Leadership and Governance in Nutrition for the First 1000 Days Intervention Package in Samar, Northern Samar, and Zamboanga del Norte

Baseline Assessment of Three Philippine Provinces

This baseline assessment report provides a comprehensive and detailed evaluation of the existing governance measures in three key provinces in the Philippines – Samar, Northern Samar, and Zamboanga del Norte – in relation to the integration and implementation of First 1000 Days Program. This baseline report describes the current nutrition and governance landscapes in these provinces and provides strategic recommendations to the implementation of the First 1000 Days Program.

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List of acronyms

4Ps	Pantawid Pamilyang Pilipino Program
ABC	Association of Barangay Captains
AFP	Armed Forces of the Philippines
AICS	Assistance to Individual in Crisis Situation
AIP	Annual Investment Plan
AOP	Annual Operational Plan
BCC	Behavior Change Communication
BEMONC	Basic Emergency Maternal Obstetric Newborn Care
BHW	Barangay Health Workers
BFAR	Bureau of Fishery and Aquatic Resources
BFP	Bureau of Fire Protection
BHS	Barangay Health Station
BJMP	Bureau of Jail Management and Penology
BLT	Bridging Leadership Training
BLGP	Barangay Leadership Governance Program
BNS	Barangay Nutrition Scholars
BL4ND	Barangay Leadership for Nutrition and Development
BNAP	Barangay Nutrition Action Plan
BNC	Barangay Nutrition Committee
BNS	Barangay Nutrition Scholar
CHD	Center for Health and Development
CICL	Children in Conflict with the Law
CLGP	City Leadership Governance Program
CPDO	City Planning and Development Office/r
CSOs	Civil Society Organizations
CSWDO	City Social Welfare and Development Office/r
DA	Department of Agriculture
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
DepEd	Department of Education
DILG	Department of Interior and Local Government
DMO	Development Management Officer
DOH	Department of Health
DOLE	Department of Labor and Employment

DQC	Data Quality Check
DRRM	Disaster Risk Reduction Management
DRRM-H	Disaster Risk Reduction Management for Health
DRRMO	Disaster Risk Reduction Management Office/r
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
EBF	Exclusive Breastfeeding
ECCD	Early Childhood Care and Development
EFA	Education for All
EGBU	Enhanced Gasang Bahandiana sa Umahan
EO	Executive Order
FDS	Family Development Sessions
FGD	Focus Group Discussion
FHA	Family Health Associates
FHIS	Field Health Services Information System
FIC	Fully Immunized Child
HEMS	Health Emergency Management System
HEPO	Health Education Promotion Officer
HKI	Hellen Keller International
HLGP	Health Leadership Governance Program
GIDA	Geographically Isolated and Disadvantaged Areas
IEC	Information, education, and communication
ILHZ	Inter-local Health Zone
IMCI	Integrated Management of Childhood Illnesses
IP	Indigenous People
IPCC	Inter-Personal Communication
IRA	Internal Revenue Allotment
IRR	Implementing Rules and Regulations
ISDN	Integrated Service Delivery Network
ITC	Inpatient Therapeutic Care
ITIS	Integrated Tb Information System
IYCF	Infant and Young Child Feeding
KGJF	Kristian Gerhard Jebsen Foundation
KII	Key Informant Interview
LCEs	Local Chief Executives
LDPs	Local Development Plans

LGU	Local Government Unit
LHB	Local Health Board
LINIS	Local Integrated Nutrition Information System
LIPH	Local Investment Plan for Health
LMIC	Low-to-middle income country
LNAPs	Local Nutrition Action Plans
LNCs	Local Nutrition Councils
MAM	Moderate Acute Malnutrition
MAO	Municipal Agriculture Officer
MBFI	Mother Baby Friendly Initiative
M & E	Monitoring and Evaluation
MCHN	Maternal and Child Health and Nutrition
MELLPI	Monitoring and Evaluation of Local Level Plan Implementation
MHO	Municipal Health Officer
MISP	Minimum Initial Service Package
MNAO	Municipal Nutrition Action Officer
MNAP	Municipal Nutrition Action Plan
MNC	Municipal Nutrition Council
MCH	Maternal and Child Health
MLGP	Municipal Leadership Governance Program
MNCHN	Maternal, Newborn, Child Health and Nutrition
MNAO	Municipal Nutrition Action Officer
MOOE	Maintenance and Other Operating Expenses
MPDC	Municipal Planning and Development Coordinator
MUAC	Mid-upper arm circumference
NCF	Nurturing Care Framework
NCIP	National Commission on Indigenous People
NDAP	Nutritionist-Dietitians' Association of the Philippines
NGO	Non-government organization
NIE	Nutrition in Emergencies
NNC	National Nutrition Council
NNS	National Nutrition Survey
NPM	Nutrition Program Management
NSOA	Nutrition School on the Air
NTP	National Tuberculosis Program
OCD	Office for Civil Defense

OOSY	Out-Of-School Youth
OpCen	Operation Center
OPT	Operation Timbang Plus
OTC	Outpatient Therapeutic Care
PCB	Primary Care Benefits
PCSO	Philippine Charity Sweepstakes Office
PDOHO	Provincial Department of Health Office
PHN	Public Health Nurse
PHTL	Provincial Health Team Leader
PHA	Public Health Assistant
PHO	Provincial Health Office/r
PIA	Philippine Information Agency
PIMAM	Philippine Integrated Management of Severe Acute Malnutrition
PINAPF1K	Pagsanghan Integrated Nutrition Act Program for the First 1000 Days
PLGP	Provincial Leadership Governance Program
PIO	Public Information Office
PNAO	Provincial Nutrition Action Officer
PNC	Provincial Nutrition Committee
PNGC	Provincial Nutrition Governance Committee
POPCOM	Commission on Population and Development
PPAN	Philippine Plan of Action on Nutrition
PS	Personnel Services
PSWDO	Provincial Social Welfare and Development Office
RHU	Rural Health Unit
RNAHC	Regional Nutrition Anti-Hunger Committee
RNC	Regional Nutrition Cluster
RNET	Regional Nutrition Evaluation Team
RPAN	Regional Plan of Action on Nutrition
RTWG	Regional Technical Working Group
RUSF	Ready to Use Supplementary Food
RUTF	Ready to Use Therapeutic Food
PES	Parent Education Sessions
SAAD	Special Area for Agricultural Development
SAP	Social Amelioration Program
SAM	Severe Acute Malnutrition

SDN	Service Delivery Network
SEA-K	Self Employment Assistance para sa Kaunlaran
SLP	Sustainable Livelihood Program
SKPH	Sultan Kudarat Provincial Hospital
SMR	Severe Malnutrition Review
SP	Sangguniang Panglalawigan
STD	Sexually transmitted diseases
SWDO	Social welfare and development officer
TESDA	Technical Education and Skills Development Authority
UHC	Universal Health Care
WASH	Water, Sanitation and Hygiene
ZFF	Zuellig Family Foundation
ZOD	Zero Open Defecation

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Summary

Background

Stunting is a condition where children aged 0-59 months have a height-for-age more than two standard deviations below the median of the WHO Child Growth Standards. This condition results from poor nutrition, repeated infections, and inadequate psychosocial stimulation, affecting around 149.2 million children worldwide. Stunting has long-term adverse effects on health, cognitive development, and socioeconomic outcomes. It also impacts maternal health, leading to poor neonatal outcomes and restricted fetal growth.

Methodology

The baseline assessment focused on the F1KD program, a key nutrition initiative supported by UNICEF and the Philippine government, conducted across three provinces and 19 municipalities in the country. The study utilized document reviews, key informant interviews, and focus group with local health officers, nutrition action officers, local chief executives (LCEs), and regional government representatives. Data were collected using guide questions to evaluate the effectiveness, relevance, innovation, sustainability, and replicability of the F1KD program.

Findings

The study involved 191 participants, with 68% from Region 8 and 32% from Region 9. Most participants were provincial government officials from Samar, Northern Samar, and Zamboanga del Norte. The roles of participants included local nutrition council (LNC) members (44%), local health officers and nutrition action officers (23%), members of the local nutrition core team (10%), and LCEs (9%).

1. Governance and coordination

Challenges in multi-sectoral nutrition coordination included a lack of accountability and ownership, limited resources, and narrow perspectives that hindered vertical and horizontal synergies. These issues led to ineffective program implementation and low prioritization of health nutrition programs for mother and children. Additionally, there was insufficient investment and a lack of consensus on food and nutrition security for these investigated population groups.

2. Policy and operationalization

The policy environment and operationalization of the integrated service delivery network (ISDN) for F1KD highlighted the need for better policy support, resource allocation, and regional practices. Effective communication strategies and institutional arrangements were crucial for disseminating knowledge and ensuring the diffusion of information across various levels.

3. Capacity building

Gaps were identified in the capacity for integrative program management, including the need for competency development, training, effective planning, monitoring, and evaluation

mechanisms. Robust local investment plans for health and better coordination of F1KD at all local levels were also noted as critical areas for improvement.

Conclusion

The baseline assessment of the F1KD program in the Philippines revealed significant challenges in governance, coordination, policy support, and capacity building. Addressing these issues requires a multi-sectoral approach, improved accountability and ownership among stakeholders, adequate resource allocation, and effective communication strategies. Enhancing integrative program management capacity and establishing robust coordinating mechanisms are essential for the successful implementation and sustainability of health and nutrition programs for mothers and children. The findings provide a foundation for strengthening the promotion, delivery, and integration of F1KD interventions through innovative strategies and mechanisms.

Background

Stunting in the first 1000 days of a child

Stunting, as defined by the World Health Organization (WHO, 2015), refers to the compromised growth and development that many children experience as an impact of poor nutrition, continuous and repeated infection, and limited psychosocial stimulation. The height of a stunted child is usually not proportionate to his or her age based on the WHO Child Growth Standards (WHO-CGS) (WHO, 2006). Technically, children aged 0-59 months are considered stunted if his or her height-for-age is more than two standard deviations below than the median height-for-age of WHO-CGS (Development Initiatives, 2021).

According to the latest Global Nutrition Report (2021), targets for global childhood stunting might not be met, including other infant young child and nutrition targets on wasting, low birth weight, anemia, and child overnutrition. More specifically, three in every ten (3 out of 10), or 149.2 million children aged 0-59 months are stunted globally.

