORS (Low Osmolarity ORS)

<table>
<thead>
<tr>
<th>Grams/liter</th>
<th>mmol/liter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Chloride</td>
<td>2.6</td>
</tr>
<tr>
<td>Trisodium citrate dihydrate</td>
<td>2.9</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>1.5</td>
</tr>
<tr>
<td>Glucose anhydrous</td>
<td>13.5</td>
</tr>
<tr>
<td>Potassium chloride</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Total weight 20.5 Total osmolarity 245


ORS should be given to:
Children under 2 years old, approximately 50-100 ml (1/4 large cup) of ORS after each loose stool. Give older children ½ to 1 large cup of ORS.

Older children and adults should drink as much as they want.

ORS or recommended home-fluids such as buko juice, soup, and clean water should be continued until diarrhea stops. This may last for several days.

C. Use of Zinc Supplement

Table 1. Preparation, dose and duration of Zinc supplementation

<table>
<thead>
<tr>
<th>Target</th>
<th>Preparation</th>
<th>Dose/Duration</th>
</tr>
</thead>
</table>
| Children up to 6 months of age | Drop: 27.5mg/ml (equiv. to 10 mg elemental zinc) 15 ml drops, (as sulfate monohydrate)  
Syrup containing 27.5 mg/ml (equiv. to 10 mg elemental zinc) 60 ml syrup (as sulfate monohydrate) | 1 ml once a day for 10-14 days  
1 ml once a day for 10-14 days |
| Children 6 months up to 59 months | Scored and dispersible tablet containing 20 mg zinc as sulfate monohydrate (USP31) or zinc gluconate*  
Syrup containing 55 mg/ml (equiv. to 20 mg elemental zinc) 60 ml syrup (as sulfate monohydrate) | 1 tablet once a day for 10-14 days  
1 tablet once a day for 10-14 days  
5 ml or 1 teaspoon once a day for 10-14 days |

* Not yet manufactured in the country, but is now being used in selected provinces/municipalities under the UNICEF Country Program for Children 6 (CPC VI), in USAID assisted areas in Mindanao and in International Aid Zinc Study areas also in Mindanao.

D. The steps to treat diarrhea are shown below:

1. The first step in treating the child with diarrhea is to assess the child for signs of dehydration. Ask the mother of the caretaker about the child’s history. Then check for the signs and symptoms of dehydration and signs of other possible important problems (refer to Table 2).

2. The next step is to select treatment and treat appropriately for degree of dehydration. In determining the degree of dehydration and the appropriate plan to treat dehydration, use the table below:
### Table 2. Assessment of diarrhea patients with dehydration

<table>
<thead>
<tr>
<th>LOOK AT: Condition&lt;sup&gt;a&lt;/sup&gt;</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Well, alert</td>
<td>Restless, irritable</td>
<td>Lethargic or unconscious</td>
</tr>
<tr>
<td>Drinking normally, not thirsty</td>
<td>Normal</td>
<td>Sunken</td>
<td>Sunken</td>
</tr>
<tr>
<td>Thirst</td>
<td>Drinks eagerly</td>
<td>Thirsty, drinks eagerly</td>
<td>Drinks poorly, or not able to drink</td>
</tr>
<tr>
<td>FEEL: Skin Pinch&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Goes back quickly</td>
<td>Goes back slowly</td>
<td>Goes back very slowly</td>
</tr>
<tr>
<td>DECIDE</td>
<td>The patient has NO SIGNS OF DEHYDRATION</td>
<td>If the patient has two or more signs in B, there is SOME DEHYDRATION</td>
<td>If the patient has two or more signs in C, there is SEVERE DEHYDRATION</td>
</tr>
<tr>
<td>TREAT</td>
<td>Use Treatment Plan A</td>
<td>Weigh the patient, if possible, and use Treatment Plan B</td>
<td>Weigh the patient and use Treatment Plan C</td>
</tr>
</tbody>
</table>

<sup>a</sup> Being lethargic and sleepy are not the same. A lethargic child is not simply asleep: the child’s mental state is dull and the child cannot be fully awakened; the child may appear to be drifting into unconsciousness.

<sup>b</sup> In some infants and children, the eyes normally appear somewhat sunken. It is helpful to ask the mother if the child’s eyes are normal or more sunken than usual.

<sup>c</sup> The skin pinch is less useful in infants or children with marasmus or kwashiorkor, or obese children.

Advise family members about home treatment of diarrhea. **Counsel mother** on giving ORS and zinc, good food choices, including continued breastfeeding.

**TREATMENT PLAN A: TREAT DIARRHEA AT HOME**

Counsel the mother on the 4 rules of Home Treatment:

- Give extra fluid
- Give zinc supplements
- Continue feeding
- When to return to health facility

**Rule 1: GIVE EXTRA FLUID (as much as the child will take)**

**A. TELL THE MOTHER**

- Breastfeed frequently and for longer at each feed
- If the child is exclusively breastfed, give ORS or clean water in addition to breastmilk
• If the child is not exclusively breastfed, give one or more of the following: ORS solution, food-based fluids (such as soup, rice water) or clean water.

B. TEACH MOTHER HOW TO MIX AND GIVE THE ORS. GIVE THE MOTHER 2 PACKETS OF ORS TO USE AT HOME.

C. SHOW THE MOTHER HOW MUCH FLUID TO GIVE IN ADDITION TO THE USUAL FLUID INTAKE:

Up to 2 years 50 to 100 ml after each loose stool
2 years or more 100 to 200 ml after each loose stool

Tell the mother to:
• Give frequent sips from a cup.
• If the child vomits, wait for about 10 minutes before asking the child to sip from the cup again, but more slowly.
• Continue giving extra fluid until the diarrhea stops.
• Remind mother not to use sports drinks in the management of diarrhea because of its low sodium content which can cause hyponatremia and its very high carbohydrates content which can provoke osmotic diarrhea and worsen the dehydration.

**Rule 2:** GIVE ZINC SUPPLEMENTS

A. TELL THE MOTHER HOW MUCH ZINC TO GIVE (REFER TO TABLE 1 FOR DOSE AND DURATION)

B. SHOW THE MOTHER HOW TO GIVE ZINC SUPPLEMENTS

For infants up to 6 months dissolve the tablet in a small amount of expressed breastmilk, ORS or clean water, in a small cup or spoon. For infants and children 6 months up to 59 months old tablets can be chewed or dissolved in a small amount of clean water in a cup or spoon

C. REMIND THE MOTHER TO GIVE ZINC SUPPLEMENTS FOR THE FULL 14 DAYS

**Rule 3:** CONTINUE FEEDING

A. If the child is breastfeeding, breastfed more frequently and for longer period at each feed

B. Give the child above 6 months of age foods with the highest amount of nutrients and calories. Depending on the age of the child, give mixes of cereal, meat or fish. Add oil to these foods to make them energy-rich. Dairy products and eggs are also
suitable. Fresh fruit juices and bananas are helpful because they contain potassium.

C. Avoid high fiber or bulky foods such as coarse fruits and vegetables and whole grain cereals. These are hard to digest.

D. Avoid very dilute soups. These are recommended as fluids but are not sufficient because they fill up the stomach of the child without providing sufficient nutrients. Do not give foods with lots of sugar. These foods can worsen diarrhea.

E. Encourage the child to eat as much as he/she wants. Offer food every 3-4 hours (six times each day) or more often to a young child. Small frequent feedings are best because they are more easily digested and preferred by the child.

Rule 4: WHEN TO RETURN

A. The caretaker should bring the child to a health worker if the child shows any of the following:

- Passes many stools,
- Is very thirsty,
- Has sunken eyes,
- (These three signs suggest the child is dehydrated)
- Seems not to be getting better after 3 days,
- Has a fever,
- Does not eat or drink.

Treatment Plan B: Treat some dehydration with ORS

A. Give in clinic/health center the recommended amount of ORS over 4-hour period

| DETERMINE AMOUNT OF ORS TO GIVE DURING THE FIRST 4 HOURS |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| AGE*                           | Up to 4 months | 4 months up to 12 months | 12 months up to 2 years | 2 years up to 5 years |
| WEIGHT                         | < 6 kg          | 6 - < 10 kg          | 10 - < 12 kg          | 12 - 19 kg       |
| In ml                          | 200 - 400       | 400 - 700            | 700 - 900             | 900 - 1400       |

*Use the child’s age only when you do not know the weight. The approximate amount of ORS required (in ml) can also be calculated by multiplying the child’s weight (in kg) times 75.

- If the child wants more ORS than shown, give more.
- For infants less than 6 months who are not breastfed, also give 100-200 ml clean water during this period.
B. ADVICE THE MOTHER

- Give frequent small sips from a cup.
- If the child vomits, wait 10 minutes. Then continue, but more slowly.
- Continue breastfeeding whenever the child wants.

C. AFTER 4 HOURS:

- Reassess the child and classify the child for dehydration.
- Select the appropriate plan to continue treatment.
- Begin feeding the child in clinic.

D. IF THE MOTHER AND CHILD MUST LEAVE BEFORE COMPLETING TREATMENT:

- Show her how to prepare ORS solution at home.
- Show her how much ORS to give to finish 4-hour treatment at home.
- Give her enough ORS packets to complete rehydration. Also give her 2 packets as recommended in Plan A.
- Explain the 4 rules of home treatment as shown in Treatment Plan A:

Treatment Plan C: Treatment of Diarrhea with Severe Dehydration

A. Refer to hospital for treatment
B. Treat according to Plan B or A when child’s condition improves.

TREATMENT OF DYSENTERY

Treat for 5 days with an oral antibiotic for Shigella in the area. Advice mother when to return immediately to the health center.

TREATMENT OF SEVERE PERSISTENT DIARRHEA (Diarrhea of 14 days or more with dehydration)

- Treat the child for dehydration before referral unless the child has another severe classification
- Give Vitamin A
- Refer to hospital

PERSISTENT DIARRHEA (diarrhea of 14 days or more with no dehydration).

Advice mother on feeding, give multivitamins and minerals including Zinc for 14 days, give Vitamin A, follow-up in 5 days and advise mother when to return to the health center.
VII. REPEALING CLAUSE

The provision of previous Orders and other related issuances inconsistent or contrary with the provisions of this Administrative Order are hereby revised, modified, repealed or rescinded accordingly. All other provisions of existing issuances which are not affected by this Order shall remain valid and in effect.

VIII. EFFECTIVITY

This order shall take effect immediately.

FRANCISCO T. DUQUE III, MD, MSc
Secretary of Health

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September 09, 2008

Administrative Order
No. 2008-0029

Subject: Implementing Health Reforms for Rapid Reduction of Maternal and Neonatal Mortality

I. BACKGROUND AND RATIONALE

Despite previous efforts and improvement in general health status indicators, the rates of decline in maternal and neonatal mortality have decelerated in the past decade to a point where Philippine commitments to the Millennium Development Goals (MDGs) of lowering maternal mortality ratio (MMR) and infant mortality rate (IMR) may not be achieved.

However, with pregnancy and childbirth continuing to pose risks to Filipino mothers and their newborn, rapid reduction in these risks must be realized as quickly as possible while considering that variations in health outcomes and program performance across localities and population groups warrant targeted and locally-customized interventions in order to meet the rapid reduction goal.

The risk of maternal and neonatal deaths for a given population group is magnified with critical accumulation of the following four risks. First, is the risk of having mistimed, unplanned, unwanted and unsupported pregnancy. Secondly, having become pregnant exposes the mother and the fetus to the risk of not securing adequate care during the course of the pregnancy. Third, is the risk of delivering without being attended to by skilled birth attendants, namely: skilled midwives, nurses and physicians, and of not having access to emergency obstetric and neonatal care services. Lastly, there is the risk of not securing proper postpartum and postnatal care for the mother and neonate, respectively.

Long term control of mortality and morbidity and improvement in the equality of life require provision and use of a continuum of health services spanning each of the life cycle stages. Provision and use of these services would require informed decisions by mothers and their families (demand side), as well as a health system (supply side) that is responsive to their needs.

This Order applies the Formula One for Health (F1) approach for the local implementation of an integrated Maternal, Neonatal and Child Health and Nutrition (MNCHN) Strategy. It outlines specific policies and actions for local health systems to systematically address health risks that lead to maternal and, especially neonatal deaths, which comprise half of reported infant mortalities.
II. STATEMENT OF POLICY

An integrated MNCHN Strategy is hereby formulated and implemented pursuant to the priorities of F1 or Administrative Order No. 0023 series of 2005; the National Objectives for Health (NOH) 2005-2010; the Philippine commitments to the Millennium Development Goals (MDG) for 2015; the lessons obtained from various maternal and child health projects; National Health Sector Meeting Resolution No. 2008-01-02; DOH Executive Committee (Execom) resolution dated February 4, 2008 with a subsequent reiteration in DOH Execom resolution dated June 10, 2008 which was supplemented by DOH Execom resolutions dated July 21 and 30, 2008; as well as in compliance with the 1992 Philippine Midwifery Act or Republic Act (RA) 7392; the Early Childhood Development Act (RA 8980) of year 2000; the Newborn Screening Law (RA 9288) of 2004; Executive Order 286 on the Bright Child Program, 2004; Executive Order 51 on the Milk Code, 1986; the Rooming-In and Breastfeeding Act (RA 7600) of 1992; and, other related laws.

This strategy shall guide the development, implementation and evaluation of various programs aimed at women, mothers and children, with the ultimate goal of rapidly reducing maternal and neonatal mortality in the country. It shall also serve as guide in the engagement, assistance and empowerment of local government units (LGUs) and other partners in rapidly achieving the maternal and neonatal mortality reduction goal.

III. GENERAL PRINCIPLES

The goal of rapidly reducing maternal and neonatal mortality shall be achieved through effective population-wide provision and use of integrated MNCHN services as appropriate to any locality in the country.

Reforms, improvements and changes in local health systems shall, among other results, create the following intermediate results that can significantly lower the risk of dying secondary to pregnancy and childbirth:

1. Every pregnancy is wanted, planned and supported;
2. Every pregnancy is adequately managed throughout its course;
3. Every delivery is facility-based and managed by skilled birth attendants; and
4. Every mother-and-newborn pair secures proper postpartum and postnatal care with smooth transitions to the women’s health care package for the mother and child survival package for the newborn.

The above four intermediate results shall be achieved by:

1. Health Service Delivery—Addressing the direct causes of mortality during childbirth by managing deliveries in either a basic emergency obstetric and newborn care (BEmONC) or comprehensive emergency obstetric and newborn care (CEmONC) facility. Moreover, public health services that reduce the risk of dying and improve the well-being of women, mothers and their children shall be made available. A core list of high priority interventions shall be promoted and supported by DOH for implementation by province-wide or city-wide health systems.
2. Health Regulation—Enforcement of regulatory measures and guidelines related to the establishment and operations of health facilities, as well as the capacity building of an
adequate health staff through competency-based standards that are linked with suitable performance-based incentive mechanisms;

3. **Health Financing**—Application of combined financing strategies using instruments available through DOH and LGU budgets, PhilHealth payments and other funding sources. These sources shall finance the acquisition of additional capacities and maximize utilization of services particularly in areas or population groups where maternal and neonatal mortality is most severe; and

4. **Governance for Health**—Establishment of governance mechanisms that secure the political commitment of local stakeholders and exact accountability for results. These mechanisms shall have broad-based participation, non-partisan leadership and sustained popular support to assure continued local effort regardless of different political, economic and socio-cultural conditions.

IV. **GOAL AND OBJECTIVES**

**Goal**
Rapidly reduce maternal and neonatal mortality through local implementation of an integrated MNCHN strategy.

**Objectives**
1. Develop, adopt, promote, implement and evaluate an integrated MNCHN strategy for the rapid reduction of maternal and neonatal mortality;
2. Engage all province-wide or city-wide health systems to adopt and implement the integrated MNCHN strategy;
3. Provide targeted support to province-wide or city-wide health systems and specific population groups where the maternal and neonatal mortality problem is most severe; and
4. Achieve national MNCHN program targets for the following key indicators by 2010:
   a. Increase modern contraceptive prevalence rate from 35.9% (Family Planning Survey, 2006) to 60%;
   b. Increase percentage of pregnant women having at least four antenatal care visits from 70% (National Demographic and Health Survey [NDHS], 2003) to 80%;
   c. Increase percentage of skilled birth attendance and facility-based births from 40% (NDHS, 2003) to 80%; and
   d. Increase percentage of fully immunized children from 70% (NDHS, 2003) to 95 percent.

V. **DEFINITION OF TERMS**

1. **Basic Emergency Obstetric and Newborn Care (BEmONC)** facilities are capable of performing six signal obstetric functions, which include: (i) parenteral administration of oxytocin in the third stage of labor; (ii) parenteral administration of loading dose of anti-convulsants; (iii) parenteral administration of initial dose of antibiotics; (iv) performance of assisted deliveries; (v) removal of retained products of conception, and (vi) manual removal of retained placenta. BEmONC facilities are also capable of providing neonatal emergency interventions which include at the minimum: (i) newborn resuscitation, (ii) treatment of...
neonatal sepsis/infection; and (iii) oxygen support. It shall also be capable of providing blood transfusion services on top of its standard functions.

2. **Community level providers** refer primarily to Barangay Health Stations (BHS) and its health staff (e.g. midwife) and volunteer health workers (e.g. barangay health workers, traditional birth attendants) that typically comprise the Women’s Health Team (or Barangay Health Team). These teams implement integrated MNCHN services identified for the community level. Their functions include advocating for birth spacing and counseling on family planning services; the tracking and master listing of pregnant women; assisting pregnant women and their families in formulating a birthing plan; early detection and referral of high-risk pregnancies; and reporting maternal and infant deaths. The teams shall also facilitate discussions of relevant community health issues, particularly those affecting women and children.

3. **Comprehensive Emergency Obstetric and Newborn Care (CEmONC) facilities** can perform the six signal obstetric functions of a BEmONC and in addition, perform cesarean section and provide blood banking and transfusion services along with other highly specialized obstetric services. It is also capable of providing the following neonatal emergency interventions, which include at the minimum: (i) newborn resuscitation, (ii) treatment of neonatal sepsis/infection, (iii) oxygen support for neonates, and (iv) management of low birth weight or premature newborn, along with other specialized neonatal services.