Stunted children experience health, nutrition, educational, and socioeconomic difficulties. Early childhood stunting has long-term detrimental impacts on the growth and development of a child. If a child is stunted in the first 1000 days from conception until two years of age, it is likely that the child would experience serious and irreversible developmental consequences. Maternal stunting also has long-term consequences on the health and development of the mother and the child. Maternal stunting could lead to restrict uterine blood flow and abnormal growth of the uterus, placenta, and fetus leading to poor fetal and neonatal outcomes such as fetal death and growth restrictions if the newborn child survives (Black et al., 2008; Dewey & Begum, 2011). Moreover, children who are stunted are more likely to experience poor brain function and permanent cognitive impairments (Kar et al., 2008). This could further result to poor educational performance, lost productivity, and low socioeconomic income (Grantham-McGregor et al., 2007; Martorell & Young, 2012). Additionally, when stunted children experience excessive weight gain during childhood, there is an increased risk that these children might have nutrition-related chronic diseases (e.g., diabetes) when they reach adulthood.

Stunting among under-five years old children in the Philippines

In the Philippines, around one in three (1 in 3) under-five years old children, or 3.8 million, are stunted, which is relatively high for a low-middle income country (LMIC). The Philippines is the 5th country in East Asia and Pacific region with the highest stunting prevalence, and among the top 10 countries in the world that have high magnitude of stunted children (Capanzana et al., 2020).

Eleven out of 17 regions in the country have high stunting prevalence, mostly in Visayas and Mindanao, accounting to 60% of under-five stunted children (Capanzana et al., 2020). These include Region 9 (Zamboanga Peninsula) and Region 8 (Eastern Visayas). Among the strategic thrusts of the Philippine Plan of Action 2017-2022 (NNC, 2017) is the intensification and mobilisation of local government units (LGUs) to help improve child nutrition in the country.

Thirty-six provinces with the highest prevalence of stunting based on 2015 National Nutrition Survey (NNS) were prioritized for robust local government and community mobilization. Among the PPAN 2017-2022 Focus Areas, four of six provinces (4 out of 6) are from Eastern Visayas (e.g., Biliran, Eastern Samar, Northern Samar, and Samar); while two of three provinces (2 out of 3) are in Zamboanga Peninsula (e.g., Zamboanga del Norte, Zamboanga Sibugay).

First 1000 Days and the impact of effective governance on nutrition

Childhood stunting is considered as the best and the most appropriate measure of children's health and wellbeing; and the most accurate indicator of social inequalities experienced by children (De Onis & Branca, 2016). There are many social factors that could possibly contribute to the high prevalence level of stunting in the country. These include suboptimal prenatal condition and maternal nutrition, inadequate and less diverse food intake, and poor water, sanitation, and environmental conditions (Capanzana, Demombynes, and Gubbins, 2020).

The First 1000 Days (F1KD) Program is a package of nutrition interventions that aim to improve health and wellbeing of a child from conception until the child reaches his or her second birthday. Focusing on the first 1000 days is a way of improving the health, nutritional, social, and economic factors that could contribute to child's nutrition. In the NNC's First 1000 Days Manual of Procedures, five thematic components of the Nurturing Care Framework (NCF) were highlighted that is believed to help children survive and thrive to reach their optimum potential as individuals. The five components of the NCF include: 1) good health; 2) adequate nutrition; 3) responsive caregiving; 4) opportunities for early learning; and 5) security and safety (NNC, 2021).

The delivery of the First 1000 Days package is often influenced by governance, stakeholder leadership, and policy measures. For instance, the delivery of the First 1000 Days interventions in the Philippines is anchored to the Republic Act 11148 (RA 11148) or the *Kalusugan at Nutrisyon ng Mag-Nanay Act*. This policy measure requires national and local governments investment in the implementation of needed maternal and child nutrition interventions. Moreover, the delivery of NCF requires critical whole-of-government approach and multisectoral involvement, especially in the planning and budgeting mechanisms.

Often, this whole-of-government approach requires LGUs to become the service delivery providers of the nutrition intervention. However, evidence-based nutrition actions over the life-course are not easily implementable in resource-scarce settings, especially where there are governance and economic constraints, and limitations on implementing holistic behavior change intervention.

Proof of concept: Looc and Gamay towns in the Philippines

In response to the multi-faceted nutritional challenges on children and mothers in the Philippines, the Kristian Gerhard Jebsen Foundation (KGJF) and the Zuellig Family Foundation (ZFF) implemented a pilot program on nutrition governance in two partner municipalities: Gamay in Northern Samar and Looc in Romblon between 2016 and 2019.

The pilot project aimed to contribute to achieving the national government's goals for better nutrition outcomes in the First 1000 Days. The project served as a proof of concept where functional technologies were developed and implemented as well as new approaches that enabled communities to achieve their desired nutritional outcomes.

The improved competencies of the Looc and Gamay's municipal nutrition action officer (MNAO), municipal nutrition council (MNC), barangay nutrition committee (BNC) leaders and members enabled them to help catch-up with the LGU targets on nutrition, hurdle their expressed challenges, and validate innovations after attending the Bridging Leadership Training (BLT).

Through the trainings conducted, MNC and BNC members were able to acknowledge that they are accountable for the problems on nutrition in their communities. Their leadership capabilities improved in areas of resources management; encouraging their communities change in behavior; improving management competencies; policy development; and building partnerships.

In the process, they were able to engage and foster community participation. Comparing with the baseline assessment in 2016 when there was very poor community participation in the pilot sites, the Barangay Leadership for Nutrition and Development (BL4ND) changed stakeholders' attitudes towards their understanding on nutrition problems. The barangay leaders started to see malnutrition as a complex issue that needs to be prioritized.

Moreover, the practice of educating parents continued all throughout the project implementation. Parents who got the idea of backyard gardening from the project, planted vegetables, and provided counterpart to community nutrition program from their garden's produce. Members of the LGBTQ community advocate for maternal and child health and nutrition (MCHN) in their communities. Community voices manifested as a "new life role" for women who traditionally valued themselves as mothers and wives to fisherfolk and farmers. These women realized their participation by engaging and participating in health projects, especially for mothers and children; advocating on proper nutrition for pregnant mothers, exclusive breastfeeding, and complementary feeding of newborn children, and zero open defecation (ZOD); and by tracking and encouraging pregnant mothers for regular prenatal checkup, newborn care, and self-care.

The municipalities of Looc and Gamay, together with their barangays also strengthened their community nutrition and health systems, as shown in the multi-year municipal nutrition scorecard (MNS), except for one financing indicator (i.e., liquidation rate of the nutrition budget of barangays) and five other indicators for health and nutrition service delivery (e.g., vitamin A supplementation, vaccination, and antenatal care) remained below target in 2019.

Moreover, capacity development on leadership and governance processes enabled the barangay captains and members of the BNCs to become aware of their roles and responsibilities in nutrition governance, planning, and programme management. They also became active in convening meetings regarding health and nutrition which became a space for them to discuss, debate, and pass ordinances for environment and sanitation. They also increased the monthly incentives of BNSs and gave them a working space in the barangay hall. Effective collaboration was also an output of this capacity building as they improved their engagement with schoolteachers.

Leaders in both municipalities recognized the need for a multi-stakeholder support towards municipal-wide interventions on health and nutrition. These leaders were able to mobilize multiple stakeholders on nutrition-related activities. They were able to mandate barangays in establishing their respective BNCs. They also organized farmers and fisherfolks and engaged people's organizations to become part of the MNC.

Enabling factors identified from the pilot projects

Lessons learned from the two pilot municipalities demonstrated a policy-driven, multi-faceted governance interventions at multiple levels to facilitate generation of nutrition outcomes. The policy mandates resources for nutrition program implementation from barangays, municipalities, cities, and provinces. These resources naturally came from various sources such as departments, offices, and units. These resources converged at the local nutrition action office to ensure that these are linked and are used to achieve nutrition outcomes. Effective and efficient convergence of these resources helped generate vital nutrition outcomes. These include the regulation of junk food marketing and ensuring availability and affordability of quality nutritious food especially in areas that are resource poor. This is accompanied by access to clean and potable water.

Moreover, the nutrition governance project in these two municipalities enabled the LGUs (e.g., municipal, barangays levels) to organize and align both the MNC and BNC. This needs for alignment required the reorganization of the MNC and BNC. Multi-dimensional nutrition programs call for a

close multi-level supervision of frontliners. Thus, MNCs should supervise the BNCs during planning, implementation, monitoring and evaluation of barangay nutrition action plans (BNAP). In the same way, BNCs' should also supervise barangay volunteers and households to ensure that the pro-nutrition behaviors are sustainably practiced.

There was also a realization that BNCs should be able to monitor their own progress, the same way as the MNCs. It is then imperative that monitoring and evaluation frameworks for nutrition at local levels should be simplified with indicators that are identified and are easily understood by community volunteers and barangay leaders. This will enable BNCs and MNCs to use their monitoring and supervision results for planning, implementation, policy development, resource mobilization among others.

For BNCs and MNCs to be cohesive and consistent, the BLT should be inclusive and should not be limited to barangay councillors on health and agriculture alone. This should include other barangay officials including the barangay secretary. Capacitating every member of the BNC is an investment to one's competency levels that could enable efficient operation and organization of the BNC.

Contextual requirements to adapting and adopting the pilot projects in other contexts

Despite the success of the pilot projects implemented in the municipalities of Looc and Gamay, its implementation in other LGUs need further assessment, contextualization, and adaptation. There is no specific local model that could translate and replicate the positive experiences and outcomes from Looc and Gamay to other LGUs.

Firstly, it is imperative to understand the role and influence of provincial LGUs on nutrition program planning and implementation, especially in the context of municipal LGU independence and the scarcity of resources at barangay level. Currently, these situations limit the response to the multifaceted challenges of nutrition at all local government levels.

Secondly, since provincial LGUs are more complex in scope, coverage, stakeholders' interests, and political dynamism, there is a need to understand the enabling environment, its complexity, its barriers to achieving nutrition outcomes in relation to the F1KD program.

Considering all these contextual underpinnings, it is then important to understand what effective integration models of health and nutrition systems are most feasible at the provincial LGU level. Specifically, there is a need to investigate potential facilitators and barriers that should be considered before adapting and adopting these integration models. Moreover, since LGUs are operated by LCEs, understanding acts of leadership that could fast track changes in governance, and eventually in the generation of nutrition outcomes need to be highlighted and implemented. Strategies for diffusion across all local government levels (barangay, municipal, province) that will facilitate health nutrition outcomes should also be identified.

These consideration and requirements for contextual adaptation and adoption of governance program to local government stakeholders for improvement of local nutrition outcomes paved the way for a baseline assessment of governance measures in three critical provinces (Samar, Northern Samar, and Zamboanga del Norte) before the implementation of a robust and integrated F1KD program.

Aim and objectives of the baseline assessment

This study aimed to assess current governance status of the integrated health and nutrition interventions for the F1KD at the provincial level and provide context-specific recommendations for the nutrition governance project, towards achieving F1KD outcomes in selected provincial LGUs.