4. **MNCHN service delivery network** refers to the network of facilities and providers within the province-wide or city-wide health system offering integrated MNCHN services in a coordinated manner. It also includes the communication and transportation system supporting this network. The facility, provider type and service standards for the network shall be described in the MNCHN Operations Manual.

5. **Integrated MNCHN services** refer to a package of services for women, mothers and children that cover the continuum of the following:
   1. Known appropriate clinical case management services in preventing direct causes of maternal and neonatal deaths, and which are within the capacity of the health system to routinely provide, and;
   2. Known cost-effective public health measures capable of reducing exposure to and the severity of risks for maternal and neonatal deaths, that are within the capacity of the health system to routinely provide.

6. **Province-wide or city-wide health system** refers to the default catchment area for delivering integrated MNCHN services. It consists of public and private providers organized into configurations such as interlocal health zones (ILHZ) or health districts for provinces and integrated urban health systems for highly-urbanized cities. Service arrangements with other LGUs may be considered if provision and use of integrated MNCHN services across provinces, municipalities and cities become necessary.

VI. SCOPE AND COVERAGE

This Order shall apply to the whole hierarchy of the DOH and its attached agencies, as well as LGUs, other public and private providers of health care and development partners implementing the MNCHN strategy.
VII. GENERAL GUIDELINES

1. Recognize the province-wide or city-wide health system as the unit for planning, organizing and implementing the MNCHN strategy. The province-wide or city-wide health system shall be the basic unit for planning, organizing and implementing MNCHN activities. The DOH shall advocate and promote the standards of a stable and mature service delivery network to local stakeholders. It shall also ensure that the standards are flexible enough to adapt to local conditions, and are appropriate to the local area and population.

2. Engage local stakeholders and strengthen public-private partnerships to support the goal of rapidly reducing maternal and neonatal mortality. Local stakeholders shall be engaged to review the current functionality of their respective local service delivery network. Functionality includes, among other things, the level and quality of coordination across the various activities and functions of public and private providers. Based on this assessment, all local stakeholders shall be enjoined to take part in activities that address maternal and newborn health.

3. Mobilize the service delivery network to deliver the integrated MNCHN services as a continuum. Universal access to and utilization of integrated MNCHN services in its full continuum spanning the pre-pregnancy, pregnancy, delivery and postpartum/postnatal care phases shall be ensured in all localities, and shall be backed-up by pertinent laws and accessible operational resources. A core list of MNCHN services include those from the women’s health and child survival packages developed by the DOH.

4. Pursue improvements in the delivery of various component services in the maternal and neonatal service package. In order to mount rapid response capacity in local health systems, the MNCHN strategy shall build on existing service capacities and utilization patterns. Targeted quality improvements in facilities and human resources, together with measures to facilitate utilization by clients, shall be carried out to achieve rapid mortality reduction with minimal effort and investment in the immediate and medium term. Over time, improvements in the current delivery system configuration and services shall be introduced as standards improve, as demand increases, as local health systems acquire additional capacity, as legal and resource constraints are addressed and as the nature of the maternal and neonatal mortality problem evolves.

5. Develop and support implementation of appropriate demand-side interventions.

The DOH shall develop schemes to support local health systems in designing, implementing and evaluating appropriate demand-side interventions to improve health seeking behavior and service utilization patterns in localities. Demand-side measures shall be given due emphasis in local applications of the MNCHN strategy as life saving and cost saving interventions. These measures shall also be crafted and directed at specific target areas and populations (e.g. mothers, poor households) whichever is most appropriate and effective in a given locality.

6. Develop monitoring and evaluation systems for the MNCHN strategy. The DOH shall develop and support the establishment, operation and maintenance of monitoring and evaluation mechanisms for local implementation of the MNCHN strategy. Appropriate methodologies (e.g. maternal and perinatal death reviews) shall be employed to establish baseline, track progress and assess the impact of various interventions to improve the delivery of services in a local health system. The monitoring and evaluation system shall be developed incrementally and may begin with a limited set of readily available and verifiable indicators. It is also desired that these monitoring and evaluation mechanisms are transparent, have established dissemination channels that feed into formal feedback mechanisms to policy and management that is sustainable given local constraints and conditions.
7. Provide national support to local planning and development in support of the MNCHN strategy. The DOH shall develop and apply various instruments to help localities develop customized MNCHN strategies, strengthen their service delivery networks, secure critical goods and commodities and improve monitoring and evaluation. These instruments shall include a mix of grant assistance schemes, policy issuances, technical assistance, institutionalized training, research and development, development of new standards, provision of specialized services, financing mechanisms through PhilHealth, and regulatory measures.

VIII. SPECIFIC GUIDELINES

The following are specific guidelines for implementing the general guidelines mentioned above:

1. The province-wide or city-wide health system shall be delineated by the politico-geographic jurisdictions of its component LGUs. Other providers and LGUs outside the catchment area may also be engaged within this health system should it be necessary for the effective provision and use of integrated MNCHN services. This may be recommended if the required service capacities are not accessible within the catchment area and/or if utilization patterns by constituents and neighboring populations overlap in these jurisdictions. To sustain operations, DOH shall also facilitate compliance of these facilities with DOH licensing and PhilHealth accreditation requirements.

2. The operations of the MNCHN service delivery network shall be organized as follows:
   a. Third Tier—CEmONCs are public or private facilities designated as the end-referral facility for integrated MNCHN services. The default CEmONC in a given locality shall be the provincial hospital or similarly capable DOH/LGU hospital or private hospital. Designation of the CEmONC facility shall be based primarily on its service capacity. However, other criteria such as pricing, service load, quality of care, location, topography, transport system, utilization patterns and other similar parameters may be used to determine the designation of a CEmONC facility. In case of multiple CEmONC facilities (as in large or highly-populated provinces or cities), the catchment area may be divided further into specific areas of responsibility for each facility, based on criteria mentioned above.

      Ideally, the CEmONC facility shall be accessible within two hours travel from any residence/referring facility within the province/city. However, in anticipation of possible delays during referral, CEmONC facilities are recommended to be accessible within one-hour travel time. A CEmONC facility shall operate on a 24-hour basis with emergency standby capacity. At least one obstetrician/surgeon, a pediatrician, an anesthesiologist, six nurses, a medical technologist and six midwives staff the typical CEmONC.

   b. Second Tier—The default BEmONC facility shall consist of the core district hospital or similarly capable public or private facility assigned to serve an ILHZ or health district. In certain cases, such as in geographically isolated and disadvantaged areas or in densely-populated areas, rural health units (RHUs), health centers, BHS, lying-in clinics or birthing homes capable of performing the six signal obstetric functions and neonatal emergency care may also be designated as BEmONC facilities.
Designation of the BEmONC facility shall be based primarily on service capacity. However, other criteria such as pricing, service load, quality of care, location, topography, transport system, utilization patterns and other similar parameters may be used to determine to upgrade and designate a facility as a BEmONC facility. In case of multiple BEmONC facilities serving a particular ILHZ or health district the catchment area may be divided further into specific areas of responsibility for each facility, based on criteria mentioned earlier.

Ideally, the BEmONC facility shall be accessible within one-hour travel from any residence/referring facility within the ILHZ, health district or city. However, in anticipation of possible delays during referral, BEmONC facilities are recommended to be accessible within 30 minutes of travel time. A BEmONC facility may have a minimum staff complement of at least one physician, a nurse and a midwife. The BEmONC facility shall operate on a 24-hour basis and shall have access to communication and transportation facilities to facilitate referrals.

Public and private clinics, lying-in clinics, birthing homes and other similar facilities currently managing deliveries but have no capacity to provide the six signal obstetric functions and neonatal emergency services may acquire new capacities to qualify and be designated as BEmONCs. Acquisition of these additional capacities shall be supported by DOH in terms of addressing legal and resource constraints, with resources focused mainly in areas where the maternal and neonatal mortality problems are most severe.

c. First Tier—Community level service providers such as RHUs, health centers, BHS or similar private facilities shall have Women’s Health Teams or Barangay Health Teams led by a nurse or a midwife organized to provide the identified MNCHN services along with other functions deemed necessary in their communities. These teams shall vigorously campaign for proper birth spacing, complete required antenatal care visits, facilitate the shift from home deliveries to facility-based births attended by skilled professionals, provide postpartum and postnatal care, and ensure smooth transitions to other health care packages for women and children.

The RHUs, health centers and private outpatient clinics in the network shall provide MNCHN services other than managing deliveries. These services shall include family planning, prenatal services and postpartum and postnatal care aside from other public health and clinical services deemed necessary in their localities, including organizing of outreach activities;

3. The province-wide or city-wide health system shall be supported by an adequate emergency communication and transportation system. This communication system shall facilitate consultation, referral and coordination from and by peripheral facilities all the way up to the end referral facility level. LGUs are encouraged to invest in modern communication systems available in and suitable to their localities. The transportation system is intended to bring patients to and from facilities during referrals and transfers. This may be done through an organized ambulance network that services the whole breadth of the province-wide or city-wide health system or a mix of facility-based ambulances and locally available transportation with explicit arrangements for use and financing during referrals and transfers.
Appropriate measures shall be taken to facilitate the shift from home-based deliveries to facility-based births attended by skilled birth attendants. In order to facilitate the shift, schemes can be developed to provide traditional, non-skilled attendants with incentives to refer deliveries to appropriate facilities. Aside from enjoining them to join barangay health teams, qualified TBAs may be provided educational assistance to become midwives.

4. The integrated MNCHN services shall consist of clinical and public health interventions for women and children that shall be delivered through a seamless continuum of care that shall include pre-pregnancy care, antenatal care, care during delivery and postpartum and postnatal care. The minimum standard services are:
   a. Pre-Pregnancy Services
      i. Provision of correct information and responsive counseling for fertility awareness, maternal nutrition, birth spacing and adolescent reproductive health;
      ii. Active identification and servicing of population segments with unmet needs for family planning and referral to alternative sources of services and supplies when these are not available in one’s service outlet or facility;
      iii. Assurance of a safety net of free family planning services and supplies for indigent potential users; and
      iv. Provision of other basic and essential services for young females and women in the reproductive age.
   b. Antenatal Care
      i. Consistent coverage of all eight essential antenatal care functions (monitoring height and weight, taking blood pressure, blood testing, urine testing, iron and folate supplementation, tetanus toxoid immunization, malaria prophylaxis where appropriate and birth planning);
      ii. Focused attention to individualized birth preparedness counseling about the place of delivery and transport arrangements to increase the mother’s readiness to deliver in health facilities; and
      iii. Discussion with household member/s and preparation for childbirth with partner support and involvement in care-seeking decisions.
   c. Care during Delivery
      i. Proper channeling of patient workloads with aggressive promotion of shifting from home-based deliveries to delivery in either a BEmONC or a CEmONC, especially for women with medical conditions and other special needs by classifying them as priority for transport and servicing by the appropriate delivery/birthing facility;
      ii. Deliberate planning and special provisions for hard-to-reach segments of the population within the province-wide or city-wide system to promote facility-based deliveries;
      iii. Active conversion and mobilization of traditional birth attendants into advocates and agents of facility-based deliveries; and
      iv. Correct and updated monitoring and reporting of the number and proportion of facility-based births.
   d. Postpartum and Postnatal Care
      i. Provision of proper postpartum/postnatal care for mothers and neonates; and
      ii. Provision of the whole range of women’s health care services for mothers and of the child survival package for children.
5. The DOH shall support universal local implementation of the MNCHN strategy. However, local conditions and capacities shall be considered in the adoption of MNCHN services in the different LGUs. The DOH shall periodically determine the appropriateness and responsiveness of the comprehensive and core components of the integrated MNCHN package in order to adapt to the evolving nature of the maternal and neonatal mortality problem.

6. The assessment of coordination across the various MNCHN-related activities and functions within and outside the health service system shall be in accordance with specific criteria, and made part of a local monitoring and evaluation system. The assessment shall cover coordination within the province-wide or city-wide system, between public and private service providers, and between each tier of the 3-tier service delivery network.

IX. ROLES AND RESPONSIBILITIES

For purposes of this Order, the various DOH instrumentalities, partners and other stakeholders shall have the following roles and functions:

1. Office of the Undersecretary for Policy Standards and Development Team-Service Delivery
   a. Provide overall leadership in the implementation of the MNCHN strategy;
   b. Mobilize and coordinate resources for implementation of the MNCHN strategy;
   c. Monitor overall progress of implementing the MNCHN strategy; and
   d. Regularly report progress of implementing the MNCHN strategy to the Secretary of Health, Execom and similar oversight bodies.

2. National Centers for Disease Prevention and Control (NCDPC)
   a. Reorganize its systems and processes to ably support the delivery of the integrated MNCHN services;
   b. Re-align relevant programs and services into the MNCHN framework and strategy;
   c. Provide technical leadership and assistance in the delivery of integrated MNCHN services to CHDs, LGUs and other stakeholders;
   d. Identify resources necessary to efficiently assist partners in their implementation of MNCHN;
   e. Develop service standards for MNCHN interventions; and,
   f. Coordinate monitoring and evaluation of the implementation of the MNCHN strategy.

3. National Center for Health Facilities Development (NCHFD)
   a. Assist designated facilities to comply with technical standards and requirements for providers in the service delivery network;
   b. Develop facility standards for MNCHN providers and other facilities within the service delivery network;
   c. Strengthen the MNCHN functions of hospitals and other facilities, including public health services; and,
   d. Assist in monitoring the progress of implementation of the MNCHN strategy.
4. **National Center for Health Promotion (NCHP)**
   a. Develop effective mechanisms to promote the MNCHN goals and strategies;
   b. Design and assess communication and health promotion schemes addressing various groups of stakeholders involved in MNCHN; and
   c. Provide technical assistance to CHDs, LGUs and other stakeholders in developing locally-specific communication and health promotion packages.

5. **Health Human Resources Development Bureau (HHRDB)**
   a. Identify mechanisms to meet human resource requirements to operate province-wide or city-wide health systems;
   b. Develop strategy and program to retool national and local personnel in order to facilitate delivery of integrated MNCHN services;
   c. Facilitate integration and updating of existing training modules on maternal-neonatal health and other related programs;
   d. Develop training standards as part of civil service deployment and promotion criteria for local health officials.

6. **Bureau of Local Health Development (BLHD)**
   a. Develop guide/criteria for designing the province-wide or city-wide health system providing integrated MNCHN services;
   b. Assist CHDs in the engagement of LGUs;
   c. Facilitate mainstreaming of the MNCHN strategy into the PIPH and AOPs of the F1 sites; and,
   d. Assist in monitoring local implementation of the MNCHN strategy.

7. **Health Policy Development and Planning Bureau (HPDPB)**
   a. Link MNCHN strategy implementation with DOH budget
   b. Facilitate the review and updating of policies and plans for consistency with the MNCHN strategy;
   c. Provide support in the enhancement of laws/IRRs in support of the MNCHN strategy; and
   d. Institutionalize mechanisms for the use of accurate, timely and reliable evidence for policy decisions, strategic actions and prioritization of resources and efforts.

8. **Bureau of International Health Cooperation (BIHC)**
   a. Manage external resources to support implementation of the MNCHN strategy;
   b. Influence the formulation by development partners of their country assistance package or assistance framework so that these are harmonized with the Philippine Health Sector Reform Program, in general, and the MNCHN strategy in particular; and
   c. Facilitate access to information on international experience and best practices to enhance MNCHN as necessary.

9. **National Epidemiology Center (NEC)**
   a. Provide accurate, timely and complete data as basis for policy decisions, strategic actions and prioritization of resources and efforts;
   b. Enhance FHSIS as source for tracking maternal mortality and the other childhood health outcomes;
c. Design tools to improve data collection and skills of regional/local health managers/staff, including development of compliance monitoring mechanisms; and,

d. Coordinate overall measurement of MDG-related goals on maternal-neonatal health including the conduct of national surveys and special studies.

10. Finance, Procurement and Materials Management Services
   a. Assist in the development of guidelines for granting assistance to groups of stakeholders involved in the implementation of the strategy;
   b. Facilitate process in transferring financial resources to the regions and LGUs as part of the overall grants approach to local health system development; and
   c. Enhancing procurement and supply chain management system of essential MNCHN logistics.

11. Office of Special Concerns, Field Implementation and Management Office and Centers for Health and Development
   a. Reorganize/staff to support the delivery of the integrated MNCHN services, in the context of the health sector reform elements and goals;
   b. Promote the adoption of the MNCHN Policy Framework and Strategy to their catchment LGUs;
   c. Advocate for the participation of multi-sectoral partners and work for the establishment of a coalition of advocates to reduce maternal and neonatal deaths in the region;
   d. Promote the establishment of province-wide or city-wide health systems in the region;
   e. Assist DOH-retained hospitals to qualify to serve as CEmONC facilities in their respective networks;
   f. Assist LGUs in applying and qualifying for MNCHN and related grants;
   g. Manage regional implementation of MNCHN and related grants facilities; and
   h. Provide technical assistance to LGUs and providers implementing the MNCHN strategy.

12. Local Government Units
   a. Adopt and implement the MNCHN strategy;
   b. Reorganize staff to deliver the integrated MNCHN services, in the context of the health sector reform elements and goals;
   c. Invest in the development of facilities and staff to improve implementation of MNCHN services;
   d. Ensure adequate financing of MNCHN service inputs by allocating budgets and actively sourcing alternative financing sources such as grants;
   e. Monitor and supervise local implementation of the MNCHN; and
   f. Ensure sustainability of quality MCNHN services in the locality.

13. Philippine Health Insurance Corporation (PhilHealth)
   a. Intensify enrollment campaigns in localities implementing the MNCHN strategy;
   b. Facilitate the accreditation of facilities involved in the MNCHN service delivery network;
   c. Assist facilities in improving the management of claims, payments and reimbursements; and
   d. Strengthen existing benefit packages in support of the MNCHN strategy.
14. **Commission on Population (PopCom)**
   a. Reorganize staff to support the delivery of the integrated MNCHN services, in the context of the health sector reform elements and goals;
   b. Coordinate and intensify efforts at promoting family planning, especially natural family planning methods in localities implementing the MNCHN strategy; and
   c. Mobilize local population workers including barangay population workers/volunteers ( Barangay Service Point Officers) and other community-based volunteers to support the MNCHN strategy in the localities.