Specifically, this baseline assessment aimed to determine the:

1. Current F1KD interventions using standard development effectiveness criteria on relevance/appropriateness, results-orientation and innovation, sustainability/replicability.
2. Policy environment and operationalization of the ISDN for F1KD.
3. Policy, resource support for, and practices on F1KD at the regional level.
4. Communication strategies, institutional arrangements for dissemination and diffusion of knowledge products, learnings, and insights across different levels.
5. Capacity for an integrative program management, both strategic and operational at various levels.
6. Mechanisms to integrate F1KD and align at various levels.

Scope of the baseline assessment

This baseline assessment covered nutrition and governance at the provincial and municipal levels in the sample LGUs and the regional support provided to them in relation to the implementation of the F1KD program.

The study was done in select provinces that have unique relational dynamics between and among governors, mayors, and barangay captains. It is expected that they, as autonomous government units have implemented nutrition programs based on their own local contexts and capacities. Therefore, the results of the assessment particularly described each selected province and cannot be used to illustrate nutrition governance and F1KD program implementation in other provinces, even if they belong to the same region.

Methodology

This baseline assessment study was conducted across three provinces and 19 municipalities in the Philippines. These provinces and municipalities were purposively chosen and are UNICEF partners for the implementation of the F1KD program during the conduct of this study. The F1KD program is a flagship program by the Philippine government and is supported by international partners such as UNICEF. The implementation of the F1KD program in these provinces and municipalities is projected to help 12,000 infants aged 0-5 month; 36,000 young children 6-23 months, including those from poor families and geographical isolated and disadvantage areas (GIDAs); and 57,000 pregnant and lactating women. It will also strengthen the capabilities of around 1,370 nutrition and health personnel.

Conceptual frameworks

Governance is a critical element to successful nutrition policy development and program implementation. It is vital in achieving nutrition security and nutrition outcomes. Research conducted in Ethiopia for example has investigated the root causes of governance problems that persistently and adversely affected program design, coordination, and implementation. Based on this research, four thematic areas pulled back efforts to improve nutrition. These are:

1. Ineffective multi-sectoral nutrition coordination between national and regional organizations. This is due to lack of accountability among leaders, partners, and implementers; lack of ownership among members of the national and regional nutrition coordination bodies, which regard nutrition as supplementary to their other activities; and narrow perspectives and limited resources hindering creation of vertical and horizontal synergies between different sectors and actors.
2. Low policy priority of multi-sectoral nutrition program implementation with insufficient number and quality of personnel and financial resources.
3. Low investment in nutrition programs.
4. Lack of consensus on internal and external framing of food and nutrition security. This is largely due to uninformed narrative about nutrition, and conflicting and divergent perspectives among program donors.

Another research conducted in Nepal suggested three key domains as critical elements for governance in nutrition to be effective: commitment, capability, and collaboration.

1. Commitment or “willingness to act” was defined as a core professional responsibility and internalization of one’s personal role in implementing relevant policies and programs, with necessary dedicated resources to nutrition.
2. Capability requires access to relevant technical information, as well as financial and human resources.
3. Collaboration is the ability to forge cross-sectoral linkages and partnerships to implement complex nutrition programs and nutrition policies.

Similarly, assessment done in India, Bangladesh, and Pakistan on nutrition policy implementation, showed inadequate capacity at all levels, spanning from policymakers to extension workers to communities.

Operational definition of terms

In this report, we used technical terms to explain further concepts and ideas used in the nutrition governance and nutrition program implementation sphere. Below are the operational definitions of the commonly used technical terminologies in this report:

1. **Assessment of strategy:** the identification of challenges and issues encountered, as well as good or best practices, mechanisms, and strategies in health and nutrition governance, or in health delivery system development.

2. **Assessment of relevance or appropriateness:** the responsiveness of interventions to local needs or interests, especially to vulnerable populations or sectors (e.g., pregnant and lactating women, adolescent mothers, newborn children up to 24 months of age, indigenous peoples, communities with high incidences of poverty, residents in isolated and/or disaster prone areas or in areas inaccessible to transportation, unserved or underserved communities or communities recovering from crisis or armed conflict); it is also defined as the consistency or alignment of interventions with regional and/or national strategic goals, program targets, and priorities.

3. **Assessment of effectiveness (results orientation and innovation):** it is the extent to which objectives and targets were achieved as a direct and indirect result of the interventions, further resulting to new approaches to common challenges that have been proven to generate or demonstrate results, or potential modifications to strategies and activities in response to cultural, religious, political, and demographic conditions of the program/project areas.

4. **Assessment of sustainability or replicability:** this takes into consideration different factors to nutrition governance and program implementation such as community participation, ownership by local stewards or leaders, extent of institutionalization, functional stewardship, and knowledge management (e.g., manuals, guidelines, tools, and templates that can be used for replication).

Models and conceptual frameworks used

The implementation of this baseline assessment was based on different models and frameworks. One of which was the ZFF's Health Change Model. This model suggests that nutrition improvement in communities is associated with the understanding of local leaders about the systemic challenges in their area. This understanding is translated to a response in leadership actions and further to a response in local nutrition systems, eventually contributing to the generation of improved nutrition outcomes in the community such as the reduction of stunting prevalence among 0-2 years old children (Figure 1).

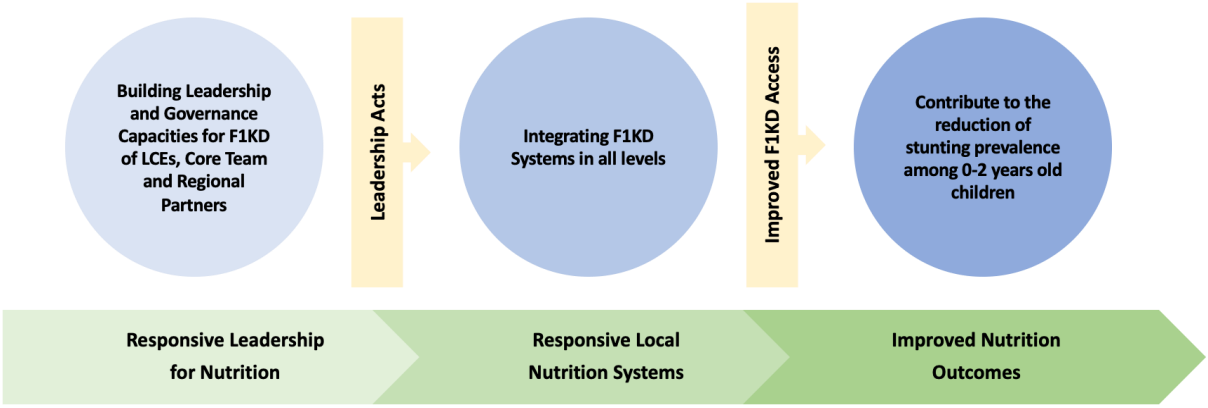

Figure 1. ZFF Health Change Model

Building from the ZFF's Health Change Model and set goals of UNICEF on Child Health Systems (UNICEF CP Output 1.2) and Nutrition and First 1000 Days (UNICEF CP Output 1.1), a Results Framework for the Provincial Nutrition Governance Program (Figure 2) was developed. This Results Framework details how the outcomes from responsive leadership and improved governance strategy for F1KD program could improve integrated systems, specifically on improving local governance capacity of integrated health and nutrition systems, on integrating service delivery network, and integrating and harmonizing support at the regional level. A well improved and established integrated system for F1KD program could help improve access to nutrition services such as immunization, antenatal care, management of acute malnutrition, and promotion of exclusive breastfeeding, eventually contributing to improving health and nutrition outcomes, especially to the reduction of stunting prevalence among 0-2 years old children.

Improved health and nutrition outcomes	Contribute to stunting prevalence reduction among 0-2 years old children		
Responsive integrated systems for F1KD	Improved access to F1KD services		
	Improved local governance capacity of integrated health and nutrition systems for the F1KD	Integrated service delivery network for the F1KD established	Integrated and harmonized support for F1KD at the regional level
Responsive leadership and improved governance for F1KD	LGUs set strategies and investments	Service delivery networks for F1KD are assessed	Engagement mechanisms and guidelines with the private sector and civil society sector developed and established
	Provincial governments are trained and coached	Provincial guidelines for F1KD SDN governance developed	
	Municipality/city governments are trained and coached	Performance mechanism guidelines and review workshops of F1KD conducted	Coaching and mentoring to DOH and NNC regional staff conducted
	Barangay leadership and governance program is implemented		Knowledge and insights disseminated and diffused
ZFF Health Change Model	UNICEF CP Output 1.2: CHILD HEALTH SYSTEMS. The health systems at national level and in select provinces are strengthened to accelerate equitable access to high impact interventions for reducing preventable newborn deaths, early childhood illness and disability		UNICEF CP Output 1.1: NUTRITION AND FIRST 1000 DAYS. Government and partners have enhanced capacity to plan, delivery, and monitor coordinated multisectoral, gender-responsive, risk-informed approaches at scale to reduce stunting and other forms of malnutrition

Figure 2.Results Framework for the Provincial Nutrition Governance Program

Another conceptual framework used as basis for this assessment was originally developed for the summative evaluation of the pilot nutrition governance projects in Looc in Romblon and Gamay in Northern Samar. This framework (Figure 3), inspired by the theoretical framework on the health systems dynamic framework (Van Olmen et al., 2012) and complex adaptive systems (Paina & Peters, 2012), provides a lens on integration and consolidation of different resources to help achieve nutritional outcomes.

This framework is adapted for this baseline assessment since knowledge products that stemmed out from the municipal governance provide a proof-of-concept that could be adapted and expanded to a wider perspective. This framework traces both the enabling and limiting environments of the provinces; the type and number of regional supports that stimulate or strengthens commitment; coordinative mechanisms; and multi-sectoral collaborations (or the lack of it) for nutrition governance.

Inputs include technical tools from the BLT, and communication and diffusion strategies (i.e., empowering environment that can stimulate co-creation of products and services). Current situation on governance, including participatory governance, roadmap and LGU scorecard, level and mechanism of integration, and community participation. Systems strengthening covers service delivery, logistics, nutrition referral system, consolidated financing, human resources, and nutrition information system. Moreover, the province-wide monitoring and evaluation system envelopes the entire governance and health and nutrition systems to capture project-specific and system-wide data, feedbacking, data use from the barangay to municipality and provincial levels and then back for decision making, resource mobilization, policy shifts, among others.