15. **National Nutrition Council (NNC)**
   a. Reorganize staff to support the delivery of the integrated MNCHN services, in the context of the health sector reform elements and goals;
   b. Coordinate multisectoral efforts on nutrition in support of the MNCHN strategy (i.e. consolidating efforts targeted to mothers and children below two years old); and
   c. Mobilize Barangay Nutrition Scholars to support MNCHN strategy in their localities.

16. **Philippine National AIDS Council (PNAC)**
   a. Coordinate multisectoral efforts on HIV/AIDS and STI prevention in support of the MNCHN strategy; and
   b. Mobilize Local HIV/AIDS Councils (LACs) to support MNCHN strategy in their localities.

17. **Development Partners**
   a. Align country programs and support to facilitate the adoption and implementation of the MNCHN strategy, in the context of the health sector reform elements and goals; and
   b. Provide technical assistance and other forms of support to LGUs in implementing the MNCHN strategy.

18. **Professional Societies/Groups**
   a. Support the implementation and continuing development of the MNCHN strategy;
   b. Assist in the review and updating of MNCHN facility and practice standards;
   c. Assist in the development and implementation of compliance monitoring strategies for the MNCHN strategy; and
   d. Promote the adoption of the MNCHN strategy among members and component societies.

X. **MANUAL OF OPERATIONS**

The Undersecretary for Policy Standards and Development Team-Service Delivery shall organize and oversee the technical working group that shall draw up the Manual of Operations for the MNCHN Strategy, in consultation with maternal and child health experts and other sectoral and development partners. The Manual shall contain, among other necessary details, the following components of the MNCHN strategy:

a. Key indicators to measure progress in intermediate results
b. Integrated list of MNCHN services
c. Core list of MNCHN interventions  
d. Budget execution guidelines for the MNCHN grants facility  
e. Facility and service standards for the MNCHN network  
f. Capacity building requirements for the MNCHN strategy  
g. Coordination mechanisms within and with other province-wide or city-wide health systems  
h. Monitoring and evaluation systems and implementation guide  
i. Reporting and documentation  

XI. REPEALING CLAUSE  

Provisions from previous issuances that are inconsistent or contrary to the provisions of this Order are hereby rescinded and modified accordingly.  

XII. SEPARABILITY CLAUSE  

In the event that any provision or part of this Administrative Order be declared unauthorized or rendered invalid by any court of law or competent authority, those provisions not affected by such declaration shall remain valid and effective.  

XIII. EFFECTIVITY  

This Order shall take effect immediately.  

FRANCISCO T. DUQUE III, M.D., MSc.  
Secretary of Health
## Annex 4. Recommended Energy and Nutrient Intakes Per Day

<table>
<thead>
<tr>
<th>Population group</th>
<th>Weight kg</th>
<th>Energy kcal</th>
<th>Protein g</th>
<th>Vitamin A µg RE</th>
<th>Vitamin C mg</th>
<th>Thiamin mg</th>
<th>Riboflavin mg</th>
<th>Niacin mg NE</th>
<th>Folate µg DFE</th>
<th>Calcium mg</th>
<th>Iron mg</th>
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Annex 5. Garantisadong Pambata Guidelines

The GP Campaign is conducted nationwide to deliver a package of health and nutrition services to children. The following outlines activities and tasks that need to be done preparatory to, during and post GP campaign:

Preparatory Phase

1. The GP team identify units and organize areas where GP will be conducted. These could be the BHSs, RHUs, health centers, health and nutrition posts (HNP), Patak Centers, hospitals, barangay halls and other units. The identified area or site will be called or referred to as GP center(s).

2. Two weeks before the GP, prepare the community by promoting the upcoming event. Make sure that everybody in your community knows about GP, knows where their GP Center is, and agrees to participate in GP activities. Highlight the following key messages in the promotion of the GP before the event:

   - GP will take place at the GP center, specifying where the GP center is located
   - All children 6 months to 59 months old should be brought to the GP center
   - Children 6 - 11 and 12 – 59 months old will each receive vitamin A capsule
   - Children 12-59 months old will receive other services such as deworming tablet, and vaccines for those who did not complete their immunization series and for children 6-11 months who have missed their immunization schedules.
   - Mothers to bring MCB/GMC/ECD cards on GP day

3. Make a master list of all children 6 months to 59 months old. Refer to Annex 5A for the Master List Template.

4. Make an inventory of supplies needed for GP. Please refer to Annex 5.B for the Inventory Form of MS Supplies.

5. Provide each GP center with all logistics required and a copy of the Guidelines.

6. Orient/re orient volunteers on GP themes, schedule and updates.

7. Mobilize support of and involve barangay officials, NGOs, and civic organizations working in the barangay for GP implementation.

8. Coordinate with concerned health facilities for possible referrals from the GP centers during the GP implementation for further case evaluation and management.

9. Ensure that enough personnel and volunteers are available at GP Center. At least 9-10 persons are needed in every GP Center:

   9.1 One or two “Traffic” Officers to direct women, children and others who will go to the GP center and stations.

   9.2 One “Registration” Officer/recorder whose tasks are described below under the “During the GP -- Registration” section.
9.3 Two “Weighing” Officers whose tasks are described below under the “During GP – Growth Monitoring and Promotion” section.

9.4 Four (4) “Patak Distribution” Officers whose tasks are described below under the “During GP – Patak Distribution” section.

9.5 One “Vaccinator” whose tasks are described below under the “During GP – Injection” section.

9.6 One Health Education and Promotion Officer whose tasks are described below under the “During GP – Health Promotion” section.

During the GP

1. Check that the GP center/s is well-organized to accommodate a lot of children and their caregivers during the GP week. The place should be cool and comfortable. Check that the 6 stations in the GP center are properly and prominently labeled or marked:
   - Station 1: Registration
   - Station 2: GMP Station
   - Station 3: Distribution of Vitamin A capsule and deworming tablets/Patak
   - Station 4: Injection
   - Section 5: Health Promotion
   - Station 6: Evaluation

2. Registration (Station 1)

   2.1 Ask for the name of the child and validate it against the master list.
      
      a. If child’s name is in the master list, place a check across the name.
      
      b. If child’s name is not in the list, add his/her name in the masterlist and ask for other relevant information needed like birthday, name of mother, address, etc and write in appropriate column in the masterlist.

   2.2 Fill up a GP Recording Form for each child by interviewing the mother/caregiver. Refer to Annex 5C for the GP Recording Form to be accomplished.
      
      a. Record the name and age of the child on the GP Form
      
      b. Ask for a copy of the MCB/GMC/ECCD Card of the child and determine if the child has received vitamin A or not. If the mother/caregiver did not bring a copy of these records, ask if the child received vitamin A or not in the past 4 weeks.
         
         (i) If the child received vitamin A capsule within the last four (4) weeks, do not provide VAC. Explain to the mother/care giver that the child should come back to the health facility after completing the 4-week interval from the previous dose of vitamin A taken. Indicate in the child’s GP Form the services that must be provided by checking the appropriate items (services). Then, direct the child to the next station for weighing.
(ii) If the child did not receive any VAC within the last 4 weeks, he/she should be given VAC.

c. Determine the preparation of VAC that should be given based on the child’s age:

(i) If child is 6-11 months old, give 1 capsule of vitamin A 100,000 IU

(ii) If the child is 12-59 months old, give 1 capsule of vitamin A 200,000 IU

d. Indicate this information on the GP Form and identify other services that must be provided to the child by checking the enumerated items on the GP Form

2.3 Give to the mother/caregiver the GP Form and direct them to bring the child to the Weighing Station.

3. Growth Monitoring & Promotion (Station 2)

3.1 Weigh the child in kilograms (kg) and record his/her weight on GP Recording Form and on the GMC/MCB/ECCD Card.

3.2 Assess the nutritional status of the child and record the same on his/her MCB/GMC/ECCD Card.

3.3 Record the child’s nutritional status on the GP Form.

3.4 Direct the mother/caregiver to bring the child to the Patak Station.

4. Patak Distribution (Station 3)

4.1 Refer to the GP Form given to the child and prepare the vitamin A capsule to be provided.

4.2 Administer the VAC

a. If you are using two preparations of vitamin A in the center, make sure you know which capsule contains 100,000 IU and which ones contain 200,000 IU.

b. If you do not have 100,000 IU preparation for your 6-11 months old children, you can use the 200,000 IU VAC by providing only 3 drops which is equivalent to 100,000 IU.

c. Using a pair of clean pair of scissors, cut the nipple of the VAC at the middle and squeeze out 3 drops if 6-11 months or squeeze out the full content if 12-59 months directly to the child’s mouth.

d. Do not ask the child to swallow the capsule. Do not give capsule to the mothers/caregivers to take away.
e. Discard all used vitamin A capsules in a plastic bag or container. At the end of the day, all used capsules should be disposed of safely (buried or burned), to avoid children or animals accidentally ingesting the capsules. If the child vomits upon intake, repeat the dosage after one (1) week.

f. Provide other services including deworming tablets.

4.3 Direct the mother/caregiver to bring the child to the next station.

5. Health Promotion (Station 4)

5.1 Advise mother/caregiver on measures to ensure the health and wellness of their children, including the following:

a. Benefits of micronutrient supplementation
b. Benefits of breastfeeding, ensuring continues availability of breastmilk and correct complementary feeding. Refer to section 6 for the key messages
c. Benefits of food fortification
d. Use of iodized salt and other fortified foods
e. Personal hygiene (hand washing, tooth brushing use of slippers, etc.)
f. Other health messages as appropriate

5.2 Highlight the following key messages on vitamin A

a. Insufficient vitamin A reduces a child’s ability to fight common childhood infections such as diarrhea and measles.
b. Vitamin A is needed for growth and development.
c. It prevents blindness.
d. Giving vitamin A drops to children increases their chances of survival

5.3 Give copies of IEC materials to mothers/caregivers to learn more about the benefits of the above services.

5.4 Assess if the child needs to be given immunization or not. If immunization is needed, direct the mother/caregiver to bring the child to the injection station, if not, direct the mother to the final station to submit the accomplished GP Form.

6. Injection (Station 5)

6.1 Check the child’s immunization status and give the appropriate injectable vaccine/s.

6.2 Record the vaccines (BCG, DPT, AMV and Hepa B) given on the MCB/GMC/ECCD Card.

6.3 Direct the mother to the final station to submit the accomplished GP Form.
7. Evaluation (Station 6)

7.1 Collect all GP Recording Form and make sure the child has not missed any health service.

7.2 Review the child’s GP Recording Form and check if the child has any other health problem that would need a referral to another health facility.

7.3 If the child needs to be referred, accomplish the referral form using any prescription pad, stating the child’s name, age and reason for referral.

7.4 If the child needs no referral, send the child home.

7.5 Check the coverage of GP after implementation. If the coverage is below 95%, conduct a house-to-house mop up operations.

8. Mop Up Operations

8.1 Organize and do complete house-to-house visit.

8.2 Ask whether the household has a child 6 years old and below. If a 6-59 months old resides in that household, ask for the name of the child and check the masterlist if he/she is listed.

If he/she is listed:
   a. Ask for copy of the child’s MCB/GMC/ECCD Card and validate if he/she has not received VAC in the last 4 weeks.
   b. If not, verify the birthday of the child to assess the appropriate VAC to be administered
   c. Administer the VAC and indicate such in the GP recording form and in their MCB/GMC/ECCD Card.

If he/she is not listed:
   a. Add the name of the child on the Master List and ask for the other information required
   b. Do the same procedure as above.

8.3 Give the child the appropriate dose of vitamin A. Inform the mother/caregiver that the child was given vitamin A capsule and provide information on the importance of vitamin A.

8.4 Administer the other services and explain the importance or benefits of these services to the child’s health.

8.5 Record the services provided to the child in the ECCD card and the GP recording form.

8.6 Conduct household salt testing if kits are available.
Post GP Implementation

1. When all target children have been covered, accomplish the reporting forms and submit to MHO not later than the first week of May (for the April GP) and November (for the October GP).

   Refer to Annex 5.D1-5 for the Consolidated GP Report Forms.

2. Provide feedback on the GP accomplishment to Barangay Captain, MHO and other partners who participated in the conduct of GP.

3. The MHOs/CHOs should consolidate the report from the different barangay using the same report form and submit to the PHO not later than the 2nd week of May (for the April GP) and November (for the October GP).

4. The provincial GP coordinator must ensure that reports from all municipalities/cities are collected and consolidated and submit them to the CHDs not later than the 3rd week of May (for the April GP) and November (for the October GP).

5. CHDs must consolidate all reports from all provinces, and submit the report to the NCDPC not later than the 4th week of May (for the April GP) and November (for the October GP).

6. Ensure that the children given VAC during the months of April and October are reflected in the health facility’s FHSIS Target Client List, and are included in the regular reports submitted to concerned offices.
# Annex 5.A. Masterlist of 0-59 Month Old Children

**Year:**

**Municipality/City:**

**Barangay:**

**Province:**

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<th>Date of Registration</th>
<th>HI No</th>
<th>Name of Child (1)</th>
<th>Date of Birth (1)</th>
<th>Sex (1)</th>
<th>Birth weight (grams)</th>
<th>Name of Mother</th>
<th>Address (1)</th>
<th>Iron Supplementation Given</th>
<th>Vitamin A Supplementation</th>
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<td>2-3 months</td>
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<td>6-11 months</td>
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<td></td>
<td>12-23 months</td>
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<td>48-59 months</td>
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**Remarks:**

- (Date of Last Immunization and Vitamin A Dose)
# Annex 5.B. Logistics Inventory Form for GP

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<th>Vitamin A Capsules</th>
<th>Deworming Tablets</th>
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Prepared by: __________________________  Noted by: __________________________

Name and Designation  CHD Director
## ANNEX 5.C. GARANTISADONG PAMBATA FORM

Name of Child: ____________________________  Age: ______________  Date Accomplished: _____________

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<th>Remarks</th>
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<td>- DPT 3</td>
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<td>- Hep B</td>
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<td>- Importance of MS</td>
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<td>- Other Messages/Info (specify)</td>
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<td>Referral (specify for what condition and where referred)</td>
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**ANNEX 5.D1. FORM 1: VITAMIN A SUPPLEMENTATION AND DEWORMING COVERAGE**

**Month ___________**

**Region: ______________**

**Year ____**

<table>
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<tr>
<th>Province/City/Municipality</th>
<th>Population</th>
<th>Vitamin A Supplementation</th>
<th>Deworming</th>
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<tr>
<td></td>
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<td>6-11 months</td>
<td>12-59 months</td>
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<td></td>
<td></td>
<td>Target (1.35%)</td>
<td>No. Given</td>
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</tbody>
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Prepared by: ___________________________

Name and Designation

Noted by: ___________________________

CHD Director
### ANNEX 5.D2. FORM 2: IMMUNIZATION COVERAGE

Month ________________ Year __________
Region: ________________

<table>
<thead>
<tr>
<th>Province/City</th>
<th>Eligible Population</th>
<th>Number of Children Immunized</th>
<th>No. of Pregnant Mothers Immunized</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DPT1 12-59 months</td>
<td>DPT2 12-59 months</td>
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</table>

Prepared by: ____________________________
Name and Designation

Noted by: ____________________________
CHD Director
# Annex 5.D3. Form 3: Other Services Coverage

Month ___________ Year ___________
Region _______________________

<table>
<thead>
<tr>
<th>Province/City</th>
<th>Iron Supplements</th>
<th>Salt Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Children Given</td>
<td>No. of Pregnant Women Given Tablets</td>
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<tr>
<td></td>
<td>Eligible Target</td>
<td>No. Examined</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Activities:</th>
<th>Target</th>
<th>No.</th>
<th>%</th>
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<tbody>
<tr>
<td>No. of mothers given pre-marital counselling</td>
<td>______</td>
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<tr>
<td>No. of mothers given prenatal counselling</td>
<td>______</td>
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<tr>
<td>No. of pregnant mothers consulted in Health Centers</td>
<td>______</td>
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<tr>
<td>No. of mothers given birth spacing counselling</td>
<td>______</td>
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<tr>
<td>No. of mothers exclusively breastfeeding</td>
<td>______</td>
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<tr>
<td>No. of mothers counseled on complementary feeding</td>
<td>______</td>
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<tr>
<td>Mothers counseled on Detrimental Effects on Tobacco Smoking</td>
<td>______</td>
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<tr>
<td>No. of mothers given IEC materials</td>
<td>______</td>
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<tr>
<td>No. of children weighed (Height taking is optional)</td>
<td>______</td>
<td>_____</td>
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<tr>
<td>No. of children consulted on safety tips on child injury</td>
<td>______</td>
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</tbody>
</table>

Prepared by: __________________________ Noted by: __________________________

Name and Designation  CHD Director
## ANNEX 5.D4. FORM 4: RAPID COVERAGE ASSESSMENT FOR GARANTISADONG PAMBATA

<table>
<thead>
<tr>
<th>Door No.</th>
<th># children 6-71 months living with you</th>
<th># who have received Vitamin A</th>
<th># who have received Deworming Drugs</th>
<th># who have received DPT1</th>
<th># who have received MEASLES</th>
<th># who have received hbv3</th>
<th>Last child protected at birth (Y/N) (CPAB)</th>
<th>Main reason why child not received Vitamin A/ Deworming/ Immunization</th>
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<tbody>
<tr>
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<td>a</td>
<td>B</td>
<td>c</td>
<td>d</td>
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<td>f</td>
<td>g</td>
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<td>Site 1:</td>
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<tr>
<td>ANALYSIS</td>
<td>% Vit. A</td>
<td>% Dewormed</td>
<td>% DPT1-Vit.A</td>
<td>% MV</td>
<td>% HBV</td>
<td>% CPAB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GUIDE FOR RAPID COVERAGE ASSESSMENT OF VITAMIN A SUPPLEMENTATION - GP

1. Complete the first two lines of the form (your name, date, region, province/city, municipality, barangay/purok/sitio name)
2. Identify all urbanized barangays/puroks in the catchment area of the health facility.
3. Randomly select one of the urbanized barangays/puroks. Do not select well-off villages or subdivisions.
4. From the barangay hall, health facility or other sources, obtain a map of the area. Use the map to discuss with locals the sites of the more congested depressed areas and public sites where people congregate (e.g. plaza, markets, basketball courts). Of these, identify 2 sites where people live along the riverside, bordering other Barangay, away from roads) and 2 central sites (a total of 4 sites); and one public site.
5. Go to the first site identified on the map.
6. Briefly describe the site on the table (e.g., riverside, bordering other Barangay, along road).
7. Identify 5 doors nearest to the site. If there is a variety, select at least a couple of the hardest to reach doors. E.g., the top floor, or ones with complicated entry.
8. Complete one line of the table for each door:

   Knock on the door. If there is someone present, ask the following questions.