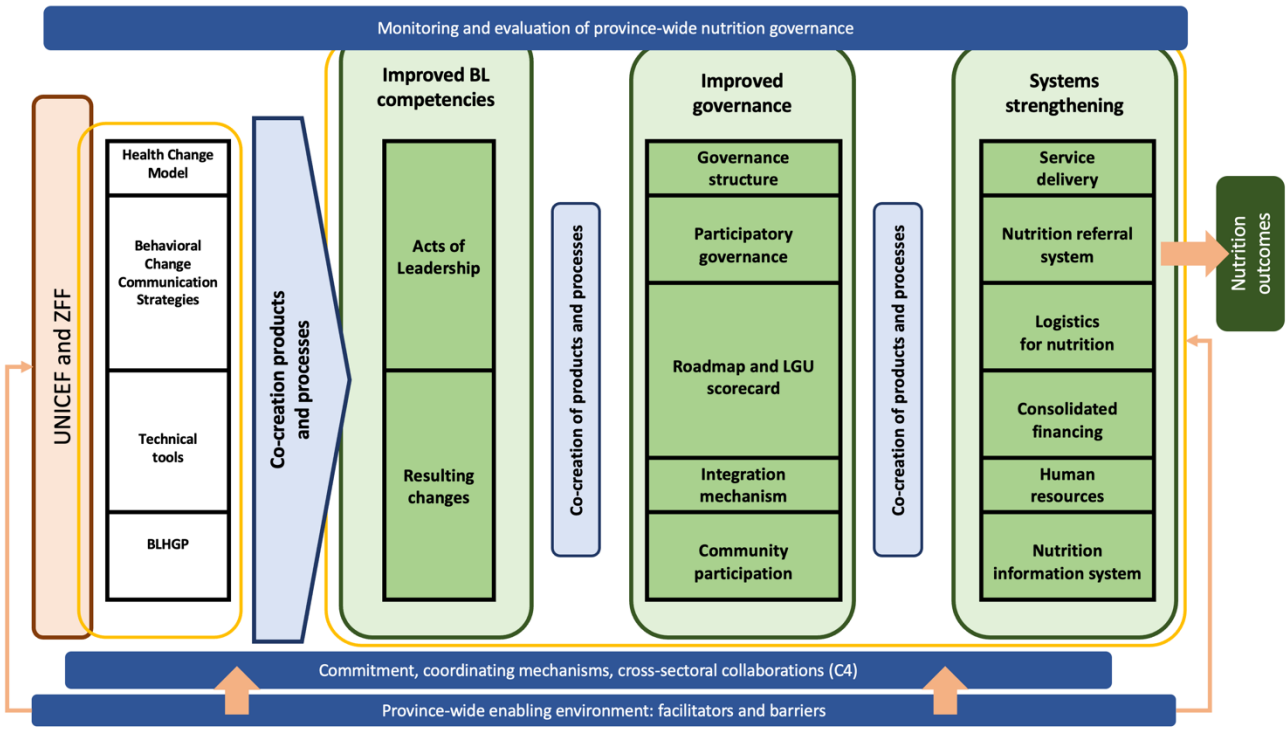

Figure 3. Adapted and Combined Health Systems Dynamics Framework and Complex Adaptive Systems Framework for Province-Wide Nutrition Governance Modelling

The conceptual framework presented above is a consolidation and integration of both the ZFF's Health Change Model and the Results Framework for the Provincial Nutrition Governance Program. This served as the overall guide in the conduct of this baseline assessment.

Study sites

Three provinces were chosen for this baseline study: Samar and Northern Samar (Region 8 or Eastern Visayas) and Zamboanga del Norte (Region 9 or Zamboanga Peninsula).

A total of 19 LGUs (cities and municipalities) were selected as study sites within these provinces for the baseline assessment (Table 1). Seven LGUs were selected from Samar province, eight from Northern Samar, and four from Zamboanga del Norte.

Table 1. Fieldwork areas for the baseline assessment

Region	Province	Capital	Total number of LGUs and barangays	Fieldwork areas	Remarks
Region 8	Samar	Catbalogan City	24 LGUs 952 barangays	Calbayog City Catbalogan City Gandara San Jose de Buan* Sta Margarita Tarangnan* Pagsanghan*	• Samar completed the ZFF Provincial Leadership and Governance Program (PLGP) • Five areas underwent the ZFF Nutrition and Health Leadership and Governance Project (NHLGP)
Region 8	Northern Samar	Catarman	24 LGUs 569 barangays	Bobon Catarman Gamay Lapinig Lope de Vega Mapanas Mondragon San Jose	• Northern Samar did not complete the ZFF PLGP • Four areas underwent the ZFF NHLGP • Gamay completed ZFF pilot project on municipal nutrition governance
Region 9	Zamboanga del Norte	Dipolog City	27 LGUs 691 barangays	Godod* Leon Postigo* Siayan Sindangan*	• Zamboanga del Norte has on-going PLGP • Two areas underwent the ZFF NHLGP

**Fieldwork areas used for case study reports*

Some of the provinces completed or has an on-going Provincial Leadership and Governance Program (PLGP) by ZFF during the conduct of this baseline study. Samar province completed its PLGP while Zamboanga del Norte has an on-going PLGP during the baseline assessment. Northern Samar did not complete PLGP. Some selected LGUs within each province also completed the ZFF Nutrition and Health Leadership and Governance Project (NHLGP).

Research methods

Qualitative research techniques were used for the baseline assessment to capture required and appropriate data to assess the current governance status of selected provinces and LGUs in relation to their capacity to deliver the integrated health and nutrition programs for the F1KD. Document analysis, key informant interviews, and focus groups were employed.

Document analysis and synthesis of existing evidence

Relevant grey literature (i.e., published and unpublished government papers) from covered provinces, cities, and municipalities were collected, scanned, analysed, and synthesised. This grey literature included, but were not limited to the following:

1. Local demographic and health and nutrition data related to the F1KD program included those from pregnant and lactating women, adolescent mothers, 0-23 months old newborn children, indigenous peoples (IPs), residents of isolated and/or hazard prone areas, residents of areas with inaccessible transportation, unserved or underserved communities, and communities recovering from crisis or armed conflicts
2. Provincial and city-wide health systems data
3. Strategic and operational local nutrition action plans
4. Annual local investment plans for health and nutrition
5. Minutes and records of local nutrition council/committee, including health board meetings
6. Laws, regulations, ordinances, resolutions, and other enabling policies, including those related to nutrition, health, and F1KD
7. Relevant operational manuals
8. Records and inventories of training and supply chain management
9. Reports of monitoring activities, accomplishment reports of F1KD interventions and nutrition program implementation reviews
10. Profiles of institutional and community stakeholders associated with F1KD program implementation

These records were systematically synthesised to form the initial evidence base to describe nutrition governance in the provinces. This evidence base served as basis for triangulating or validating data from the interviews and focus groups.

Key informant interviews

The key informant interviews were conducted online using virtual teleconferencing platforms (e.g., Google Meet, Microsoft Teams, Zoom) with relevant stakeholders purposively selected based on their association with implementing health and nutrition programs, more specifically with F1KD interventions in their respective LGUs. Around 120 potential informants were interviewed (Table 2). LCEs (e.g., mayors, governors), chairperson of regional nutrition councils (RNC), regional nutritionist from DOH-Center for Health Development (DOH-CHD), LGU focal person on nutrition or nutrition action officer (NAO), representatives from LGUs' agriculture and social welfare departments, as well as health education and promotion office (if existing), and council leader responsible for health and nutrition. All informants were asked to read and sign an informed consent form before administering the online interview.

Table 2. Key informants for the interview and focus groups

Key informant	Number of key informants per LGU level				Total
	Municipality	City	Province	Region	
Governors			3		**3**
Mayors	16	3			**19**
Local health officers	16	3	3		**22**
Local board members for health	16	3	3		**22**
Local nutrition action officers	16	3	3		**22**
Local health and nutrition promotion officers	16	3	3	2	**24**
DOH-CHD regional nutritionists				2	**2**
Regional nutrition program coordinators				2	**2**

Key informant	Number of key informants per LGU level				Total
	Municipality	City	Province	Region	
Representatives from Department of Agriculture regional office				2	**2**
Representatives from Department of Social Work and Development regional office				2	**2**
Total	**80**	**15**	**15**	**10**	**120**

Two sets of guide questions were developed and shared to informants prior to the interview so they can familiarize themselves with the topics to be discussed. One set of guide questions were intended for health education and program officers (HEPO) and the other was intended for LCEs and regional directors of government agencies. The questions were adapted to the intended information, but these generally focused on the common development problems experienced by the community in the area; and the effectiveness, relevance, results-orientation, innovation, sustainability, and replicability of current F1KD interventions. The themes in the guide questions were parallel with the objectives being assessed for the baseline study:

1. Current F1KD interventions using standard development effectiveness criteria on relevance/appropriateness, results-orientation and innovation, sustainability/replicability.
2. Policy environment and operationalization of the ISDN for F1KD.
3. Policy, resource support for and practices on F1KD at the regional level.
4. Communication strategies, institutional arrangements for dissemination and diffusion of knowledge products, learnings, and insights across different levels.
5. Capacity for an integrative program management, both strategic and operational at various levels.
6. Mechanisms to integrate F1KD and align at various levels.

Focus group discussion

Representatives from each of the three provinces participated in focus groups to consolidate and validate the initial desk review and findings from the interviews on provincial health and nutrition governance and health systems development. The focus groups also became a venue to identify, discuss, and analyze challenges, innovative/best practices, and facilitators to nutrition governance in the province. Robust proposals to further strengthen the promotion, delivery, and integration of F1KD interventions through different strategies and mechanisms were also co-created.

Twenty-two focus groups were conducted with around 6-8 participants per focus group. Usual participants in the focus groups were members of the LNCs (e.g., city, municipal, provincial), representative from non-government organizations (NGOs), and local nutritionist and/or NAOs.

A set of guide questions were developed and used for the series of focus groups. Similar with the guide questions for the interviews, guide questions for the focus groups were parallel with the six specific objectives of the baseline study and focused on the common developmental problems experienced in the community; and the effectiveness, relevance, results-orientation, innovation, sustainability, and replicability of current F1KD interventions in their respective areas.

Prior to the conduct of focus groups, the participants were also asked to read and sign an informed consent form.

Data management, analysis, utilization, and reporting

Audio recordings from interviews and focus groups were labelled according to the LGU using a corresponding code. These audio recordings were then transcribed in preparation for coding and thematic analysis. Audio recordings were stored in a password-protected Google Drive and managed by the main researcher and team leader.

Relevant data from the transcriptions were abstracted and tabulated in MS Excel in preparation for further coding and thematic analysis. When necessary, abstracted data from the interviews and focus groups were triangulated with desk review data. Validation was also done with data from interviews and focus groups.

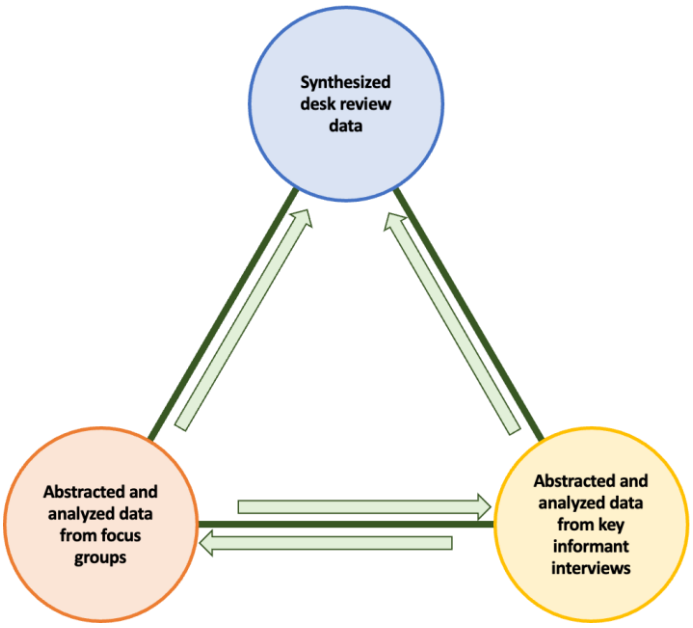

Figure 4. Data triangulation diagram

The results of the baseline assessment will be shared with ZFF, UNICEF, participating LGUs, and other relevant stakeholders as a written report and through a presentation. In general, the findings of this assessment will be used for enhancing and strengthening the delivery of F1KD program in the study sites. The findings could also be adapted in other potential study sites to investigate similar aspects of F1KD program delivery.

Method and data matrix

To summarize and to demonstrate the relationship of the study objectives with the methods used and the nature of data that were collected, a method and data matrix was developed (Table 3).

Table 3. Methods and data matrix

Study objectives	Data required	Data collection method	Data source
1. Assess current F1KD interventions using standard development effectiveness criteria of relevance, appropriateness, results-orientation, and innovation, sustainability, replicability.	• Acts of leadership for/on nutrition and F1KD for those who took the BLT • Description of F1KD interventions in the province, cities, municipalities • Nutrition data of 0-23 months old children, pregnant, and lactating mothers • Health service coverage data of 0-23 months old children, pregnant, and lactating mothers • Nutrition and health outcomes of 0-23 months old children, pregnant, and lactating mothers • Innovations done to reach the objectives • Sustainability mechanisms started and institutionalized • Replications of specific interventions in other localities • Knowledge management products used for replication	Document review, key informant interview, and focus group discussion	Local health officer; local NAO; local nutritionist Local nutrition council or committee Council member for health Regional Nutrition Council DOH regional nutritionist
2. Policy environment and operationalization of the ISDN for F1KD	• Local policies in the pipeline, passed, implemented in relation to F1KD, nutrition, and service delivery • Policies spearheaded or championed by BL-trained leaders and managers • Presence of and description of the ISDN for F1KD • Stakeholders or partners in the service delivery network • Budget and other resources for the ISDN for F1KD	Document review, key informant interview, and focus group discussion	Local health officer; local nutrition action officer; local nutritionist Local nutrition council or committee Council member for health Regional Nutrition Council DOH regional nutritionist
3. Policy, resource support for and practices on F1KD at the regional level	• Policy on F1KD at the regional level, spearheaded by various institutions notably the DOH, DA, DSWD, and regional nutrition council • Resources for the F1KD interventions from regional partners to various levels • Resources dedicated for the integration of F1KD intervention at the provincial level	Document review, key informant interview, and focus group discussion	Local health officer; local nutrition action officer; local nutritionist Local nutrition council or committee

Study objectives	Data required	Data collection method	Data source
	• Practices on F1KD done by regional partners and stakeholders • Regional partners contributing resources • Cooperation and collaboration of regional offices of DOH and NNC		Council member for health Regional Nutrition Council DOH regional nutritionist
4. Communication strategies, institutional arrangements for dissemination and diffusion of knowledge products, learnings, and insights across different levels	• Description of communication strategies in cities, municipalities, and province • Description of knowledge products • Effectiveness of communication strategies for diffusion across different levels • Institutional arrangements	Document review, key informant interview, and focus group discussion	Local health officer; local nutrition action officer; local nutritionist Local nutrition council or committee Council member for health Regional Nutrition Council DOH regional nutritionist
5. Capacity for an integrative program management both strategic and operational at various levels	• BL competency development and program management training • F1KD planning, monitoring, and evaluation mechanisms and outputs • Local nutrition action plan (LNAP) • Local investment plan for health • Monitoring and evaluation schemes for F1KD and beyond • Institutional arrangements • Coordinating mechanisms • Level of integration at all local levels, district or inter-local health zones (ILHZ), etc.	Document review, key informant interview, and focus group discussion	Local health officer; local nutrition action officer; local nutritionist Local nutrition council or committee Council member for health Regional Nutrition Council DOH regional nutritionist
6. Mechanisms to integrate F1KD and align at various levels	• Institutional arrangements • Coordinating mechanisms • Integrated budget, financing mechanisms for nutrition and F1KD • Harmonized plan for nutrition and health • Monitoring and evaluation schemes	Document review, key informant interview, and focus group discussion	Local health officer; local nutrition action officer; local nutritionist

Study objectives	Data required	Data collection method	Data source
			Local nutrition council or committee Council member for health Regional Nutrition Council DOH regional nutritionist

This matrix served as the backbone for identifying and analyzing the relevance of data to appropriately answer what is required by each objective of the assessment study. It also guided the interviewers and focus group facilitators on collecting data using appropriate methods and data sources.

Findings

A total of 191 participants participated in the KIIs and FGDs (Table 4). Of which, 68% were from Region 8, and 32% were from Region 9. More specifically, 93% of the respondents were from provincial governments of Samar, Northern Samar, and Zamboanga del Norte.

Table 4. Profile of respondents per regional area

Region	Agency	Number of participants
Region 8	DOH-Center for Health Development 8	3
	National Nutrition Council Regional Office 8	1
	Department of Social Welfare and Development Field Office 8	1
	Department of Agriculture Regional Office 8	1
	Province of Samar	51
	Province of Northern Samar	72
	Sub-total	**129**
Region 9	DOH-Center for Health Development 9	2
	National Nutrition Council Region Office 9	3
	Department of Social Welfare and Development Field Office 9	1
	Department of Agriculture Regional Office 9	1
	Province of Zamboanga del Norte	55
	Sub-total	**62**
	TOTAL	**191**

The participants were also aggregated based on official function. Forty-four percent (44%) of the participants function or have remits within their respective LNCs, 23% works as local health officers, nutrition action officers, and health education and promotion officer on nutrition.

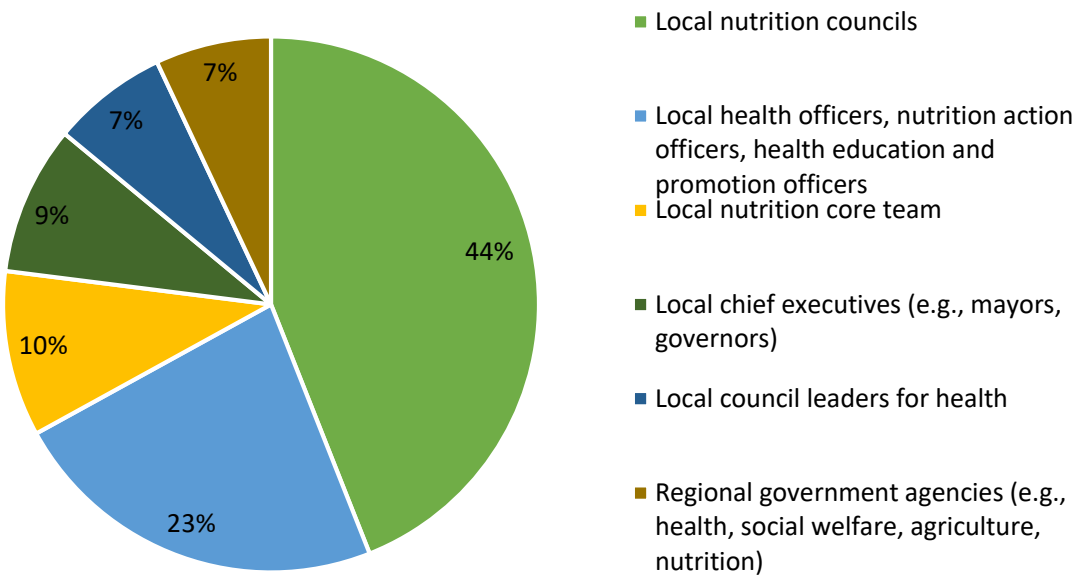

Figure 5. Percent distribution of participants based on their official functions

Ten percent (10%) works as members of the local nutrition core team; 9% were LCEs (e.g., mayors, governors); and 7% works as local council leaders for health. Seven (7%) of them came from sub-national government agencies such as DOH-Centre for Health Development, regional office of the Department of Agriculture and National Nutrition Council.

The Case of Eastern Visayas Region

Sixty eight percent (68%) of the total participants for the key informant interviews and focus group discussions were from Region 8 or Eastern Visayas region. There was complete representation of respondents from all sub-national government offices (e.g., health, social welfare, agriculture, and nutrition offices). The provincial government of Northern Samar, including the eight LGUs had the largest representation in terms of number of respondents.

In this section, we discussed the implementation of F1KD-related interventions in Eastern Visayas region, particularly in Samar and Northern Samar provinces and some selected municipalities. We also discussed how the implementation of these strategies satisfies the set objectives for this baseline study. We enveloped municipal level strategies on F1KD within each objective, specifically how these contributed and relate to the achievement of objectives at the provincial level.

Province of Samar

Objective 1. Current F1KD interventions using standard development effectiveness criteria of relevance/appropriateness, results-orientation, innovation, and sustainability/replicability

There is a significant developmental problem related to the implementation of nutrition-specific and nutrition-sensitive interventions, including F1KD-specific interventions. There is also a lack of awareness on the importance of these interventions interpreted by community members as issues on the availability and accessibility of these programs and services. Moreover, there is a perceived lack of opportunity (i.e., economic) among community members that limits them from accessing vital health and nutrition services.