Column a: "Are there children aged 6-71 months old living with you?" If YES, write the number. If NONE, thank them and go to the next door or house.

Column b: For each child ask mother, “Did (NAME) receive vitamin A during the Garantisadong Pambata (October) or for the past 6 months? How many have received Vitamin A.

Column c: For each child ask mother, “Did (NAME) receive Deworming tablets during the Garantisadong Pambata (October) or for the past 6 months? How many received Deworming tablets?

Column d: For each child, ask mother, “Did (NAME) ever receive a DPT vaccination that is an injection given in a thigh or buttocks, sometimes at the same time as polio drops? Determine how many have received DPT1.

Column e: For each child with an immunization card, check if measles was given. For each child without an immunization card, ask the mother, “Did (NAME) ever receive an injection to prevent measles?” Determine how many have received AMV.

Column f: For each child with an immunization card, check if HB3 was given. For each child without an immunization card, ask the mother, “Did (NAME) ever receive an injection to prevent Hepatitis B?” If yes, ask “How many times?” Determine how many have received HBV3.

Column g: Ask, “Did you receive either:
A. At least 2 injections of tetanus toxoid during your last pregnancy OR
B. At least 3 injections of tetanus toxoid at anytime during or before your last pregnancy?
If either she received either, indicate “yes” to Column g, Child is protected at birth (CPAB). Otherwise, indicate “no”.

Column h: If any child was not given vitamin A or deworming drugs or fully immunized or not protected at birth, ask, “What are the reasons (YOU/YOUR CHILD/YOUR CHILDREN) was/were not given vitamin A or deworming tablets or fully immunized?”

Column i: Ask, “How long have you lived in this barangay?”
### ANNEX 5.D5. FORM 5: SUMMARY OF KICK-OFF ACTIVITIES

**Month __________ Year __________**

<table>
<thead>
<tr>
<th>Activities</th>
<th>LGU (Region/Province/Cities)</th>
<th>Date Conducted</th>
<th>Participants Type</th>
<th>Number</th>
<th>Outputs/Results</th>
</tr>
</thead>
<tbody>
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Prepared By: ____________________________  Noted By: ____________________________

Name and Designation  CHD Director
1. Client/ Health Care Consumers (Demand)

What are the current behaviors, practices and perceptions of the general public and the target clients on MS?

1.1 Are clients/targeted population aware of the importance of MS and the negative consequences of micronutrient deficiencies if these remained unattended?

1.2 What are the clients/targeted populations’ behavior?
1.2.1 Do pregnant women consult the health care provider/facility as early as 1st trimester?
1.2.2 Do clients/targeted population complete the duration of the recommended MS?
1.2.3 Do clients/target population readily participate in MS campaign e.g. GP events, growth monitoring, etc.

1.3 How is their access to MS services? Are there groups that are not reached with MS services? What prevents them from accessing these services?

1.4 Are there groups with higher risk to micronutrient deficiencies? What factors exposes them to the deficiencies?

1.5 What are their cultural orientation, beliefs and practices that prevented them from being micronutrient sufficient? Or this can be in negative term, like reasons why they are mn deficient...

2. Service Providers (Supply)

Is the network of health facilities and/or health care providers capable in providing quality MS to targeted populations?

2.1 What is the capacity of local health service providers in providing quality MS’ services?

(i) competency/proficiency of providers: Are the staff trained on how to diagnose clients with micronutrient deficiency, how to administer MS, how to forecast MS requirements?
(ii) availability of tools: equipment/facilities: Are their tools used to help health care providers in the diagnosis of micronutrient deficiency?
(iii) adequacy and timeliness of MS supply: Does the health facility maintain adequate stocks of essential MS supply to meet the requirements of the targeted population?

2.2 To what extent are hospital staff involved in the provision of MS as well as the private practitioners?

2.3 How are trained BHWs, BNSs and other volunteer workers performing their tasks in MS?

2.4 Are health staff supervised in the delivery/provision of MS to clients?

3. LGUs (Province/City/municipality/barangays)

How do LGUs govern the provision of MS services to their constituents?

3.1 How is the local health system organized in support to MS provision in the area?

a. are all health facilities providing MS services?
b. Is there a functional referral system for MS provision?
c. Does the LGU enjoin the support of private providers/health facilities?
3.2 Does the LGU support MS delivery?
   a. Does the LGU provide budget for the procurement of MS supply?
   b. Does the LGU provide counterpart funding, supply, personnel during GP events?

3.3 Does the LGU coordinate with professional societies, academe and other NGOs in the area for the provision of MS?

3.4 Has the LGU established effective and efficient procurement system and logistics management system for MS requirements of its constituents?
   a. Has it set-up the system for procuring quality MS?
   b. Has it established mechanism of acquiring MS supply not available locally?
   c. Does it have mechanism to ensure that procured MS supply are of quality?
   d. Does it undertake regular inventory of MS stocks?

3.5 Has the LGU established and operate effective and efficient recording and reporting system relative to MS provision and utilization? Are reports relevant to MS accurate, complete and submitted timely to appropriate offices?

3.6 Has the LGU formulated/issued any policy/resolution/ordinance in support to MS?

4. DOH-National and CHDs

4.1 What is the extent of assistance provided by DOH to the LGUs? How are these prioritized and coordinated across funding sources vis-à-vis local counterparts? How timely are these delivered/provided?

4.2 In what way are the national MS program policies disseminated, advocated and operationalized and cascaded down to local level?

4.3 To what extent are program initiatives disseminated, advocated and adopted in other areas?

4.4 To what extent are results of researches/studies undertaken, disseminated and acted upon?

4.5 Any regulatory functions which DOH/CHD should have performed in support to MS?

5. Development Partners and Donor Community

5.1 To what extent are the participation and support of the different stakeholders defined?

5.2 How coordinated are the technical inputs and financial contributions of the different groups of stakeholders?

5.3 To what extent are the donors’ contributions managed and coordinated to meet MS priority needs and gaps?

5.4 How are the other professional societies, line agencies, and other private groups mobilized for MS provision?

Daily Nutritional Guide Pyramid for Filipino Children (1-6 years old)

- Fats & Oils: 6 tsps
- Sugar/Sweets: 4 - 5 tsps
- Fish, Shellfish, Meat & Poultry: 1 - 1 1/3 servings
- Dried Beans & Nuts: 1/3 - 1/2 cup serving
- Egg: 1/2 piece
- Milk & Milk Products: 1 glass
- Vegetable: 1 - 2 medium servings
- Fruits: 1 - 2 medium servings
- Corn, Root crops, Bread, Noodles: 2 - 4 1/2 servings
- Rice, Rice Products: 1/3 - 1/2 cup serving
- Water/Beverages: 4 - 7 glasses

Exercise

Personal & Environmental Hygiene
- Encourage children to do regular exercise to prevent obesity.
- Use growth chart to monitor children's height and weight patterns.

Eating Plan for Healthy Living

Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance. Use iodized salt and eat other fortified foods to increase the intake of micronutrients.

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General Santos Avenue, Bicutan, Taguig City
Tel./Fax: 837-29-34; 837-31-64
http://www.fnri.dost.gov.ph
Daily Nutritional Guide Pyramid for Filipino Children (7-12 years old)

- **Fats & Oils**: 6 - 8 tsps
- **Sugar/Sweets**: 5 - 6 tsps
- **Fish, Shellfish, Meat & Poultry, Dried Beans & Nuts**: 2 1/3 - 2 servings
- **Egg**: 1/2 piece
- **Milk & Milk Products**: 1 glass
- **Vegetables**: 3/4 - 1 cup serving
- **Fruits**: 2 medium servings
- **Rice, Rice Products, Corn, Root Crops, Bread, Noodles**: 4 - 6 servings
- **Water/Beverages**: 6 - 8 glasses

**EXERCISE**

PERSONAL & ENVIRONMENTAL HYGIENE
- Substitute physical activity for television watching or playing computer games.

**EATING PLAN FOR HEALTHY LIVING**

Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance.
Use iodized salt and eat other fortified foods to increase the intake of micronutrients

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General Santos Avenue, Bicutan, Taguig City
Tel./Fax: 837-29-34; 837-31-84
http://www.fnri.dost.gov.ph
Daily Nutritional Guide Pyramid for Filipino Children (13-19 years old)

- **Fats & Oils**: 6 - 8 tsps
- **Sugar/Sweets**: 5 - 6 tsps
- **Fish, Shellfish, Meat & Poultry, Dried Beans & Nuts**: 2 1/2 servings
- **Eggs**: 1 piece
- **Milk & Milk Products**: 1 glass
- **Vegetables**: 3 servings
- **Fruits**: 3 servings
- **Rice, Rice Products, Corn, Root Crops, Bread, Noodles**: 6 - 8 servings
- **Water/Beverages**: 6 - 8 glasses

**EXERCISE**
- PERSONAL & ENVIRONMENTAL HYGIENE
  - Engage in physical activities like swimming, biking, hiking or household chores rather than in sedentary activities such as television watching or playing computer games.
  - Do not smoke.
  - Avoid alcoholic beverages.

**EATING PLAN FOR HEALTHY LIVING**
Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance. Use iodized salt and eat other fortified foods to increase the intake of micronutrients.

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General Santos Avenue, Binan, Taguig City
Tel./Fax: 837-29-34; 837-31-64
http://www.fnri.dost.gov.ph

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Daily Nutritional Guide Pyramid for Filipino Adults

EXERCISE
PERSONAL & ENVIRONMENTAL HYGIENE
- Exercise regularly in most days of the week for at least 30 minutes.
- Practice good personal and environmental hygiene.

EATING PLAN FOR HEALTHY LIVING
Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance. Use iodized salt and eat other fortified foods to increase the intake of micronutrients.

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General San Tao Avenue, Bagong, Taguig City
Tel./Fax: 837-25-34, 837-31-64
http://www.fnri.dost.gov.ph
Daily Nutritional Guide Pyramid for Older Persons (60-69 years old)

**Fats & Oils**
2 - 5 tsps

**Sugar/Sweets**
4 - 6 tsps

**Fish, Shellfish, Meat & Poultry, Dried Beans & Nuts**
3 servings

**Eggs**
1 piece

**Milk & Milk Products**
2/3 - 3/4 glass

**Vegetables**
3 servings

**Fruits**
2 servings

**Rice, Rice Products, Corn, Root Crops, Bread, Noodles**
4 1/2 - 6 servings

**Water/Beverages**
6 - 8 glasses

---

**EXERCISE**

**PERSONAL & ENVIRONMENTAL HYGIENE**
- Exercise regularly to maintain and/or achieve a healthy weight.
- Limit the use of salty foods.
- If you drink alcoholic beverages, limit your intake to not more than 2 glasses a day.

---

**EATING PLAN FOR HEALTHY LIVING**
Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance. Use iodized salt and eat other fortified foods to increase the intake of micronutrients.

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General Santos Avenue, Biocen, Taguig City
Tel./Fax: 837-29-34; 837-31-64
http://www.fnri.dost.gov.ph
Daily Nutritional Guide Pyramid for Filipino Pregnant Women

- Fats & Oils: 7 tsps
- Sugar/Sweets: 6 tsps
- Fish, Shellfish, Meat & Poultry, Dried beans & Nuts: 4 - 6 servings
- Egg: 1 piece
- Milk & Milk Products: 1 glass
- Vegetables: 3 - 4 servings
- Fruits: 2 servings
- Rice, Rice Products, Corn, Root Crops, Bread, Noodles: 5 1/2 - 6 servings
- Water/Beverages: 6 - 8 glasses

EXERCISE
PERSONAL & ENVIRONMENTAL HYGIENE
- Try light to moderate physical activity such as walking. Be sure to consult your doctor before engaging in light to moderate activity. Other activities include swimming, stretching, and floor exercise.
- Consume sodium/salt in moderate amount.
- Stop smoking and avoid alcohol during the entire pregnancy.

EATING PLAN FOR HEALTHY LIVING
Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance. Use iodized salt and eat other fortified foods to increase the intake of micronutrients.

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General Santos Avenue, Bicutan, Taguig City
Tel/Fax: 837-29-34, 837-31-64
http://www.fnri.dost.gov.ph
Daily Nutritional Guide Pyramid for Filipino Lactating Women

EXERCISE

PERSONAL & ENVIRONMENTAL HYGIENE

- Try to incorporate some form of exercise into your daily routine.
- Get enough rest during the day.
- Stop smoking and avoid alcohol during lactation.
- Avoid fear, worry and fatigue especially when nursing the baby.

EATING PLAN FOR HEALTHY LIVING

Eat a variety of foods everyday to ensure that all nutrients are provided in proper amount and balance. Use iodized salt and eat other fortified foods to increase the intake of micronutrients.

Source: Nutritional Guidelines for Filipinos (NGF) 2000

Food and Nutrition Research Institute
Department of Science and Technology
General Santos Avenue, Bicutan, Taguig City
Tel./Fax: 837-29-34; 837-31-64
http://www.fnri.dost.gov.ph
In support of the overall micronutrient supplementation program direction, there is a need to focus key messages on various groups of partners in areas of different MSP status. The following table summarizes the key behaviours and messages that need to be emphasized to each particular audience:

<table>
<thead>
<tr>
<th>Target Audience (Employers/Owners)</th>
<th>Desired Behaviors/Action Points</th>
</tr>
</thead>
</table>
| Work Place (local companies, factories, establishments, etc.)          | - Provide micronutrient supplementation package to women employees of reproductive age as part of staff benefits/incentives  
- Integrate micronutrient supplementation provision in clinic services  
- Provide supportive environment for lactating mothers to enable her to continue breastfeeding after going back to work. |
| Management of Pharmaceutical Manufacturing Companies                    | - Manufacture micronutrient supplementation products consistent with DOH specifications  
- Ensure FDA registration of micronutrient supplementation products and comply with relevant provisions of the Milk Code  
- Widen delivery and retail distribution of micronutrient supplementation products to the local level |
| Development Partners                                                   | - Provide technical assistance in the promotion of the new micronutrient supplementation Policies and Guide  
- Provide resources to augment micronutrient supplementation supply at the local level  
- Support the national micronutrient supplementation campaign like GP, routine and outreach activities |
| Local Chief Executives, other Decision Makers/Policymakers             | - Issue resolution or local ordinances for the implementation of micronutrient supplementation program  
- Include in the local annual operations and investment plan, as well as appropriate the required budget for the micronutrient supplementation program including funds for monitoring. |
| Schools and Day Care Centers and Social Welfare sector                 | - Be oriented on the new micronutrient supplementation Policies and Guide  
- Integrate micronutrient supplementation messages in the lesson plan  
- Disseminate information to the adolescents about the availability of iron-folic acid |
<table>
<thead>
<tr>
<th>Target Audience (Employers/Owners)</th>
<th>Desired Behaviors/Action Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>o Issue Department Memo for schools to subsidize iron folic acid supplementation</td>
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<td>o Ensure that fortified foods are sold and used in the canteen</td>
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<td>o Integrate micronutrient supplementation messages during feeding activities and parents meetings</td>
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<tr>
<td>Faith-based organizations</td>
<td>o Disseminate micronutrient supplementation messages through pastoral letter, newsletter, news bulletin, etc.</td>
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<tr>
<td></td>
<td>o Integrate micronutrient supplementation program in their own projects</td>
</tr>
<tr>
<td>NGOs, Civic organizations</td>
<td>o Provide DOH approved micronutrient supplementation packages in project sites</td>
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<td>o Conduct information dissemination activities using the revised DOH Micronutrient Supplementation Policies and Guidelines</td>
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<td>o Reproduce micronutrient supplementation packages, materials and collaterals based on DOH Micronutrient Supplementation Policies and guidelines</td>
</tr>
<tr>
<td>Health Service Providers</td>
<td>o Be oriented on the new Micronutrient Supplementation Policies and Guidelines and be familiar with micronutrient supplementation packages approaches and other relevant policies and guidelines like the Milk Code.</td>
</tr>
<tr>
<td></td>
<td>o Make sure that all micronutrient supplementation supplies for the different target groups are available during routine services, outreach activities/mission, and Garantisadong Pambata</td>
</tr>
<tr>
<td></td>
<td>o Identify other service delivery and other possible service channels where targets converge as appropriate for micronutrient supplementation provision</td>
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<td>o Know the population who have the least access to micronutrient supplementation and find ways to redirect efforts to reach the marginalized population</td>
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<td></td>
<td>o Record micronutrient supplementation provision and submit reports on time.</td>
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<td>o Monitor HPC activities.</td>
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<td></td>
<td>o Advocate for the support of your local chief executives and other partner agencies for the implementation of micronutrient supplementation.</td>
</tr>
<tr>
<td></td>
<td>o Participate in planning for health promotion.</td>
</tr>
</tbody>
</table>
A. Background and Rationale:

A brief review of the reporting forms of Health Education and Promotion Officers (HEPOs) from various parts of the country showed a variety of forms reflective of the level of reporting required of them by the Provincial Health Office. These could be categorized into 4 forms (see samples at end of this Annex). The more exhaustive form would be a listing of trainings, inventory of IEC distributed and a comparison of targets and accomplishments for various activities such as counselling, mothers class and bench conferences. Some would simply submit narrative reports for a chronological list of activities they conducted for a certain period. Others still used the HE/IEC form which showed targets and accomplishments (number and percentage) for 9 types of HEPO activities including training of community workers, staff conferences and mass information campaigns. Still another form is the consolidation of the numbers reached with HPC following the FHSIS format. A cursory survey of HEPOs during a consultation workshop in December 2008 revealed that these reports were not uniformly and regularly submitted and that indeed there was no standard regulation reporting form for HEPOs.