A spectrum of maternal- and child-specific nutrition services

A suit of nutrition and health services are available for mothers and young children to promote maternal and newborn health. Currently, there are seven accredited adolescent-friendly facilities across Samar province. Teenage mothers are given the same services given for adult women with regards to public health. They are also given services for sexually transmitted diseases (STD) with confidentiality. Samar province is currently working on being accredited to provide a one-stop-shop of sexual and reproductive health services for cases of teenage pregnancies. A Parent Young program, a tie-up strategy with the Department of Education (DepEd) and Technical Education and Skills Development Authority (TESDA) is organized in hospitals and referrals to these services are provided to those who would like to attend or return to school.

Programs and services available for mothers include family planning services, pre-natal, and post-natal check-up services, micronutrient supplementation (e.g., vitamin A, iron-folic acid), and counselling for maternal nutrition. Infant health is promoted through breastfeeding programs, expanded newborn screening program, hearing screening, and immunizations. These are accessible for 24 hours in all facilities. In addition to immunization, infants are also provided with monthly Well Baby Clinic. Appropriate timing for the provision of required health and nutrition interventions are followed such as the provision of vitamin A supplementation and regular anthropometric screening (e.g., weighing). Malnourished infants are prioritized and are given needed vitamin supplementation coupled with the promotion of exclusive breastfeeding. ready to use therapeutic foods (RUTF) are provided to malnourished children and mothers. Wasted children with complications are also referred to in-patient therapeutic clinics in the provincial hospital.

A package of F1KD interventions is implemented in rural health units (RHUs), especially for children who are experiencing severe acute malnutrition (SAM) and moderate acute malnutrition (MAM). Currently, five accredited hospitals offer health and nutrition services for children with SAM and MAM. During the COVID-19 pandemic, the provincial Disaster Risk Reduction Management for Health (DRRM-H) Plan included nutrition and F1KD services. This became an opportunity to shift infant feeding choices from milk to breastfeeding due to the intensive promotion and advocacy for exclusive breastfeeding especially to those who are affected by the COVID-19 pandemic. Unfortunately, this was abruptly put on hold due to the unavailability of feeding bottles and was limitedly resumed by the health workers despite the difficulty on the mobility of nutrition commodities.

Overall, the provincial nutrition action officer (PNAO) of Samar is the one in-charge for all nutrition-related activities. In addition to the abovementioned services, there is fidelity in implementing conventional nutrition interventions such as Operation Timbang (OPT) Plus and capacity-building programs for health and nutrition staff and volunteers. There is also a strong collaboration with the education and health departments for the provision of deworming, immunizations, and micronutrient supplementation services in schools.

Nutrition-sensitive programs on water, agriculture, and fisheries

In addition to nutrition-specific interventions for young children, pregnant, and lactating mothers, a suit of nutrition-sensitive programs are also implemented in the province for promoting water and food security. Regular microbiological water testing is done to ensure that water distributed across Samar province is free from contamination and is potable for public use. However, competing programmatic priorities remains to be a problem in investing in Water, Sanitation, and Hygiene (WASH) programs in some government units. There is a challenge in providing safe and clean drinking water in specific areas with high quality water requirement. For instance, day care centers have handwashing areas, but safe and clean water is usually unavailable. Additionally, comfort rooms in these child centers are reported to be dilapidated. Certification of ZOD in most barangays is also not high. These problems are contributing factor to proper household access to sanitation and hygiene, resulting to continuous worm and rodent infestation in some areas.

Moreover, through the Pagulay sa Barangay, farmers are given technological assistance, seeds, and farm-to-market roads that link their produce to the market and consumers. Households in two cities and 24 municipalities are also provided with livelihood through the “Greenlihood” program. This program is focused on establishing people’s organizations to improve food accessibility and food security. Trainings for the households, provision of farming tools, and provision of vegetable species that could thrive in upland and coastal areas are the main components of the program. The Greenlihood program is provided by DA and the provincial government.

Another specialized food production program provide support for children and households with nutritional problems. Seeds, farm inputs, and implements, and a Php300 cash-for-work is distributed to families of school children who are wasted and severely wasted. The Armed Forces of the Philippines (AFP) Infantry Battalion also help the provincial government in providing food support to far-flung areas, covering around 300 people’s organizations and poor households. Ten barangays from 10 municipalities with nutritional problems were selected as target areas for this food production service. Other food production services are provided to fisherfolks such as the provision of small boats.

Limited availability and accessibility of F1KD services especially in GIDAs

Despite the number of nutrition programs and services delivered, malnutrition continues to be a problem in thee are. This dilemma is due to the limited availability and accessibility of needed F1KD interventions compounded by problems on limited health and nutrition human resources and financial opportunities to support the needs of community members.

There are accessibility problems on nutrition services relating to maternal health in GIDAs. Pre-natal check-ups and iron-folic supplementation among mothers are low particularly during the first trimester of pregnancy. There is also no data management of serviced populations for maternal health and nutrition services. The inaccessibility of maternal health services is also associated with the high numbers of newborns with low birth weight and the high prevalence of stunting. The lack of systematic and robust data management and proper monitoring of mothers and children's health and nutritional status also contributes to unreliable prevalence data for stunting and other nutrition and health-related indicators (e.g., wasting, underweight, overweight, obesity). This inaccessibility to maternal and newborn health and nutrition services are ever more pressured by the increasing number of teenage pregnancies in Eastern Visayas.

The accessibility to water is also subpar, especially in GIDAs. This inaccessibility to water sources is further translated to very low proportion of barangays who are ZOD certified and poor sanitation and hygiene.

Equitable distribution and delivery of essential nutrition services is potentially impacted by problems on limited health and nutrition human resources. Usually at LGU level, there is one staff who only deals with multiple health and nutrition programs at the same time. This lack of dedicated health and nutrition staff compromise the goal for multistakeholder collaboration and whole-of-government approach for health and nutrition service delivery.

Even though there has been a reduction in poverty incidence in the region, the lack of sustainable economic and financial opportunities is considered as one of the root causes of poverty and malnutrition. The limited individual and household incomes create difficulties in purchasing good quality and nutrition food. Moreover, while food and vegetable sources are made available in KADIWA markets, selling prices of these fruits and vegetables are expensive because the supply is locally imported from Mindanao, making the commodities ever more expensive.

Governance and leadership as a facilitator in nutrition program delivery

The COVID-19 pandemic prompted for the re-prioritization of local government initiatives, plans, and budget, including those for health and nutrition. Governor of Samar Province, Reynolds Michael Tan spearheaded the revisitation of their government's Peace and Prosperity Roadmap. The roadmap considers Samar province's chronic problem on poverty, insurgency, and disasters due to natural hazards such as typhoons. The revisitation of the roadmap focused on emphasizing a whole-of-government approach to alleviate province-wide problem on poverty.

The concept of whole-government approach was also applied in tackling malnutrition in Samar province. This fuelled the provincial government's implementation of its developmental agenda as reflected in the "Balay ni Alfie" – an activity designed as proof of concept in using multisectoral collaboration in providing housing and livelihood package for a family as a measure to alleviate poverty. This project was inspired by a severely wasted four-month-old baby whose family has limited opportunities to provide the child with their required health and nutritional care due to lack in employment and income to support the needs of a relatively big household. As a response, Governor Tan spearheaded the provision of livelihood package and housing to the family in

collaboration with Department of Labor and Employment (DOLE) and Department of Trade and Industry (DTI).

Impact of existing health and nutrition services on nutrition-related outcomes

Health and nutrition stakeholders perceive that the impact of current health and nutrition programs on stunting and undernutrition is low. They associated this low impact with a number of limiting factors such as the lack of health human resources and adequate financial support resulting to overworked local nutrition volunteers and workers. There is also perceived low prioritization of nutrition programs especially from the LCEs due to low awareness and in-depth understanding on the multi-faceted problem on malnutrition, which is translated to lack of limited functionality of the LNCs. This results to limited development and passage of local nutrition policies.

The proliferation of 'dole out' interventions is also seen as a concern. Some stakeholders noted that this limits the development of genuine behavior change among community members. For instance, while the LNCs are aware of the importance of minimum acceptable diet, this is not fully translated to behavior change among the target populations.

Nevertheless, there are still essential nutrition programs that are perceived to be impactful in the community. The establishment of the ILHZ with robust referral system and systematic facility-based deliveries improved nutrition-sensitive outcomes on WASH, especially in GIDAs. The 'Buntis Congress' is believed to contribute to the betterment of nutrition outcomes of pregnant women and newborns. Additionally, the provision of technical assistance and supervision by provincial nutrition officers and core team, especially during program implementation review for local health officers are believed to provide positive impact on the formulation of LNAPs. Technical assistance such as helping local NAOs and health officers to clearly define the target beneficiaries (e.g., pregnant women, children, youth) who could mostly benefit from the LNAPs.

Due to high-risk of armed conflicts in the investigated provinces, health and nutrition workers believe that effective delivery of health and nutrition programs in the area should be supported by the government military personnel, especially in GIDAs. Moreover, there is also a concern on the need of proper documentation of these nutrition innovations.

Objective 2. Policy environment and operationalization of the integrated service delivery network for F1KD

The policy proposal and approval process for the ISDN for F1KD was already initiated, however there are still many programmatic and implementation components that need to be ironed out. The two-way referral system by the entire provincial health system already exists, however this was severely impacted by the COVID-19 pandemic. The existing referral systems has three components: 1) provision of health and nutrition services by existing service network providers (i.e., Plan International aids mothers and children during family development sessions (FDS) and F1KD); 2) improvement on the deployment of health human resource, supported by LCEs; and 3) involvement of community health and nutrition workers: barangay nutrition scholars (BNS) and barangay health workers (BHWs), together with midwives, doctors, and secondary and tertiary hospitals.

Provision of health and nutrition services

There is a perception among local NAOs and HEPOs that not all nutrition and F1KD services are effective. Currently, very few proportions of municipalities have a well-developed LNAP, with only Calbayog City having a functional inter-agency LNC, and only five municipalities (e.g., Calbayog City, Tarangan, Gandara, San Jose de Buan, and Sta. Margarita) having a full-time NAO.

Despite these critical planning and human resource challenges, plans to fully launch the F1KD program in Samar province is set in 2021 with supporting necessary policies and guidelines, as well as the working monitoring and evaluation system for the program at the municipal and barangay levels. A provincial nutrition action plan (PNAP) was prepared in 2020 which is to be implemented in 2021. This was planned to be launched together with the poverty alleviation plan which considered the local malnutrition data in the province. The provincial nutrition action plan sets out nutrition-specific and nutrition-sensitive strategies which include Serbisyo Caravan, a local project that brings government services to far-flung barangays. The Serbisyo Caravan is conducted every week covering three to four barangays. The delivery of Serbisyo Caravan is spearheaded by the provincial government with the support from the military, especially during the COVID-19 pandemic. It was perceived that such military support was needed during the COVID-19 pandemic because there was fear across the community that nurses and other health workers were the carriers of SARS-CoV-12. This impacted the delivery of the services and the community participation.