The above forms mostly showed the targets for numbers to be reached with HPC activities compared to the numbers actually accomplished. However, there is no way to check how targets were determined, and no way to assess if the accomplishments reflected certain levels of impact in the community. For example, how can an accomplishment of 14, 986 reached with bench conferences for a 3 month period be effectively assessed when it does not relate to a base population or a geographical area? Furthermore, there is no way to trace numbers for double counting so as to effectively report actual reach.

Likewise, the numbers for HPC activities do not reflect the health themes (e.g., family planning, maternal health, tuberculosis, dengue, malaria, etc.) covered by these activities nor can they use the reporting forms to identify what specific topics have taken up for specific health themes like pre-natal care, postnatal care, danger signs and skilled birth attendance for Maternal Health. The HEPOs therefore have no qualitative documentation of the types of information that have been provided to the communities.

A consultation with the DOH National Center for Health Promotion (NCHP) in December 2008 confirmed the need for a system to document, track and report HPC activities from the community up to the provincial level at least. A series of FGDs for mothers and fathers were conducted by HealthPRO in 2009 in various provinces to inform the communication campaign for these areas. In conjunction with the scheduled FGDs, interviews were done with selected HSPs from two municipalities each in Negros Oriental, South Cotabato and Saranggani. These allowed us to gather information on BHW documentation and reporting systems and how HPC activities were planned, conducted and implemented.

HealthPRO, as part of its technical assistance to NCHP and to the HPC efforts in 28 provinces, committed to help in developing a tracking tool. Initial conceptualization with the DOH-NCHP point persons pointed to a tool that must be designed to interface with existing documentation and limited to a one-page tool to facilitate reproduction. It must be designed to allow not counting and tracking individuals reached with HPC, but allow for a simple disaggregation by sex, by health themes, health topics and types of HPC activities. Furthermore, the form is designed not only as a reporting mechanism but is useful for the BHW, Midwife, Nurse and HEPO in targeting, monitoring and planning purposes.

Tools for the midwife (barangay level), nurse (municipality level) and HEPO (provincial level) were drafted. These were presented to health service providers in Tarlac, Bohol, Saranggani South Cotabato and Compostela Valley for consultation and feedback. These forms were also introduced for consultation among the HEPOs of Lanao del Sur, Maguindanao, Basilan, Sulo and Tawi-Tawi.
B. THE TRACKING FORMS

1. The BHW Masterlist

BHWs annually update a household-based client listing where households in their “catchment areas/puroks” are numbered and all household members are listed with details such as sex and birthdates. It is therefore important for each and every BHW to be supplied with a record book, journal or at least notebook for their masterlist.

Target listing for each health program is based on the masterlist such as the list of pregnant mothers, children for immunization, FP users, TB symptomatics, etc.

The masterlist can also be used to identify participants for health classes and referred for health counselling.

Ideally, the masterlist can be extended as a columnar journal where each column can mark a household member for a specific health program. This way the BHW need not maintain separate target lists for each program. And when an individual is marked for various health programs, the BHW can track clients in each household across health programs towards a more integrated approach.

2. The FP counselling Sign-up Sheet

Unlike in other health programs where counselling is done in conjunction with a health service, for family planning, counselling is done prior to service uptake. For other health programs therefore, HSPs can track the number of people they have counselled based on service documentation. For example records for ANC for maternal health or EPI for counselling on child health.

In FP, the record for new acceptors is only a fraction of the number counselled in this health program hence the need for actual recording of counselling activities. Also, some clients require a series of counselling sessions before they are taken up as new acceptors, if at all.

The FP counselling sign-up sheet allows the HSPs to record actual counselling clients both new and returning, male and female. Consolidation of the numbers can provide distinct counts of people counselled for a specific barangay.

a) Each FP counselling client (whether one-on-one or group sessions with 10 or less clients) will be asked to sign up. For midwives assigned more than one barangay, separate sign-up sheets can be maintained for every barangay they cover.

b) The Midwife at regular intervals (eg monthly or quarterly) can sum up new male and female clients.

3. The MIDWIFE Tracking Form

This form allows the Midwife to track HPC status across the barangays in his/her coverage area. Likewise she is also able to monitor what types and topics of HPC activities have been conducted per barangay. The midwife can then plan which barangays to target for next HPC sessions and what topics and types of activities to prepare. With her background knowledge about the health issues in each barangay she is able to use the tool to see how HPC activities are matching the needs of the barangay. By summing up the total clients in his/her coverage barangays (from the FP counselling sign up sheets, service records and attendance sheets) the midwife is also able to monitor their saturation progress in providing information at the barangay level. Disaggregation by sex allows them to also strive for more male involvement in the HPC activities at the barangay level.
a) At the end of every quarter, the midwife, using the FP sign-up sheet, MH and CH records, the TB registry and other program records, can consolidate how many have attended counselling for each health theme (FP, MH, CH, TB etc) ensuring that the client is only counted once for each health theme. They can also count based on attendance sheets how many attended classes for each health theme also ensuring client is only counted once per health theme. This means they have separate totals for counselling and totals for classes.

b) For the succeeding quarter they only add up the new clients or participants for each health theme and activity to the number from the last quarter so they can see how they are coming closer to the total number of clients in their catchment area for both counselling and health classes.

c) The total number of males and females of reproductive age in the masterlist of each BHWs are added up to get the total at the Midwife catchment level which is the whole barangay. For every quarter then, the midwife is able to track not only the progress of numbers in each barangay in relation to the total number of clients, but also compare progress across barangays.

4. The NURSE AND HEPO Tracking Forms

The Nurses’ tracking form is basically an HPC activity profiling of the whole municipality on a quarterly basis for the whole year. At the level of the provincial HEPO, the form allows a tracking of the HPC across the municipalities of the whole province also on a quarterly basis. At these levels, both forms also enable the nurse and HEPO to monitor what types and topics of HPC activities have been conducted in their respective coverage area for a certain quarter. The Nurse can then plan which topics and what activities s/he can assist the midwife with. The provincial HEPO can plan for the municipalities to prioritize for assistance with HPC sessions. HEPOs coordinate with the thematic program coordinators (FP, MCH, etc) on health needs per municipality, so they are also able to use the tool to see how HPC activities are matching the needs of each municipality. By summing up the total clients at their level both the Nurse and the HEPOs can use the tool as basis for their accomplishment reports. For data quality concerns, numbers at the provincial level can be traced back for validation to the municipal down to the household level with these tools.

a) The Nurse simply uses numbers from the Midwife forms to sum up the barangay numbers up to the municipal level. On a quarterly basis the Nurse compares the total number of participants per type of HPC activity per health theme, and compare to the total target clients in the municipality to track HPC saturation at the municipal level.

b) The HEPO consolidates the municipal numbers every quarter to allow comparisons across municipalities for the whole province.
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<th>HH #</th>
<th>Name of household member</th>
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YEAR_____
SIGN UP SHEET FOR FP COUNSELING  YEAR  Q1  Q2  Q3  Q4

Name of Midwife ________________________________________________

Barangay/Municipality/Province _______________________________________

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<th>BABAE</th>
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<td>Unang FP Counseling?</td>
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Total NEW ______
### MIDWIFE Health Promotion Education Tracking Form

**YEAR______**

**Name of Midwife**

**Municipality/Province**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Health Topics</th>
<th>BRGY 1&lt;sup&gt;st&lt;/sup&gt; Qtr</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Qtr</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Qtr</th>
<th>4&lt;sup&gt;th&lt;/sup&gt; Qtr</th>
<th>BRGY 1&lt;sup&gt;st&lt;/sup&gt; Qtr</th>
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## NURSE/HEPO DESIGNATE Health Promotion Education Tracking Form

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**Name of Nurse/HEPO Designate**

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## Annex 10. Computation of MS Requirement

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<td><strong>A. For Vitamin A Capsule (VAC)</strong></td>
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<td>6-11 month old infants</td>
<td>Estimated proportion of 6-11 month old: 0.0135 (1.35%) of the total population</td>
<td>Example of Total Population/municipality: 42,175</td>
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<td></td>
<td>Dosage Requirement: 1 VAC 100,000 IU /infant/year</td>
<td>Estimated number of 6-11 month old = 42,175 x 0.0135 (1.35%) = 569.4 or 570 infants</td>
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<td>Buffer Stock: Additional (0.1) 10% of the total requirement/year</td>
<td>Total VAC requirement = 570 x 1capsule/infant/year = 570 capsules</td>
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<td>Buffer stock = 570 capsules x 0.1 (10%) = 57</td>
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<td>Total VAC requirement = Total VAC requirement + Buffer stock = 570 + 57 = 627 capsules</td>
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<tr>
<td>12-59 month old children</td>
<td>Estimated proportion of 12-59 month old: 0.108 (10.8%) of the total population</td>
<td>Example of Total Population/municipality: 42,175</td>
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<td>Dosage requirement: 2 VAC 200,000 IU /child/year</td>
<td>Estimated number of 12-59 months = 42,175 x 0.108 (10.8%) = 4554.9 or 4555 children</td>
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<td>Buffer stock: Additional 0.1 (10%) of the total requirement/year</td>
<td>Total VAC requirement = 4555 x 2 capsules/child /year = 9,110 capsules</td>
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<td>Buffer stock = 9,110 capsules x 0.1 (10%) = 911</td>
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<td>Total VAC requirement = Total VAC requirement + Buffer stock = 9110 + 911 = 10,021 capsules</td>
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<td>MS by Target Population</td>
<td>Assumptions</td>
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<td>Post-Partum Women</td>
<td>Estimated proportion of postpartum women: 0.03 (3%) of the total population</td>
<td>Example of Total Population/municipality: 42,175</td>
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|                                              | Dosage requirement: 1 VAC 200,000 IU/postpartum woman/year                                                                                                                                                  | Estimated number of postpartum women = 42,175 x 0.03 (3%)  
                                                                                                         = 1,265.2 or 1,266 women                                                                                                                                 |
|                                              | Buffer stock: Additional 0.1 (10%) of the total requirement/year                                                                                                                                                | Total VAC requirement = 1,266 x 1 capsules/postpartum woman/year  
                                                                                                         = 1,266 capsules                                                                                                                                          |
|                                              | Poverty Index: 0.329 (32.9%) (optional)                                                                                                                                                                   | Buffer stock = 1,266 capsules x 0.1 (10%)  
                                                                                                         = 126.6 or 127                                                                                                                                          |
|                                              |                                                                                                                                                                                                            | Total VAC requirement = Total VAC requirement + Buffer stock  
                                                                                                         = 1,266 + 127  
                                                                                                         = 1,393 capsules                                                                                                                                 |
|                                              |                                                                                                                                                                                                            | If Poverty Index to be applied:  
                                                                                                         Total VAC Requirement = Total VAC requirement x Poverty Index  
                                                                                                         = 1,393 x 0.329 (32.9%)  
                                                                                                         = 458.3 or 459 capsules                                                                                                                                 |
| Children 6-11 month old infants with high risk conditions (measles, severe pneumonia, severe PEM and persistent diarrheal) | Estimated proportion of 6-11 month old: 1.35% (0.0135) of the total population                                                                                                                                 | Example of Total Population/municipality: 42,175                                                                                                                                                                     |
|                                              | Prevalence of high risk conditions: 20%(0.20)                                                                                                                                                               | Estimated number of 6-11 month old infants with high risk conditions =  
                                                                                                         Example of Total Population/municipality: 42,175 x 0.0135 (1.35%) x 0.20 (20%)  
                                                                                                         = 113.9 or 114 infants                                                                                                                                 |
|                                              | Dosage requirement: 1 VAC 100,000 IU/infant                                                                                                                                                               | Total VAC requirement = 114 x 1 capsules/infant /year  
                                                                                                         = 114 capsules                                                                                                                                          |
|                                              | Buffer stock: Additional 0.1 (10%) of the total requirement/year                                                                                                                                              | Buffer stock = 114 capsules x 0.1 (10%)  
                                                                                                         = 11.4 or 12                                                                                                                                           |
|                                              |                                                                                                                                                                                                            | Total VAC requirement = Total VAC requirement + Buffer stock  
                                                                                                         = 114 + 12  
                                                                                                         = 126 capsules                                                                                                                                        |
<table>
<thead>
<tr>
<th>MS by Target Population</th>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-Partum Women</td>
<td>Estimated proportion of postpartum women: 0.03 (3%) of the total population</td>
<td>If Poverty Index to be applied</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement: 1 V AC 200,000 IU/postpartum woman/year</td>
<td>Total VAC = Total VAC requirement x Poverty Incidence</td>
</tr>
<tr>
<td></td>
<td>Buffer stock: Additional 0.1 (10%) of the total requirement/year</td>
<td>= 126 x 0.329 (32.9%)</td>
</tr>
<tr>
<td></td>
<td>Poverty Incidence = 0.329 (32.9%) (optional)</td>
<td>= 41.4 or 42 capsules</td>
</tr>
<tr>
<td></td>
<td>Example of Total Population/municipality: 42,175</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Estimated number of postpartum women = 42,175 x 0.03 (3%)</td>
<td>Estimated number of 12-59 month old children with high risk conditions</td>
</tr>
<tr>
<td></td>
<td>= 1,266 women</td>
<td>= 42,175 x 0.108 (10.8%) x 0.20 (20%)</td>
</tr>
<tr>
<td></td>
<td>Total VAC requirement = 1,266 x 1 capsules/postpartum woman/year</td>
<td>= 910.9 or 910 high risk children</td>
</tr>
<tr>
<td></td>
<td>= 1,266 capsules</td>
<td>Total VAC requirement = 911 x 1 capsules/child/year</td>
</tr>
<tr>
<td></td>
<td>Buffer stock = 1,266 capsules x 0.1 (10%)</td>
<td>= 911 capsules</td>
</tr>
<tr>
<td></td>
<td>= 126 capsules</td>
<td>Buffer stock = 911 capsules x 0.10 (10%)</td>
</tr>
<tr>
<td></td>
<td>Total VAC requirement = Total VAC requirement + Buffer stock</td>
<td>= 911 + 92</td>
</tr>
<tr>
<td></td>
<td>= 1,393 capsules</td>
<td>= 1,003 capsules</td>
</tr>
<tr>
<td></td>
<td>If Poverty Index to be applied</td>
<td>Total VAC = Total VAC requirement x Poverty Incidence</td>
</tr>
<tr>
<td></td>
<td>Total VAC requirement = Total VAC requirement + Buffer stock</td>
<td>= 126 x 0.329 (32.9%)</td>
</tr>
<tr>
<td></td>
<td>= 41.4 or 42 capsules</td>
<td>= 41.4 or 42 capsules</td>
</tr>
<tr>
<td></td>
<td>Total VAC requirement = Total VAC requirement + Buffer stock</td>
<td>= 1,393 x 0.329 (32.9%)</td>
</tr>
<tr>
<td></td>
<td>= 458.3 or 459 capsules</td>
<td>= 458.3 or 459 capsules</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children 12-59 months with high risk conditions (measles, severe pneumonia, severe PEM and persistent diarrhoea)</th>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated proportion of 12-59 month old children= Total population x 0.108 (10.8%)</td>
<td>Example of Total Population/municipality: 42,175</td>
<td></td>
</tr>
<tr>
<td>Prevalence of high risk conditions = 0.20 (20%)</td>
<td>Estimated number of 12-59 month old children with high risk conditions = 42,175 x 0.108 (10.8%) x 0.20 (20%)</td>
<td>= 910.9 or 910 high risk children</td>
</tr>
<tr>
<td>Dosage requirement= 1 V AC 200,000 IU/child</td>
<td>Total VAC requirement = 911 x 1 capsules/child/year</td>
<td>= 911 capsules</td>
</tr>
<tr>
<td>Buffer stock= Total requirement/year X 0.10 (10%)</td>
<td>Buffer stock = 911 capsules x 0.10 (10%)</td>
<td>= 91.1 or 92 capsules</td>
</tr>
<tr>
<td>Total VAC requirement = Total VAC requirement + Buffer stock</td>
<td>Total VAC requirement = 911 + 92</td>
<td>= 1,003 capsules</td>
</tr>
<tr>
<td>= 911 + 92</td>
<td>= 1,003 capsules</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Iron/Folic acid Supply</th>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low birth weight (LBW) infants</td>
<td>Estimated proportion of LBW infants= Total population x 0.027 (2.7%)</td>
<td></td>
</tr>
<tr>
<td>Prevalence of LBW = 0.196 (19.6%)</td>
<td>Example of Total Population/municipality: 42,175</td>
<td></td>
</tr>
<tr>
<td>Estimated number of LBW infants = 42,175 x 0.027 (2.7%)</td>
<td>Estimated number of LBW infants = 42,175 x 0.027 (2.7%)</td>
<td></td>
</tr>
<tr>
<td>x 0.196 (19.6%)</td>
<td>= 223.2 or 224 LBW infants</td>
<td></td>
</tr>
<tr>
<td>MS by Target Population</td>
<td>Assumptions</td>
<td>Computation of MS Requirement</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td><strong>6-11 months infants (non anemic)</strong></td>
<td>Dosage requirement= (2) 30 ml bottle iron drops/LBW infant</td>
<td>Total Iron requirement = 224 x 2 bottles (30 ml drops / LBW infant/year = 448 bottles</td>
</tr>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
<td>Buffer stock = 448 bottles x 0.10 (10%) = 44.8 or 45 bottles</td>
</tr>
<tr>
<td></td>
<td>Prevalence of IDA among 6-11 months = 0.55 (55.7%)</td>
<td>Total Iron requirement = Total Iron requirement + Buffer stock = 448 + 45 = 493 bottles</td>
</tr>
<tr>
<td></td>
<td>Estimated proportion of 6-11 months= Total population x 0.0135 (1.35%)</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td></td>
<td>Estimated number of 6-11 months infants (non IDA) = 42,175 x 0.0135 (1.35%) x 0.443 (44.3%) = 252.2 or 253 infants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dosage requirement= (2) 30 ml bottle iron drops/infant or 60 sachets of MNP</td>
<td>If Iron drops to be used</td>
</tr>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
<td>Buffer stock = 506 bottles x 0.10 (10%) = 50.6 or 51 bottles</td>
</tr>
<tr>
<td></td>
<td>Poverty Incidence = 0.329 (32.9%) (optional)</td>
<td>Total Iron requirement = Total Iron requirement + Buffer stock = 506 + 51 = 557 bottles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If Poverty Index to be applied</td>
</tr>
</tbody>
</table>
### MS by Target Population

**Assumptions**

- Note: Iron drops will be used until Micronutrient powders will become available in the country

**Computation of MS Requirement**

<table>
<thead>
<tr>
<th>Note: Iron drops will be used until Micronutrient powders will become available in the country</th>
<th>If Micronutrient powders (MNP) to be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Iron requirement = (Total population x 0.0135 (1.35%) x 0.55 (55.7%)) x (8) 30 ml bottle iron drops/ infant</td>
<td>Total Iron requirement = 253 X 60 sachets / infant/ year</td>
</tr>
<tr>
<td>= 317.1 or 318 infants with IDA</td>
<td>= 15,180 sachets</td>
</tr>
<tr>
<td>Buffer stock = Total requirement/year x 10%</td>
<td>Buffer stock = 15,180 sachets x 0.10 (10%)</td>
</tr>
<tr>
<td>= 1,518 sachets</td>
<td>= 1,518 sachets</td>
</tr>
<tr>
<td>Total Iron requirement = Total Iron requirement + Buffer stock</td>
<td>Total Iron requirement = Total Iron requirement + Buffer stock</td>
</tr>
<tr>
<td>= 15,180 + 1518</td>
<td>= 15,180 + 1518</td>
</tr>
<tr>
<td>= 16,698 sachets</td>
<td>= 16,698 sachets</td>
</tr>
<tr>
<td>If Poverty Index to be applied</td>
<td>If Poverty Index to be applied</td>
</tr>
<tr>
<td>Total MNP = Total MNP requirement x Poverty Incidence</td>
<td>Total MNP = Total MNP requirement x Poverty Incidence</td>
</tr>
<tr>
<td>= 16,698 x 0.329 (32.9 %)</td>
<td>= 16,698 x 0.329 (32.9 %)</td>
</tr>
<tr>
<td>= 5,493.6 or 5,494 sachets</td>
<td>= 5,493.6 or 5,494 sachets</td>
</tr>
</tbody>
</table>

#### 6-11 months clinically diagnosed with iron deficiency anemia

- Estimated proportion of 6-11 months= Total population x 0.0135 (1.35%)
- Prevalence of IDA among 6-11 months = 0.55 (55.7%)
- Dosage requirement= (8) 30 ml bottle iron drops/ infant
- Buffer stock= Total requirement/year x 10%

<table>
<thead>
<tr>
<th>Example of Total Population/municipality: 42,175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of 6-11 months with IDA= 42,175 x 0.0135 (1.35%) x 0.55 (55.7%)</td>
</tr>
<tr>
<td>= 317.1 or 318 infants with IDA</td>
</tr>
<tr>
<td>Total Iron requirement = 318 X 8 bottles/ infant/ year</td>
</tr>
<tr>
<td>= 2,544 bottles</td>
</tr>
<tr>
<td>Buffer stock = 2,544 bottles x 0.10 (10%)</td>
</tr>
<tr>
<td>= 254.4 or 255 bottles</td>
</tr>
<tr>
<td>Total Iron requirement = Total Iron requirement + Buffer stock</td>
</tr>
<tr>
<td>= 2,544 + 255</td>
</tr>
<tr>
<td>= 2,799 bottles</td>
</tr>
<tr>
<td>MS by Target Population</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>12-23 months children (non anemic)</td>
</tr>
<tr>
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</tr>
<tr>
<td>MS by Target Population</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
</tbody>
</table>
|                        |             | Buffer stock = 80,664 sachets \( \times 0.10 \) (10%)  
| 12-23 month old children clinically diagnosed with iron deficiency anemia (IDA) |             | = 8,064 sachets |
|                        | Estimated proportion of 12-23 month old children = Total population \( \times 0.027 \) (2.7%)  
|                        | Prevalence of Iron deficiency anemia among 12-23 months = 0.41 (41%)  
|                        | Dosage requirement = (23) 60 ml bottle iron syrup/child  
|                        | Buffer stock = Total requirement / year \( \times 0.10 \) (10%)  | Total Iron requirement = Total Iron C requirement + Buffer stock  
|                        | Example of Total Population/municipality: 42,175 | = 80,664 + 8064 sachets  
|                        | Estimated number of 12-23 month old children with IDA = 42,175 \( \times 0.027 \) (2.7%) \( \times 0.41 \) (41%)  | = 88,704 sachets  
|                        | = 466.9 or 467 children | If Poverty Index to be applied  
|                        | Total Iron requirement = 467 \( \times 23 \) bottles (60 ml syrup/child/ year)  | Total MNP = Total MNP requirement \( \times \) Poverty Incidence  
|                        | = 10,741 bottles | = 88,704 \( \times \) 0.329 (32.9%)  
|                        | Buffer stock = 10,741 bottles \( \times \) 0.1 (10%)  | = 29,183.6 or 29,184 sachets  
|                        | = 1,074.1 or 1,075 bottles | Total Iron requirement = Total Iron requirement + Buffer stock  
|                        | Total Iron requirement = 10,741 + 1,075  | = 11,816 bottles  
|                        | = 11,816 bottles |
### MS by Target Population

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>24-59 month old children clinically diagnosed with iron deficiency anemia</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated proportion of 24-59 month old children= Total population x 0.081 (8.1%)</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td>Prevalence of Iron deficiency anemia among 24-59 months= 0.208 (20.8%)</td>
<td>Estimated number of 24-59 month old children with IDA= 42,175 x 0.081 (8.1%) x 0.208 (20.8%) =710.6 or 711 children</td>
</tr>
<tr>
<td>Dosage requirement = (23) 60 ml bottle iron syrup/child</td>
<td>Total Iron requirement = 711 x 23 bottles (60 ml syrup/child/year = 16,353 bottles</td>
</tr>
<tr>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
<td>Buffer stock = 16,353 bottles x 0.10 (10%) = 1,635.3 or 1,636 bottles</td>
</tr>
<tr>
<td></td>
<td>Total Iron requirement = Total Iron requirement + Buffer stock = 16,353 + 1,636 = 17,989 bottles</td>
</tr>
<tr>
<td><strong>5-9 year old clinically diagnosed with iron deficiency anemia</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated proportion of 5-9 year old children= Total population x 0.135 (13.5%)</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td>Prevalence of Iron deficiency anemia among 5-9 months= 0.204 (20.4%)</td>
<td>Estimated number of 5-9 month old children with IDA= 42,175 x 0.135 (13.5%) x 0.204 (20.4%) = 1,161.5 or 1,162 children</td>
</tr>
<tr>
<td>Dosage requirement = (30) 60 ml bottle iron syrup/child</td>
<td>If Iron syrup to be used</td>
</tr>
<tr>
<td></td>
<td>Total Iron requirement = 1,162 x 30 bottles (60 ml syrup/child/year = 34,860 bottles</td>
</tr>
<tr>
<td></td>
<td>Buffer stock = 34,860 bottles x 0.10 (10%) = 3,486</td>
</tr>
<tr>
<td></td>
<td>Total Iron requirement = Total Iron requirement + Buffer stock = 34,860 + 3,486 = 38,346 bottles</td>
</tr>
<tr>
<td>MS by Target Population</td>
<td>Assumptions</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5-9 year old in malaria endemic areas</td>
<td>Estimated proportion of 5-9 year old children = Total population x 0.135 (13.5%)</td>
</tr>
<tr>
<td></td>
<td>Prevalence of malaria: category A provinces = 0.08%</td>
</tr>
<tr>
<td></td>
<td>category B provinces = 0.01%</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement = 10 (60 ml) bottle iron syrup/child</td>
</tr>
<tr>
<td></td>
<td>Buffer stock = Total requirement/year x 0.10 (10%)</td>
</tr>
<tr>
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</tr>
<tr>
<td>5-9 year old who are infected with schistosomiasis in endemic areas</td>
<td>Estimated proportion of 5-9 year old children = Total population x 0.135 (13.5%)</td>
</tr>
<tr>
<td></td>
<td>Prevalence of schistosomiasisI among school children = 0.04 (4%)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dosage requirement = 10 (60 ml) bottle iron syrup/child</td>
</tr>
<tr>
<td></td>
<td>Buffer stock = 2280 bottles x 10% = 228 bottles</td>
</tr>
<tr>
<td></td>
<td>Buffer stock = Total requirement/year x 0.10 (10%)</td>
</tr>
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<tr>
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<td></td>
</tr>
<tr>
<td>MS by Target Population</td>
<td>Assumptions</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>10-49 year old women (female adolescent and non pregnant /non lactating women)</td>
<td>Estimated proportion of 10-49 year old women (female adolescent and non pregnant /non lactating women) = Total population x 0.246 (24.6%)</td>
</tr>
<tr>
<td></td>
<td>Prevalence of IDA among 10-49 yr olds = 0.227 (22.7%)</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement = 52 tablets / woman /yr</td>
</tr>
<tr>
<td></td>
<td>Buffer stock = Total requirement /year x 0.10 (10%)</td>
</tr>
<tr>
<td></td>
<td>Poverty Index = 0.329 (32.9%) (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>10-49 year old women in malaria endemic areas</td>
<td>Estimated proportion of 10-49 year old women = Total population x 0.246 (24.6%)</td>
</tr>
<tr>
<td></td>
<td>Prevalence of malaria: category A provinces = 0.0008 (0.08%)</td>
</tr>
<tr>
<td></td>
<td>category B provinces = 0.0001 (0.01%)</td>
</tr>
<tr>
<td>MS by Target Population</td>
<td>Assumptions</td>
</tr>
<tr>
<td>------------------------</td>
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</tr>
<tr>
<td></td>
<td>Dosage requirement= 60 tablets /woman</td>
</tr>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
</tr>
<tr>
<td>10-49 year old clinically diagnosed with IDA</td>
<td>Estimated proportion of 10-49 year old women( female adolescent and non pregnant/non lactating women)= Total population x 0.246 (24.6%)</td>
</tr>
<tr>
<td></td>
<td>Prevalence of IDA among 10-49 yr olds= 0.22 (22.7%)</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement= 180 tablets / woman /yr</td>
</tr>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year x 0.10 (10%)</td>
</tr>
<tr>
<td>Pregnant Women (Non anemic)</td>
<td>Estimated proportion of pregnant women= Total population x 0.035 (3.5%)</td>
</tr>
<tr>
<td></td>
<td>prevalence of IDA among pregnant women= 0.425 (42.5%)</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement= 180 tablets / woman /yr</td>
</tr>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
</tr>
<tr>
<td>Target Population</td>
<td>Assumptions</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| Poverty Index | (optional) | Total Iron requirement = Total Iron requirement + Buffer stock  
|                  |             | = 152,820 + 15,282  
|                  |             | = 168,102 tablets |

If Poverty Index to be applied |  
| Total Iron = Total iron requirement x Poverty Incidence  
| = 168,102 x 0.329 (32.9%)  
| = 55,305.5 or 55,306 tablets |

Pregnant clinically diagnosed with IDA |  
| Estimated proportion of pregnant women = Total population x 0.035 (3.5%)  
| Prevalence of IDA among pregnant women = 0.425 (42.5%)  
| Dosage requirement = 270 tablets/woman/yr  
| Buffer stock = Total requirement/year x 0.10 (10%)  
| Example of Total Population/municipality: 42,175  
| Estimated number of pregnant women clinically diagnosed with IDA =  
| = 42,175 x 0.035(3.5%) x 0.425 (42.5%)  
| = 627.4 or 628 women  
| Total Iron requirement = 628 x 270 tablets/woman/yr  
| = 169,560 tablets  
| Buffer stock = 169,560 tablets x 0.10 (10%)  
| = 16,956 tablets  
| Total Iron requirement = Total Iron requirement + Buffer stock  
| = 169,560 tablets + 16,956  
| = 186,516 tablets |

Post Partum or lactating women |  
| Estimated proportion of Post Partum or lactating women = Total population x 0.03 (3%)  
| Prevalence of IDA among Post Partum or lactating women = 0.314 (31.4%)  
| Example of Total Population/municipality: 42,175  
| Estimated number of Post Partum or lactating women (non anemic) =  
| = 42,175 x 0.03(3%) x 0.686(68.6%)  
<p>| = 867.9 or 868 women |</p>
<table>
<thead>
<tr>
<th><strong>MS by Target Population</strong></th>
<th><strong>Assumptions</strong></th>
<th><strong>Computation of MS Requirement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage requirement= 52 tablets /woman /yr</td>
<td>Total Iron requirement = 868 x 52 tablets/woman/year = 45,136 tablets</td>
<td></td>
</tr>
<tr>
<td>Buffer stock= Total requirement/year X 0.10 (10%)</td>
<td>Buffer stock = 45,136 tablets x 0.10 (10%) = 4,513.6 or 4,514 tablets</td>
<td></td>
</tr>
<tr>
<td>Poverty Index= 0.329 (32.9%)(optional)</td>
<td>Total Iron requirement = Total Iron requirement + Buffer stock = 45,136 + 4,514 = 49,650 tablets</td>
<td></td>
</tr>
</tbody>
</table>

If Poverty Index to be applied

Total Iron = Total iron requirement x Poverty Incidence

= 49,650 x 0.329 (32.9%) = 16,334.8 or 16,335 tablets

**Post Partum women/lactating women clinically diagnosed with IDA**

Estimated proportion of Post Partum or lactating women= Total population x 0.03 (3%)

Prevalence of IDA among Post Partum or lactating women= 0.314 (31.4%)

Dosage requirement= 180 tablets /woman /yr

Buffer stock= Total requirement/year X 0.10 (10%)

Example of Total Population/municipality: 42,175

Estimated number of Post Partum or lactating women with IDA = 42,175 x 0.03(3%) x 0.314 (31.4%) =397.3 or 398 women

Total Iron requirement = 398 x 180 tablets/woman/year = 71,640 tablets

Buffer stock =71,640 tablets x 0.10 (10%) = 7,164

Total Iron requirement = Total Iron requirement + Buffer stock = 71,640 + 7,164 = 78,804 tablets
<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated proportion of pregnant women = Total population x 0.035 (3.5%)</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td>Dosage requirement = 2 capsules / pregnant woman /yr</td>
<td>Estimated number of pregnant women = 42,175 x 0.035 (3.5%) = 1,476.1 or 1,477</td>
</tr>
<tr>
<td>Total Iodine requirement = 1,477 x 2 capsules / woman /year = 1,477 capsules</td>
<td>Buffer stock = 1,477 capsules x 0.10 (10%) = 147.7 or 148 capsules</td>
</tr>
<tr>
<td>Total Iodine requirement = 1,477 x 2 capsules / woman /year = 1,477 capsules</td>
<td>Total Iodine requirement + Buffer stock = 1,477 + 148 = 1,625 capsules</td>
</tr>
<tr>
<td>If Poverty Index to be applied</td>
<td>诗歌</td>
</tr>
<tr>
<td>Total Iodine requirement = Total Iodine requirement + Buffer stock = 1,477 + 148 = 1,625 capsules</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td>Estimated number of pregnant women = 42,175 x 0.035 (3.5%) = 1,476.1 or 1,477</td>
<td></td>
</tr>
<tr>
<td>Dosage requirement = 2 capsules / lactating woman /yr</td>
<td>Estimated proportion of lactating women = Total population x 0.03 (3.0%)</td>
</tr>
<tr>
<td>Total Iodine requirement = 1,266 x 2 capsules / lactating woman /year = 1,266 capsules</td>
<td></td>
</tr>
<tr>
<td>Buffer stock = 1,266 x 0.10 (10%) = 126.6 or 127 capsules</td>
<td></td>
</tr>
<tr>
<td>Total Iodine requirement = 1,266 x 2 capsules / lactating woman /year = 1,266 capsules</td>
<td>Total Iodine requirement + Buffer stock = 1,266 + 126.6 = 1,392.6 capsules</td>
</tr>
<tr>
<td>If Poverty Index to be applied</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td>Estimated number of lactating women = 42,175 x 0.03 (3.0%) = 1,265.2 or 1,266 women</td>
<td>Estimated proportion of lactating women = Total population x 0.03 (3.0%)</td>
</tr>
</tbody>
</table>

Example of Total Population/municipality: 42,175

**Pregnant Women**

- Estimated proportion of pregnant women = Total population x 0.035 (3.5%)
- Dosage requirement = 2 capsules / pregnant woman /yr
- Total Iodine requirement = 1,477 x 2 capsules / woman /year = 1,477 capsules
- Buffer stock = 1,477 capsules x 0.10 (10%) = 147.7 or 148 capsules
- Total Iodine requirement + Buffer stock = 1,477 + 148 = 1,625 capsules
- If Poverty Index to be applied
  - Total Iodine = Total Iodine requirement x Poverty Incidence
  - Total Iodine = 1,625 x 0.329 (32.9%) = 534.6 or 535 capsules

**Lactating women**

- Estimated proportion of lactating women = Total population x 0.03 (3.0%)
- Dosage requirement = 2 capsules / lactating woman /yr
- Total Iodine requirement = 1,266 x 2 capsules / lactating woman /year = 1,266 capsules
- Buffer stock = 1,266 x 0.10 (10%) = 126.6 or 127 capsules
- Total Iodine requirement + Buffer stock = 1,266 + 126.6 = 1,392.6 capsules
- If Poverty Index to be applied
  - Total Iodine = Total Iodine requirement x Poverty Incidence
  - Total Iodine = 1,266 x 0.329 (32.9%) = 419.7 or 419 capsules
<table>
<thead>
<tr>
<th>MS by Target Population</th>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
<td>Total Iodine requirement = 1,266 x 2 tablets/lactating woman /year = 2,532 capsules</td>
</tr>
<tr>
<td></td>
<td>Poverty Index= 0.329 (32.9%) (Optional)</td>
<td>Buffer stock = 2,532 capsules x 0.10 (10%) = 253.2 or 254</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Iodine requirement = Total Iodine requirement + Buffer stock = 2,532 + 254 = 2,786</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If Poverty Index to be applied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Iodine = Total iron requirement x Poverty Incidence = 2786 x 0.329 (32.9%) = 916.6 or 917 capsules</td>
</tr>
</tbody>
</table>