Improvement on the deployment of health human resource

A sit-down session with presidents of the Sangguniang Kabataan is envisaged to consider the participation of youth and other navigators in the implementation of the F1KD program. Navigators are to be paid with an honorarium and will be provided with tools, gadgets, and allowance for mobile device. Concerns on the limitations on the budget allocation for the hiring of more nutrition technical staff and the creation of a plantilla NAO is given serious consideration by Governor Tan, with the concern brought forward to the Department of Interior and Local Government (DILG) and Department of Budget and Management (DBM). Since the regularization and appointment of technical nutrition staff could take a while due to government procedures, Governor Tan is also planning to deliver an incentives program to motivate and provide support to local community nutrition workers, especially those who are implementing best nutrition practices both at the municipal and barangay levels.

Involvement of community health and nutrition workers

The province of Samar is proactive in nurturing cross-sectoral partnership. There is a strong partnership with the province of Samar and development organizations. Exiting partnerships with UNICEF, ZFF, and Plan International (PI) have been initiated and are fostered through a two-way and mutual relationship. These partnerships are managed by the provincial health officer and the PNAO. Multi-sectoral collaboration is also integrated in this partnership since there is a direct engagement with Department of Social Welfare and Development (DSWD), Department of Agriculture (DA), DepEd, DOH, and NNC, depending on the nature of the project. However, some challenges are being experienced in fostering this level of relationship with international and national stakeholders. There are concerns that the provision of services by UNICEF and PI does not cover the needed assistance. As a result, the provincial government had to implement the same projects in other LGUs. Limited budget and consistent and sustained commitment of local stakeholders is also a major area of concern as these disrupt the delivery of the projects.

Objective 3. Policy, resource support for and practices on F1KD at the regional level

The policy landscape that provides support and resources in implementing F1KD program is an amalgamation of various issuance and guidelines from different agencies. These policies are also implemented by different sub-national agencies. For example, the DOH is the one in-charged with the implementation of RA 11148 and its implementing rules and regulations (IRR), specifically on the use of the RUTF. A memorandum circular was also released by DOH with regards to the use of milk

formula and the widespread promotion of exclusive breastfeeding among infants and facility-based birth among pregnant mothers. NNC on the other hand issued a policy for the adoption of nutrition cluster in times of disasters, and a general policy for the adoption of the Philippine Plan of Action for Nutrition (PPAN) 2017-2022. DSWD implements policies that are related to children in day care centers, cash and livelihood assistance, and supplementary feeding. Lastly, DepEd provides policies that are related to school children, sanitation facilities in schools, and participation in gardening activities in school grounds.

Most of these policies identify the remits and the functions of the sub-national government agencies. For example, RA 11148 provides for the provision of technical assistance, micronutrient supplementation, and vaccination by DOH. It also provides for the allocation of various commodities needed to implement F1KD programs from DOH to LGUs (e.g., provincial, municipal, city). However, concerns on the usability of some vitamin supplements were shared as a major concern since these commodities commonly reach the LGUs near their expiry date. Similar with DOH, NNC also delivers technical assistance and capacity building in the provinces through training programs. Nutrition promotional and educational materials are also provided. LGU stakeholders form direct relationship with NNC that helps in facilitating the requests of these materials. Other agencies that provide direct services are DSWD for the provision of budget for the implementation of supplementary feeding program in day care centers; DA for the provision of seeds and seedlings used for gardening and food production; DepEd for the rollout of the deworming program; Commission on Population (PopCom) for family planning services; DILG for the dissemination of national and regional nutrition policies; and National Economic Development Authority (NEDA) for the technical assistance on LGU planning.

There were no specific practices that have been identified as significant by the respondents. There is a perception that F1KD interventions have not been very effective in resolving the health and nutritional problem of the province. Misconceptions and conflicting beliefs about the existence and implementation of some health and nutrition policies seems to be evidence among senior health and nutrition officers in the province – provincial health officer (PHO), PNAO, HEPO. It was mentioned that the provincial government does not have existing policies on F1KD implementation and the service delivery network. However, other respondents have shared that executive orders on F1KD were issued by Governor Tan, especially on appropriate funds and branding of F1KD program in the province (i.e., Tatak Tangkad).

Despite these, local nutrition workers are still pushing for a more focused F1KD program implementation by putting more emphasis on correcting misconceptions about some nutritional problems (i.e., child stunting is mainly due to parental genes). A three-point agenda was identified to make F1KD program implementation robust. These include: 1) hiring a full-time local NAO; 2) ensuring a fully functional LNC; and 3) formulating a comprehensive LNAP with corresponding budget. Stakeholders have mentioned that there is a need for a comprehensive LNAP that is integrated into the AIP since this is the main basis for nutrition program implementation. The plan should include the development of a sustained, functional, and reliable F1KD referral system and ISDN. For these changes to be done, some stakeholders thought that re-organizing the LNC and the inclusion of marginalized group is necessary, as well as focusing on establishing a working monitoring and evaluation system of all health nutrition programs implemented in the province.

Objective 4. Communication strategies, institutional arrangements for dissemination and diffusion of knowledge products, learnings, and insights across different levels of F1KD implementation

Primary communication strategies include assemblies and BANDILO – a local information dissemination initiative. The HEPO and PNAO expressed their desire to tweak these strategies to encourage the participation of mothers. However, the provincial government currently lacks the skills to come up with appropriate materials. As a result, these campaigns and promotional strategies are not done regularly. Now, they are looking into innovating their existing communication strategies and have since partnered with UNICEF to institutionalize their communication strategies.

Advocacy materials used are primarily on F1KD program. These materials focus on explaining the F1KD program, data, and the impact of stunting on children. The main goal of developing these educational materials is to help the target audience fully understand their role in addressing nutrition challenges. These promotional materials are also provided down to the barangay level, however, the need for a more in-depth and contextualized communication and education at this level is critical. Moreover, there is no participation from the community in the production of these information, education, and communication (IEC) materials since these came from DOH Central Office. These tools help facilitate the successful achievement of results of interventions such as facility-based births and exclusive breastfeeding. The posters, counselling sessions during pre-natal check-ups, and monitoring and following-up of the BHWs even in GIDAs were deemed effective.

Strong and robust interpersonal communication between the community and local nutrition workers are conducted. Local social welfare and development officers (SWDOs) are in-charge of conducting educational work with parent-leaders through Parent Education Sessions (PES). Uptake and result of nutrition interventions on families and children are also evaluated during FDS. There is, however, a challenge encountered on projecting and sharing the information in English. Hence, most IEC materials are translated in their local language (i.e., Waray). Nutrition champions are also identified to motivate nutrition workers on implementing needed nutrition interventions in the province. The local mayor of Paranas was identified as one.

The provincial government also supports and augments capacity building activities such as ‘Idol Ko Si Nanay’, resulting to harmonization of concepts about MCHN. They trained frontliners, health workers at the local level. For example, a forum of the top 10 most malnourished municipalities was convened to inform them of their status. They created a synchronized action plan with clearly delineated tasks for LGUs and a slogan: A ‘Yes to Samar’ Movement was also launched to develop a pride of place among Samarnons and as a message of hope and oneness among the Samar population.

Despite the implementation of learning interventions, no behavior change communication (BCC) strategies have been in place. This might be because of the unclear and unknown definition of BCC strategies. There is also perceived limited re-organization and functionality of LNCs resulting to limited collaboration with sub-national agencies (e.g., DOH, DSWD, DA, and other sectoral bodies) that could support improvement, governance, and implementation of F1KD communication strategies. As Governor Tan iterated, the ‘Balay ni Alfie’ Project was not meant only as a proof of concept of development project but also meant to demonstrate robust collaboration with sectoral stakeholders and pooling of government resources as a driving force to address the nutritional problem in the province.

Objective 5. Capacity for an integrative program management, both strategic and operational at various levels

In July 2019, ZFF introduced a Nutrition Roadmap which the respondents took to be the nutrition action scorecard being referred to. It is described to be a roadmap for nutrition governance used as a reference to determine what can be implemented for a certain period. It resulted for the issuance of an executive order providing for the creation of the expanded provincial nutrition committee (PNC). The nutrition action scorecard contains key areas such as including the accreditation of health facilities (graded from red to yellow based on performance). However, the scorecard was seen to be tedious which became a major complication on usage and implementation among unorganized LNCs.

Health and nutrition are priority focus areas by Governor Tan as demonstrated by his commitment and in-depth understanding about the nutritional problem and the need for comprehensive solutions. Governor Tan advocated and invested in educating LCEs so that they can have full appreciation and commitment to resolving health and nutritional problems in their respective areas, starting with the establishment and re-organization of a functional LNC. Many LGUs appreciate the importance and value of health and nutrition programs and the positive impact it provides to community stakeholders. LGUs of Daram, Paranas, and San Jose de Buan have prioritized health and nutrition in their governance and administration measures, however, provincial nutrition workers still emphasized on the need for further advocate measures on nutrition particular mobilizing communities and conveying people's role in generating positive nutrition outcomes.

Some senior nutrition stakeholders in the province considers that an interagency LNC is non-existent in Samar, with some sharing that the Calbayog City Nutrition Committee as the only functional committee in the province. There was also a major concern on the formulation of PNAP. The development of this plan, as well as the F1KD implementation plan had limited inclusivity since it was only the PNAO who formulated the plans submitted for inclusion in the annual investment plan (AIP) of the provincial government. There is also a need to integrate health and nutrition in the provincial disaster risk reduction and management plan. A sum of Php100,000,000 was allocated for nutrition in 2021 under the governor's office. This allocation covers the budget for nutrition-specific and nutrition-related products, information, among others, that were not implemented in 2020 and was re-allocated for COVID-19 response.

Provincial nutrition workers put premium on the development of nutrition workers' capacities for health and nutrition. The PHO has attended numerous training and development sessions with DOH and NNC. The HEPO/PNAO has been also mentored by DOH and NNC on Nutrition Program Management (NPM) Training. This developed the HEPO/PNAO's confidence in planning and implementing nutrition programs and monitoring tools. Perhaps one of the most important is the training on the newly developed the Monitoring and Evaluation of Local Level Plan Implementation (MELLPI) Pro – an evaluation tool used by NNC as a reference for identifying effectiveness, efficiency, and support needed by LGUs in the delivery of nutrition services. Through this tool, the province can identify gaps in capacity building or policy for nutrition, as well as identifying needed resources, target beneficiaries, capacity buildings, and advocacy measures to ensure holistic nutrition delivery down to the barangay level. Another capacity building program attended by the PHO is the BLT, where they learned about how to deal and work with different people and stakeholders, as well as mental models. The training improved skills and capacity in identifying effective strategies for nutrition and in identifying and developing a menu of nutrition strategies that they can choose from. Further, the training gave the PHO confidence in citing ownership and co-ownership of nutrition problems and their respective solutions.