**D. Zinc Supply**

<table>
<thead>
<tr>
<th>Infants below 6 months with diarrhea</th>
<th>Estimated proportion of infants below 6 months = Total population x 0.0135 (1.35%)</th>
<th>Example of Total Population/municipality: 42,175</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incidence of diarrhea episodes among under 6 months= 0.0327 (3.27%)</td>
<td>Estimated number of infants (below 6 months) who will have diarrhea = 42,175 x 0.0135 (1.35%) x 0.0327 (3.27%) = 18.6 or 19 infants</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement= (1) 15 ml bottle zinc drops/ infant or 5 zinc tablets</td>
<td>Total Zinc requirement = 19 x 1 bottle (15 ml drops / infant/year = 19 bottles</td>
</tr>
<tr>
<td></td>
<td>Buffer stock= Total requirement /year X 0.10 (10%)</td>
<td>Buffer stock = 19 bottles x 0.10 (10%) = 1.9 or 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Zinc requirement = Total zinc requirement + Buffer stock = 19 + 2 = 21 bottles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS by Target Population</td>
<td>Assumptions</td>
<td>Computation of MS Requirement</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Sample computation for Zinc Tablets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Zinc requirement = 19 x 5 tablets / child</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 95 tablets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buffer stock = 95 tablets x 0.10 (10%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 9.5 or 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Iron requirement = Total zinc requirement + Buffer stock</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 95 + 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 105 tablets</td>
<td></td>
</tr>
<tr>
<td>6-59 month old children with diarrhea</td>
<td>Estimated proportion of 6-59 month old children= Total population x 0.1215</td>
<td>Example of Total Population/municipality: 42,175</td>
</tr>
<tr>
<td></td>
<td>(12.15%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incidence of diarrhea episodes among under 6 months= 0.0327 (3.27%)</td>
<td>Estimated number of 6-59 months children who will have diarrhea =</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42,175 x 0.1215 (12.15%) x 0.0327 (3.27%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 167.6 or 168 children</td>
</tr>
<tr>
<td></td>
<td>Dosage requirement= (2) 60 ml bottles Zinc Syrup/child or 10 zinc tablets</td>
<td>Total Zinc requirement = 168 x 2 bottles (60 ml syrup / child/year)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 336 bottles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Buffer stock = 336 bottles x 0.10 (10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 33.6 or 34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Zinc requirement = Total zinc requirement + Buffer stock</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 336 + 34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 370 bottles</td>
</tr>
</tbody>
</table>
### MS by Target Population

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Computation of MS Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample computation for Zinc Tablets</td>
<td></td>
</tr>
<tr>
<td>Total Zinc requirement = 168 x 10 tablets / child</td>
<td>1,680 tablets</td>
</tr>
<tr>
<td>Buffer stock = 1,680 tablets x 10%</td>
<td>168 or 10</td>
</tr>
<tr>
<td>Total Iron requirement = Total zinc requirement + Buffer stock</td>
<td>1,848 tablets</td>
</tr>
</tbody>
</table>

- **6-59 month old children with diarrhea**
- **Estimated proportion of 6-59 month old children** = Total population x 0.1215 (12.15%)
- **Incidence of diarrhea episodes among under 6 months** = 0.0327 (3.27%)
- **Dosage requirement** = (2) 60 ml bottles Zinc Syrup/child or 10 zinc tablets
- **Buffer stock** = Total requirement / year X 0.10 (10%)
- **Example of Total Population/municipality**: 42,175
- **Estimated number of 6-59 months children who will have diarrhea** = 42,175 x 0.1215 (12.15%) x 0.0327 (3.27%) = 167.6 or 168 children
- **Total Zinc requirement** = 168 x 2 bottles (60 ml syrup / child/year) = 336 bottles
- **Buffer stock** = 336 bottles x 0.10 (10%) = 33.6 or 34
- **Total Zinc requirement** = Total zinc requirement + Buffer stock = 336 + 34 = 370 bottles

- **MS by Target Population**
- **Assumptions**
- **Computation of MS Requirement**
10.A. GUIDE TO FORECASTING MICRONUTRIENT REQUIREMENT

• This instructional material shall guide the end-users on how to fill out the **Forecasting Micronutrient Template for LGU**. This tool is in **MS Excel Spreadsheet** which automatically calculates the micronutrient requirement for the eligible population.

• The **eligible population** is computed based on the projected population of the municipality/city province and the percentage of each target group.

• The tool computes for the **estimated quantity required** for each micronutrient and the corresponding **cost requirement**.

• Total cost requirement in this tool is projected based on the current market price of each commodity and the estimated poverty rate of the municipality/city/province to estimate the requirement for the poor population.

• The **Total Requirement Cost Less GP** is also computed to reflect the actual required cost for micronutrients less the cost of Vitamin A for 6-59 months old which is provided under **Garantisadong Pambata Program**.

**Filling out the Forecasting Tool for Micronutrient**

1. Open the MS Excel file **Forecasting Micronutrients Tool (A)**. The tool has two worksheets – **Estimate Targets Sheet (B)** and **Estimate Requirement and Cost Sheet (C)**. Fill in the necessary information/data only in **yellow cells**.

**Estimate Targets Worksheet**

2. Put the municipality/city/province name (D). Fill in the estimated population for the municipality/city/province under the column **Total Population (E)**. Notice that the **estimated # per Target Group (F)** is automatically generated after filling the data under Column C.

**Estimate Requirement and Cost**

3. Fill in the estimated poverty rate of the municipality/city/province under Column **Poverty Incidence (G)**. Fill in only yellow cells.
4. Fill in the actual quantity on hand for each corresponding micronutrient under **Column Stock on Hand (H)**. Indicate “0” if out of stock.

5. Fill in the prevailing unit cost of each micronutrient in the municipality/city/province under **Column Unit Cost (I)**. If the unit cost is not known or not available, you may opt to use the unit cost provided in the tool.

6. Provide the actual budget allocated and approved by the province and municipality/city under **Columns K and L (J)**, if there are any.

7. Notice that the total cost requirement for all of the micronutrients is generated as well as the Total Requirement Cost Less GP (K).
<table>
<thead>
<tr>
<th>Micronutrient</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iodine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Less GP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## ANNEX 11. MS PLAN FORMAT

### Year: ________________

**Goal:**

**Objectives:**

**Target/Indicator:**

**Key Strategies/Key Result Area:**

<table>
<thead>
<tr>
<th>Activities/Strategy</th>
<th>Schedule</th>
<th>Locus Of Responsibility</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy 1/Key Result Area 1:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity 1.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity 1.2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strategy 2/Key Result Area 2:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity 2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity 2.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strategy 3/Key Result Area 3:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity 3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity 3.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Annex 12. Technical Specifications

<table>
<thead>
<tr>
<th>Micronutrient</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| Iron          | Syrup: 30 mg. elemental iron 60 ml syrup (flavoured)/5 ml  
Individual box  
Drop: 15 mg. elemental iron / 0.6 ml  
30 ml (flavoured)  
Individual box  
Tablet: 60 mg. elemental iron with 400 mcg folic acid  
Tablet: 60 mg elemental iron with 2.8 mg folic acid |
| MNP           | Sachet: 15 micronutrient formulation |
| Vitamin A     | Capsule: 100,000 IU  
Soft gel capsule with nipple as palmitate  
In plastic white opaque round bottle container  
Capsule: 200,000 IU  
Soft gel capsule with nipple as palmitate  
In plastic white opaque round bottle container |
| Iodine        | Capsule: 200 mg elemental iodine |
| Zinc          | Drops: 27.5 mg/ml (equivalent to 10mg elemental zinc)  
15ml drops  
Tablet: 20 mg elemental zinc  
Syrup: 55 mg/5ml (equivalent to 20mg elemental zinc)  
60ml |
<table>
<thead>
<tr>
<th>MS by Target</th>
<th>Commercial Preparation</th>
<th>Commercial Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td>Capsule: 200,000 IU</td>
<td><strong>L. MEYERF PHARMA Inc.</strong> 2/F Solar Century Tower, 100 Tordesillas St. corner H.V. Dela Costa St., Salcedo Village, Makati City 1227 Tel. No.: (02) 856-1148 / Telefax: (02) 817-7132 <a href="mailto:infor@lmeyerf.com">infor@lmeyerf.com</a></td>
</tr>
<tr>
<td>Iron with Folic Acid</td>
<td>Syrup: 30 mg. elemental iron/5 ml Drop: 15 mg. Elemental iron 0.6ml Tablet: 60 mg. Elemental iron with 400 mcg folic acid</td>
<td><strong>AM Europharma Corporation</strong> MD Distripark Alabang, Warehouse Km. 23 West Service, Muntinlupa City Tel: 8071094 / Fax: 8071090</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Phil Pharmawealth Inc.</strong> Suite 3001, East Tower PSE Ctr, Exchange Rd. Ortigas Ctr, Pasig City Tel. 6830053-57 / Fax: 6339512-13 Email: <a href="mailto:info@philpharmawealth.com">info@philpharmawealth.com</a> website: <a href="http://www.philpharmawealth.com">http://www.philpharmawealth.com</a>  Branches: Baguio: Tel.: 074-4231580 La Union: Tel.: 072-7000615 / Tel/ Fax: 072-8884047 Dagupan: Tel.: 075-515-7938 / Tel/ Fax: 075-5236020 Isabela: Tel.: 078-6240623 / Tel/Fax: 078-622-2125 Pampanga: Tel/Fax: 045-9631713 Naga: Tel/Fax: 054-4720178 Cebu: Tel.: 032-2563633 / Tel/Fax: 032-256-2381 Zamboanga: Tel/Fax: 062-9932092 Cagayan de Oro: Tel.: 088-856-7714 / Tel/Fax: 088-856-7713 Davao: Tel: 082-2251825 / Telefax: 082-2251827</td>
</tr>
<tr>
<td>MS by Target</td>
<td>Commercial Preparation</td>
<td>Commercial Source</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------</td>
<td>-------------------</td>
</tr>
</tbody>
</table>
| Iodine       | Capsule: 200 mg elemental iodine | **Blue Sky Trading Co. Inc.**  
416 Dasmarinas St. Binondo, Manila  
Rosemary Lim  
Tel. Nos. 856-1178/ 8177132 |
| Zinc         |                        |                   |
| Children up to 6 mos. of age | Drop: 27.5 mg/ml (equiv. to 10 mg elemental Zinc) 15 ml drops (as sulfate monohydrate)  
Syrup containing 27.5 mg/ml (equiv. to 10 mg elemental zinc) 60 ml syrup (as sulfate monohydrate) | **Medlink Pharmaceutical** (Immuzinc)  
**ProHealth Pharmaceutical Phils.** (ProZinc) |
| Children 6 months up to 59 months | Syrup containing 55 mg/ml (equiv. to 20 mg elemental zinc) 60 ml syrup (as sulfate monohydrate) | **Westmont Pharmaceuticals Inc.** (E-Zinc)  
4/F, Bonaventure Plaza, Ortigas Ave, Greenhills, San Juan, Metro Manila  
Tel: 858 1277, 725 6347 / Fax: 726 9454  
**Alphamed Pharma** (Diazink)  
Erwin Sison  
Tel.Nos.09228129157/4133707  
Coverage: Luzon/Cebu / Leyte / Samar  
**J Health Marketing** - Jerrywel Jaafar  
Tel. Nos. 09225514522/09189061813  
Coverage: Mindanao  
**Beracah Pharma** - Jason Sanchez  
Tel. Nos. 09228967312 / 09209280893  
Coverage: Negros Oriental/Negros Occidental/ Panay/ |
## ANNEX 14. INVENTORY OF MS SUPPLY

As of: __________________________

Health Facility: __________________________ Supply Officer/In-Charge: __________________________ Date Accomplished: ____________

<table>
<thead>
<tr>
<th>MS Supply</th>
<th>Specifications</th>
<th>Stock on Hand</th>
<th>Total Requirement</th>
<th>Additional Quantity Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100,000 IU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200,000 IU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Supplies Needed (Specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron drops</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron syrups</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron tablets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iodine capsules</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc syrup</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc tablets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Introduction

This Supervisory Checklist is aimed at improving the quality and coverage of the Micronutrient Supplementation Program in a given locality. It is to be used by sub-national and local health supervisors in assessing and tracking the progress made by each local health facility in addressing the micronutrient deficiencies in their area. It is a guide for local health managers and staff to help them identify program components that need to be enhanced and areas where the MS coverage and reach have to be strengthened; as well as help them their actions and begin to address the MS implementation gaps.

The Supervisory Checklist covers the following elements:

1. Knowledge and practice of health care providers in delivering MS services particularly in targeting the priority groups, and ensuring that the DOH-recommended MS are given to appropriate target groups in the right dosage, frequency and time;

2. Integration of MS packages into various service delivery channels;

3. Availability and adequacy of MS supplies to meet the requirements of the targeted clientele and to include the forecasting, procurement and proper storage;

4. Maintenance of an updated MS recording and reporting system;

5. Health promotion efforts;

6. Planning and budget allocation including mobilization of resources

The MS Supervision using the MS Supervisory Checklist should be done semi-annually or at least on an annual basis, depending on the availability of the supervisors and resources for supervision. The CHD and provincial Nutritionist or Nutrition Program Coordinators should team up in conducting the supervisory visits in the municipalities and cities within their jurisdiction. The Checklist can also be used by ILHZ officials or supervisors if they need to assess the MS situation and needs in each member LGU. At the municipal/city level, the Supervisory Checklist can be administered by the designated health facility supervisors, who are usually the nurse over the midwives deployed in several BHSs or barangays. In conducting the supervision, local health facilities to be visited must be informed ahead of time, and the specific staff in-charge for the planning and coordination of the MS-related activities and services must be encouraged to be present during the visit.

The MS Supervision entails 3 data collection methods. One will be an interview of the health care providers, volunteer workers and selected clients. The other method is to review existing documents which include: FHSIS-Target Client Lists, GP reports, IEC materials on MS, inventory of MS supplies, plans and budget of the local health facility, etc. The third method is an actual observation of the service delivery, counseling or information dissemination, storage and existing data bases.
I. On Delivery of MS

<table>
<thead>
<tr>
<th>Target Client</th>
<th>Yes</th>
<th>No</th>
<th>Yes, DOH recommended</th>
<th>No, Non-DOH Recommended</th>
<th>Partial</th>
<th>Not aware of protocol</th>
<th>No supply available locally</th>
<th>No budget/limited funds</th>
<th>Others, specify</th>
<th>Given supplement</th>
<th>Followed DOH technical specs</th>
<th>Complete Duration</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pregnant Women</td>
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<tr>
<td>1.1 Iron/folate</td>
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<td>1.2 Iodized oil capsule</td>
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<tr>
<td>1.3 VAC with xerophthalmia</td>
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<td>2. Post-Partum/Lactating Women</td>
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<tr>
<td>2.1 iron/folate</td>
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<td>2.2 Vitamin A</td>
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<tr>
<td>2.3 Iodized capsule</td>
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<tr>
<td>3. Infants and Children</td>
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<tr>
<td>3.1 Iron for low birth weight infants</td>
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<tr>
<td>3.2 MNP for 6-23 months old children</td>
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<tr>
<td>3.3 therapeutic dose of iron to children 6-59 with anemia</td>
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<tr>
<td>3.4 Vitamin A for 6-11 months old well children outside GP</td>
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</tr>
</tbody>
</table>
1. Do you provide the targeted clients with the following supplements when they consult your health facility?

<table>
<thead>
<tr>
<th>Target Client</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5 200,000 IU Vitamin A for 12-59 months old well children outside GP campaign</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6 Vitamin A supplements to 6-59 months old children with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. measles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. severely underweight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. persistent diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. severely underweight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7 Zinc supplement as adjunct to ORS for children with diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8 Iron/folate for female adolescents/non/pregnant/non lactating women</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Do the supplements follow technical specifications of DOH?

<table>
<thead>
<tr>
<th>Yes, DOH recommended</th>
<th>No, Non-DOH recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, Complete</td>
<td>Partial</td>
</tr>
<tr>
<td>Yes, DOH recommended</td>
<td>(X)</td>
</tr>
<tr>
<td>No, Non-DOH recommended</td>
<td>(X)</td>
</tr>
</tbody>
</table>

3. Are you able to provide for the total requirement needed?

<table>
<thead>
<tr>
<th>No supply available locally</th>
<th>No budget/limited funds</th>
<th>Others specify</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not aware of protocol</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

4. Why are you not able to provide the supplements to the pregnant women?

<table>
<thead>
<tr>
<th>Given supplement</th>
<th>Followed DOH technical specs</th>
<th>Complet e duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ - Yes X - No</td>
<td>/ - yes X - No</td>
<td>/ - Yes X - No</td>
</tr>
</tbody>
</table>

5. Get copy of TCL in the past 3 months of the following target clients and validate if supplements were really given, following DOH recommended protocols

<table>
<thead>
<tr>
<th>Assessment 2 - appropriate MS given to clients in right specs, dose, duration 1 – at least 1 element not met 0 – no element met</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
## II. On Governance

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
<th>Verification Measures</th>
<th>Results</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. MS Program Review, Planning and Resource Allocation</strong></td>
<td>- Yes X - No</td>
<td>If Yes, do Records Review:</td>
<td>/ - Yes X - No</td>
<td>2- All element s with / 1- at least 1 element with X 0-all element s with X</td>
</tr>
<tr>
<td>1. Do you have an updated report on the situation of MS in your locality?</td>
<td></td>
<td>(1) Ask for copy of PIR documentation and check if assessment of MS was done.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Have you identified the priority groups to be given MS in your locality?</td>
<td></td>
<td>(2) Ask for the latest copy of the health facility's annual health plan and check if MS is incorporated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Does your annual/strategic/investment plan incorporate strategies/actions addressing identified MS concerns?</td>
<td></td>
<td>(3) Get a copy of the approved health facility budget and check if there is amount allocated for MS.</td>
<td></td>
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</tr>
<tr>
<td>4. Are the sources of funds for MS specified in your plan?</td>
<td></td>
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<tr>
<td>5. Are the sources of funds prettily stable and reliable?</td>
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<tr>
<td><strong>B. Forecasting, Procurement and Management of MS Commodities</strong></td>
<td></td>
<td></td>
<td></td>
<td>2- All element s with / 1- at least 1 element with X 0-all element s with X</td>
</tr>
<tr>
<td>1. Does the health facility make a forecast of the MS requirements of the identified priority groups?</td>
<td></td>
<td>(1) Ask for copy of the forecast made and check if this is updated and cover all MS needs.</td>
<td></td>
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<tr>
<td>2. Does the forecast cover all the MS needed?</td>
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<tr>
<td>3. Are the forecast used as basis in the actual procurement of MS supply?</td>
<td></td>
<td>(1) Ask for copy of the health facility's annual procurement plan and check if MS is included.</td>
<td></td>
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</tr>
<tr>
<td>4. Does the local health facility procure MS supply?</td>
<td></td>
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<tr>
<td>5. Does it receive augmentation from other sources?</td>
<td></td>
<td>(2) Ask for a copy of the stock inventory and check if this is updated.</td>
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<tr>
<td></td>
<td>5.1 DOH</td>
<td>(3) Check also if MS received from other sources are included in the stock inventory.</td>
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<td></td>
<td>5.2 Development partners</td>
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<tr>
<td></td>
<td>5.3 Others, specify</td>
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<tr>
<td>6. Does the health facility maintain and update stock inventory?</td>
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<tr>
<td>7. Are the existing stocks of MS adequate to meet at least a month need?</td>
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<td>Observation: Check if the storage area or cabinet is in order and that the MS supplies are properly stored.</td>
</tr>
<tr>
<td>Questions</td>
<td>Responses</td>
<td>Verification Measures</td>
<td>Results</td>
<td>Assessment</td>
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<tr>
<td><strong>C. MS Information Management</strong></td>
<td>/ - Yes</td>
<td>Records Review:</td>
<td>/ - Yes</td>
<td>2 - All element s with / 1 - at least 1 element with X 0 - all elements with X</td>
</tr>
<tr>
<td>1. Does the Individual Treatment Record (ITR) incorporate questions on client's needs for MS?</td>
<td>X - No</td>
<td>(1) Select at random 3 ITRs and check if the MS needs of clients were asked.</td>
<td></td>
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</tr>
<tr>
<td>2. Are the Target Client Lists on MS complete and accurate?</td>
<td></td>
<td>(2) Review TCL on MS and validate if data required are completely filled up.</td>
<td></td>
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</tr>
<tr>
<td>3. Are the FHSIS reports on MS coverage submitted on time?</td>
<td></td>
<td>(3) Validate if the entries in the weekly report tally with the daily record.</td>
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<tr>
<td>4. GP report submission as specified in memo</td>
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<tr>
<td>5. Does the health facility maintain records of GP accomplishments conducted twice a year?</td>
<td></td>
<td>(4) Ask for copies of the most recent reports on GP accomplishment.</td>
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<tr>
<td>6. Are the data gathered analyzed and disseminated to all concerned?</td>
<td></td>
<td>(5) Look for evidences: e.g. situationer in the health plan, pie charts/bar graphs done on MS coverage data</td>
<td></td>
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<tr>
<td><strong>D. MS Policy Dissemination and Health Promotion</strong></td>
<td></td>
<td>Records Review:</td>
<td>2 - All element s with / 1 - at least 1 element with X 0 - all elements with X</td>
<td></td>
</tr>
<tr>
<td>1. Does the health facility have copies of the MS standards and protocols?</td>
<td></td>
<td>(1) Check if health facility has copies of the AOs, policies, manuals.</td>
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<tr>
<td>a. AO on the Revised MS Guidelines</td>
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<tr>
<td>b. MS Manual of Operations</td>
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<tr>
<td>c. AO on Zinc Supplementation</td>
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<tr>
<td>2. Are the staff oriented on the new MS AO and MOP?</td>
<td></td>
<td>(1) Check for documentation of orientation done among health staff on MS AO and MOP.</td>
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<tr>
<td>3. Does the health facility have copies of MS IEC materials (specify)</td>
<td></td>
<td>(2) Look for copies of MS IEC materials available or used.</td>
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<tr>
<td><strong>E. Staffing, Supervision</strong></td>
<td></td>
<td>Records Review:</td>
<td>2 - All element s with / 1 - at least 1 element with X 0 - all elements with X</td>
<td></td>
</tr>
<tr>
<td>1. Is there a designated staff to handle MS?</td>
<td></td>
<td>Look for official designation.</td>
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<tr>
<td>2. Is the staff trained on MS provision?</td>
<td></td>
<td>Ask for training certificates.</td>
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<tr>
<td>3. Has there been supervisory visits conducted in the previous 6 months on MS?</td>
<td></td>
<td>(3) Ask for copies of supervisory feedback.</td>
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</tbody>
</table>
### III. On Financing and Regulations

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
<th>Verification Measures</th>
<th>Results</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the health facility mobilize resources for MS from other sources as follows:</td>
<td>/ - Yes</td>
<td><strong>Records Review:</strong></td>
<td>/ - Yes</td>
<td>2- All elements with /</td>
</tr>
<tr>
<td></td>
<td>X - No</td>
<td>(1) Check actual assistance from the identified sources</td>
<td>X - No</td>
<td>1- at least 1 element</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>0 - all</td>
<td>with X</td>
</tr>
<tr>
<td>a. provincial assistance</td>
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<tr>
<td>b. DOH assistance</td>
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<tr>
<td>c. development partners</td>
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<tr>
<td>d. other government agencies DSWD, DepEd, DILG and NGOs</td>
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<tr>
<td>2. Does it collaborate with the private sector or other entities for the provision of MS to target groups?</td>
<td>/ - Yes</td>
<td><strong>Verification Measures:</strong> <strong>Records Review:</strong></td>
<td>/ - Yes</td>
<td>2- All elements with /</td>
</tr>
<tr>
<td></td>
<td>X - No</td>
<td>(1) Check actual assistance from the identified sources</td>
<td>X - No</td>
<td>1- at least 1 element</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 - all</td>
<td>with X</td>
</tr>
<tr>
<td>a. school clinics</td>
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<tr>
<td>b. company clinics</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>c. NGO centers</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>d. Others, specify</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Is it engaged in the following accreditation of the following Philhealth benefit packages?</td>
<td>/ - Yes</td>
<td>(2) Look for MOA/MOU or letter signifying partnership or collaboration.</td>
<td>/ - Yes</td>
<td>2- All elements with /</td>
</tr>
<tr>
<td></td>
<td>X - No</td>
<td></td>
<td>X - No</td>
<td>1- at least 1 element</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 - all</td>
<td>with X</td>
</tr>
<tr>
<td>3.1 Maternity Care Package</td>
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<tr>
<td>3.2 Outpatient Benefit Package</td>
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<tr>
<td>3.3 Malaria Benefit Package</td>
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<tr>
<td>3.4 In-Patient Benefit Package</td>
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</tr>
<tr>
<td>4. Does the health facility procure only MS that are listed in the PNDF?</td>
<td>/ - Yes</td>
<td>(3) Look for accreditation certificates, actual reimbursements received.</td>
<td>/ - Yes</td>
<td>2- All elements with /</td>
</tr>
<tr>
<td></td>
<td>X - No</td>
<td></td>
<td>X - No</td>
<td>1- at least 1 element</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 - all</td>
<td>with X</td>
</tr>
<tr>
<td>5. Does the health facility prescribe MS in generics?</td>
<td>/ - Yes</td>
<td>(4) Look for samples of prescriptions made or check in the ITRs</td>
<td>/ - Yes</td>
<td>2- All elements with /</td>
</tr>
<tr>
<td></td>
<td>X - No</td>
<td></td>
<td>X - No</td>
<td>1- at least 1 element</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 - all</td>
<td>with X</td>
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</tbody>
</table>
IV. Health Staff Knowledge

Select 2 staff and ask their opinion individually by either agreeing or disagreeing with the statement as you read them aloud

<table>
<thead>
<tr>
<th>Questions</th>
<th>Standard</th>
<th>Response</th>
<th>Staff 1</th>
<th>Staff 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Priority group for iron supplementation are 0-5 months old infants.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Vitamin A supplementation should be administered to pregnant women.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Zinc supplement should be added to ORS in managing children with diarrhea.</td>
<td>agree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It is better to give iron/folate to pregnant women on the 2nd or 3rd trimester to minimize nausea and vomiting during the first trimester.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Iodine deficiency is no longer a public health problem among pregnant and lactating women.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. It is alright to administer another VAC to children even if their last intake was 3 weeks ago.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Only anemic children and pregnant women are to be given iron/folate supplementation.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Micronutrient deficiency in the country can only be solved through micro-nutrient supplementation.</td>
<td>disagree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Vitamin A supplementation can reduce childhood deaths.</td>
<td>agree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Palmar pallor can be used to diagnose clients with anemia.</td>
<td>agree</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score

Assessment:
2 - If both staff got 8-10 correct answers
1 – If any 1 of the 2 staff got 5-7 correct answers
0 – If any 1 of the 2 staff got 1-4 correct answers

V. Client Feedback

Select 3 clients who just consulted the health facility and ask them to rate 1-5 the quality of service they received from the health facility (with 1 as the least, and 5 as the most)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Client 1</th>
<th>Client 2</th>
<th>Client 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MS supply is always available in the health facility.</td>
<td></td>
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<tr>
<td>2. The quantity of MS given to my child is enough to meet his/her MS requirements.</td>
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<tr>
<td>3. The health staff explained clearly the importance of MS.</td>
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<tr>
<td>4. When we are given MS, there are clear instructions from health staff on how to take them.</td>
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<tr>
<td>5. I was issued with MCB/HBMR (for mothers) by the health facility where I could record the services rendered to me or my children.</td>
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<tr>
<td>6. The health staff are courteous and friendly.</td>
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<tr>
<td>7. I am given clear instructions by the health staff when referred to another facility.</td>
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<tr>
<td>8. The health facility is clean and orderly.</td>
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<tr>
<td>9. I receive appropriate IEC materials on MS.</td>
<td></td>
<td></td>
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<tr>
<td>10. The health staff respected my privacy while being served.</td>
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</tbody>
</table>

Total Score

Assessment:
2 – If all clients rated at least 4-5 all the items above
1 – If any one of the 3 clients had a rating of 3 on any item
0 – If anyone of the 3 clients had a rating of 1-2 on any item
Annex 16. Scope of Micronutrient Supplementation Program Implementation Review (PIR)

The PIR on Micronutrient Supplementation should include an assessment of significant areas of concerns relative to the delivery of micronutrient supplementation services as enumerated below:

• **Service Delivery:**
  - Attainment of set target coverage of target group by age group by geographical area (e.g. % of 6-59 month old preschoolers as target and by geographical areas)
  - Appropriateness of current interventions (appropriate Micronutrient Supplementation package for the right target age and physiological groups)
  - Quality of service provision (staff training, competence, compliance to micronutrient supplementation program protocol)

• **Governance:**
  - Adequacy of resources (manpower, organizational, technical, logistics)
  - Adequacy of monitoring and supportive supervision
  - Issuance of resolutions and ordinances related to micronutrient supplementation program
  - Presence of multi-sectoral collaboration

• **Financing:** Adequacy of financial support from the local government, local financial schemes, Philhealth capitation funds, etc.

• **Regulations:** Compliance to ordinances and resolutions related to micronutrient supplementation program

**Steps in Conducting Micronutrient Supplementation PIR**

Before the actual PIR, there are activities to be conducted to ensure that objectives of PIR are achieved.

1. **Data collection:**

As basis for the assessment and review of Micronutrient Supplementation program performance and status of micronutrient deficiencies, there is a need to collect data or information such as:

- the prevalence of low birth weight infants (indicator of iron deficiency anemia during pregnancy),
- proportion of infants less than 6 months old not exclusively breastfed (proxy indicator of Vitamin A deficiency)
- presence, status or performance related to Micronutrient Supplementation.
- knowledge, attitude or practices of target groups on nutrition related topics such as breastfeeding practices.

These data can be collected from the:

• results of the monitoring during the field visits, records review and/or interviews of clients and health workers;
• national/regional and local surveys;
• GP accomplishment reports;
• FHSIS annual accomplishment reports;
• hospital records particularly for clients with high risk conditions;
• results of rapid coverage assessment conducted after GP and OPT data (previous and current).

2. Processing and analysis of data collected

• All data collected must be properly organized to facilitate analysis. If health facilities have the resources for computerized encoding, this must be encouraged. In its absence, health facilities can do manual encoding or tabulation of data collected.

• Data only becomes useful when they are processed and analyzed. Data generated from monitoring should be collated and analyzed to follow up status of the program as per established targets and indicators.

• Data collected must be validated for accuracy, timeliness and completeness. Reports should be cross-checked to see if there are any miscalculations or misplacements of reported figures and verify if they make sense.

• In doing the analysis and interpretation of the data, the following questions can be asked:

• Are the data timely, complete and accurate?

• What do the data show in terms of coverage? How are the trends?

• Which are strong and weak facilities in performance?

• What are the lessons learnt from the best performing facilities: planning, social mobilization, etc.?

• Is there a correlation between coverage and disease prevalence?

• Analysis can also be done by comparing the areas within the province/city/municipality to find out fluctuations in the coverage rates.

• Charts/graphs maybe used as they provide strong visual representation of the situation and can be easily understood and referred to. Charts on trends over a time period are informative because they show the progress made to attain the objectives set or the increase/decrease of Vitamin A supplementation coverage rates against a given target.
3. During the actual PIR, follow these steps:

**Step 1. Establish the scope and magnitude of micronutrient deficiency in the locality**

1.1 Based on the data collected, define and establish the current state of micronutrient deficiency problem and/or micronutrient supplementation program implementation in the locality.

1.2 Analyze the scope and magnitude of the micronutrient deficiency problems and/or the status of micronutrient supplementation program implementation by determining the:

a. extent of deficiency problem based on the recommended list of indicators in Items 3.1 to 3.3 under this Section;

b. trends in the micronutrient deficiencies over 3-5 years and check whether these are improving, worsening or fluctuating; (e.g. comparison of the current OPT results from the previous year’s OPT can be used to evaluate status of the Micronutrient Supplementation program in the locality)

c. variations in the performance across geographical locations (by barangay/sitio in case of a municipality/city) or by municipality/city (in case of province);

d. variations by population, infants: children, pregnant and lactating women, Indigenous People (IPs), between rural and urban communities or by occupation groups (e.g. fishing villages, highland/coastal communities, agricultural) that are more likely to have these problems.

e. variations by socio-economic status: poor segment of the population;

f. differences in levels against national/regional/provincial averages or with other neighbouring areas;

**Step 2. Identify the factors that influence the state of the micronutrient deficiency problem and/or status of micronutrient supplementation program implementation in the locality.**

This requires further analysis of the local micronutrient deficiency situation in the area by carrying out a Strength-Weakness-Opportunity-Threat (SWOT) Analysis based on the data collected. Please refer to Annex 15 for the Guide in the Review and Analysis of Micronutrient Supplementation Program Implementation.

2.1 Identify/enumerate the different factors that contributed to the reduction or improvement of the micronutrient supplementation situation in your locality (Strengths)

2.2 Identify the factors that limited the achievements of the targets or improvement desired (Weaknesses)

2.3 Identify opportunities in the external environment which can be maximized.

2.4 Identify events or factors in the external environment that pose threats to the achievement of your targets or objectives (Threats).
Step 3. Summary of Contributory and Limiting Factors and Prioritization of Gaps

After establishing the scope and magnitude of the micronutrient deficiency and/or status of micronutrient supplementation program implementation, and identifying the different factors that influenced the situation, summarize the strengths (contributory factors) and the weaknesses (limiting factors) that affected the micronutrient supplementation program situation in the area. You can draw these factors from the responses to the guide of questions. (Annex 14)

3.1 Based on the responses to the guide questions, summarize factors that contributed to the performance (strengths) from those that limited achievements (weaknesses);

3.2 Further discuss these gaps and identify the root causes;

3.3 Summarize these by categories of key players in the health sector using the template in Annex 17.

3.4 Summarize also the analysis of the different micronutrient supplementation interventions or activities being undertaken in the locality into:

   a. Activities or interventions with good outcomes that must be continued/sustained
   b. Effective activities/measures that need to be scaled up
   c. Activities that need to be enhanced and improved
   d. Activities or interventions that need to be stopped.

3.5 Lastly, summarize the identified gaps and issues (taken from the underlying causes) and prioritize those that require attention. You may want to use the elements in a health sector reform in categorizing these priority issues and gaps:

   a. Service Delivery
   b. Governance
   c. Financing
   d. Regulations

After the PIR, ensure that the results of the review are integrated into the overall planning process of the LGU. If possible, involve all key stakeholders in the conduct of the review.
## Annex 17. Summary of Analysis on the Factors Influencing MS Coverage/Performance by Key Players

<table>
<thead>
<tr>
<th>Key Players</th>
<th>Contributory Factors</th>
<th>Limiting Factors</th>
<th>Underlying Causes</th>
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</thead>
<tbody>
<tr>
<td>Clients/Targeted Population (DEMAND)</td>
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<tr>
<td>Service Providers (SUPPLY)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LGUs (Province, City/Municipality/Barangay)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DOH national and regional offices) and other national agencies</td>
<td></td>
<td></td>
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<tr>
<td>Other Development Partners</td>
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</tbody>
</table>
ANNEX 18. LIST OF PEOPLE INVOLVED IN THE DEVELOPMENT OF THE MS POLICY GUIDE AND MANUAL OF OPERATIONS

The Department of Health would like to recognize the contributions and assistance of the following, whom without their commitment and expertise, this Manual of Operations on Micronutrient Supplementation would not have come to fruition;

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