Objective 6. Mechanisms to integrate F1KD and align at various levels

Guided by the concept of a whole-of-government approach, Governor Tan's flagship project – 'Balay ni Alfie' is used as a framework for the province's nutrition improvement that they intend to replicate. However, implementation of such flagship program is limited due to the lack of a coordinating mechanism for F1KD program across LGUs in the province. Key nutrition stakeholders in the province recognize that a coordinating mechanism should be within the remit of the PNC under the PNAO and governor. This would mean following the same structure of many nutrition offices at municipal level where coordination is done through and between BNSs and MNAOs. However, the development of this structure at provincial level is limited by the weak convergence of nutrition services and limited tools for monitoring and evaluating the implementation of various nutrition interventions implemented in the province. Currently, the province is highly dependent on national surveys such as the NNS and Field Health Services Information System (FHSIS). Although there is an established F1KD monitoring and evaluation plan and framework, this still requires further improvement, particularly its usability among local nutrition volunteers (i.e., BNS).

Municipal level baseline assessment: San Jose de Buan, Pagsanghan, and Tarangan

In this section, we dicussed the implementation of nutrition services and F1KD strategies from three selected municipalities: San Jose de Buan, Pagsanghan, and Tarangan.

San Jose De Buan

Effectiveness, relevance, and sustainability of current F1KD interventions

Interviewed stakeholders mentioned that problems on maternal health and nutrition (e.g., low birthweight among newborns, stunting, and wasting among children) persist in the municipality. This is compounded by the problem on teenage pregnancy. Poverty is also big problem because most households are living under the poverty line, with majority of them coming from farming families.

As a response, routine nutrition services such as supplementary feeding, facility-based deliveries, micronutrient supplementation, family planning sessions, newborn screening, prenatal checkups, construction of water facilities and toilets, distribution of toilets, construction of handwashing facilities, seedling distribution, among others are implemented in the community. Other programs and services include regular clean-up drives in all barangays, barangay visits from RHU staff, child protection and welfare programs, health station construction, road development, and livelihood trainings.

A specific example of this is the 'Kapit Kamay Para Kay Nanay' program that takes a collaborative approach to preventing maternal deaths and encourage facility-based deliveries by providing psychosocial and financial support. Additionally, there are plans to take a loan from Landbank to provide Level 3 water systems across the municipality. This would resolve the issue of sanitation and hygiene of around 707 households in upland barangays who do not have toilets and lack handwashing facility.

Since the implementation of these programs, conditions have been seen to improve. In 2020, San Jose de Buan was no longer in the top 5 municipalities with high prevalence of malnutrition. Rate of maternal deaths also went down. It was perceived that the current best practices and unique innovation that contributed to the improvement of health and nutrition outcomes included family planning sessions for 4P beneficiaries, monthly check-ups, nutrition symposiums, and regular visits

from health workers in hard-to-reach places. However, there are still factors that limit further nutrition improvement in the municipality. Poor road infrastructure in upland barangays makes the delivery of health and nutrition services difficult. There are also some members of the community who are uncooperative in terms of nutrition program implementation.

Policy environment and operationalization of F1KD integrated service delivery network

The ISDN for F1KD is still unstructured and weak in the municipality. There is partnership with development partners such as ZFF, UNICEF, and World Vision, however, the movement of this partnership is still initiated more by the development partners. These NGOs provide capacity building, trainings, technical assistance, health infrastructure, and nutrition commodities (e.g., RUTF), among others. There is high risk that the delivery of these services will not be sustained once these NGOs terminate their projects in the municipality.

Policy resource and support to current practices

Similar with the provincial government, the implementation of current nutrition practices in the municipality is supported by policies on health, nutrition, social services, agriculture, and education. Supplementary and deworming programs are provided by the guidelines issued by DSWD and DepEd. Health and nutrition services (e.g., child growth monitoring, trainings, health and nutrition promotion and education, formulation of nutrition action plans, etc.) are guided by issuances from DOH and NNC. The municipality has high dependence on the nutrition commodities provided by regional government agencies.

Communication strategies and institutional arrangements for knowledge exchange

The community members are educated through FDS and regular visits by the health workers. These development sessions are commonly dominated by messages on nutrition, responsible parenthood, and gardening. There is some level of cooperation and reception among community members towards nutrition activities that motivate local officials to become active and supportive to the needs of the community in terms of communication and education. However, there are still some pockets of the community that are not swayed by positive information and education about nutrition. For instance, the benefit of vaccination is diluted in the community due to the Dengvaxia incident. As a result, it is a challenge to convince community members to get necessary vaccinations especially for children.

Mechanisms and strategic and operational capacity for integrative program management

Municipal officials are supportive in the implementation of health and nutrition interventions. The municipal mayor takes health and nutrition as a focus area and ensures that the program for health and nutrition is funded. However, the municipal nutrition committee (MNC) is partially functional and is coordinated by the MNAO. Only five members of the committee received proper training on NPM, with 90% of BNS have received basic training on nutrition.

Pagsanghan

Effectiveness, relevance, and sustainability of current F1KD interventions

There is a perceived lack of focus on maternal nutrition and most efforts go towards F1KD for children. Stunting is the most critical developmental problem for F1KD with 24% prevalence rate in 2020. There are also cases of low birth weight, wasting, and underweight which are associated with

poor maternal nutrition. Similar with other municipalities, teenage pregnancy is a problem, although rates are declining.

In terms of access to basic services, there is a need for access to clean and safe water. Most water systems are only at Level 1 (e.g., deep wells, though regularly tested for water quality) and there are no barangays that have been declared with ZOD yet. Nutritious foods are not too accessible, and most come from other municipalities. The 4Ps backyard gardening program helps augment the supply of food, but it is not sustainable. Income poverty is considered a big problem, especially for families with cases of malnutrition.

The municipality offers routine programs and services such as MCHN services, prenatal check-ups, laboratory services, counselling, labor and delivery services, newborn screening, immunization, breastfeeding support group, feeding programs, family mid-upper arm circumference (MUAC) training, Early Childhood Care and Development (ECCD) program, adolescent reproductive health youth summits and teen corners or teen clinics, water sampling, food handler seminars, toilet distribution/construction, handwashing stations construction, seed distribution, farm implements distribution, semilya and fishing equipment distribution. Moreover, nutrition counselling is given to caregivers and mothers of newborn children. Financial assistance is also given to indigent families when a child gets sick and needs to be taken to the hospital. The Pagsanghan Integrated Nutrition Act Program for the First 1000 Days (PINAPF1K) includes PPAN programs, nutrition-sensitive and nutrition-specific programs, nutrition education classes, dietary supplementation, and a stunting rehabilitation project – these are considered as the best practices and innovation of the municipality.

Due to the implementation of these health and nutrition programs, improvement on health and nutrition outcomes was achieved. Pregnant women pay more attention to the health of their newborns. They also claim to have more knowledge on how to take care of their health. Indicators for facility-based delivery have improved, as well as indicators for malnutrition among children. Current best practices include a house-to-house approach used by the health workers, posting health and nutrition information and updates on Facebook, online training, and cooking demonstrations of nutritionally adequate foods. It was suggested that these improved outcomes can be sustained if a monitoring and evaluation system is implemented with constant follow-up of services and securing funding. These results were facilitated by the establishment of the MNC spearheaded by the municipal mayor. In turn, this helped facilitate faster delivery of the programs and active community participation which all became key factors in the achievement of the results. However, certain limitations were also identified such as the lack of a monitoring and evaluation system for the nutrition program, as well as the lack of funds and resources in the municipality. The municipality takes pride of their 'Hangyukupkop' project – a stunting rehabilitation project where an affluent family 'adopts' a stunted child and provides for the child's needs until they recover.

Policy environment and operationalization of F1KD integrated service delivery network

There is no ISDN set up in the municipality. However, there is a referral system within the IHLZ. Emergency patients with SAM or those with complications are referred to the Gandara District Hospital, Calbayog District Hospital, or the Samar Provincial Hospital. Final referral is to the Eastern Visayas Medical Center in Tacloban City, Leyte. The RHU is encouraged to treat patients with SAM in the municipality because of transportation problems. Some families are also afraid to go to hospitals for the fear of contracting COVID-19. Vulnerable groups are reached through home visits or online consultations.

A municipal ordinance on F1KD was enacted in 2019. This went through consultation with LGU offices and agencies, meeting of the municipal health board led by council leader on health, municipal health officer (MHO), and municipal social welfare and development officer (MSWDO). The implementation of this ordinance started in 2020 with a plan that the F1KD would be integrated into the AIP by 2021. In addition, there is a strong support from development partners (e.g., UNICEDF, ZFF) with regards to the implementation of the ordinance and plan related to nutrition.

Policy resource and support to current practices

Current health and nutrition interventions implemented in the municipality of Pagsanghan are also supported by policies on health, nutrition, social services, agriculture, and education. These policies are issued, implemented, and disseminated from national to regional government agencies, and are translated in the municipality. Vaccination, nutrition commodities, and technical assistance on health are provided by DOH. NNC provides technical assistance for the formulation of the LNAP. DSWD guides and support the implementation of supplementary feeding program as well as the identification of 4P beneficiaries. Livelihood programs, seed distribution, animal dispersal, and provision of harvest facilities are augmented by DA.

LGU stakeholders shared that additional support would be needed, especially on funding allocation since the income and budget of the municipality for nutrition is relatively small. Hence, there is high reliance on the services downloaded by national and sub-national government agencies. Aside from this, there is a need for stronger collaboration between local and regional agencies for the implementation of F1KD program.

Communication strategies and institutional arrangements for knowledge exchange

Updates, IECs materials, and infographics about nutrition are shared via the MNC's Facebook account. 'Idol Ko Si Nanay', a program on maternal health and nutrition are also conducted where an open forum is implemented after the program to allow for questions from the community members to be addressed. The MNAO/HEPO makes use of the radio system in the municipality for educational purposes which has a good reach across barangays. Buntis Congress and nutrition education classes are also spearheaded by the BNS.

Key messages disseminated in the promotional and education materials include information about the nutrition programs, the definition and importance of F1KD, services that mothers can and should avail to ensure their health and the health of their children, advice on what to do if they encounter trouble with breastfeeding, time management for other activities. Trainings are also provided and spearheaded by MNAO/HEPO at the barangay level. There are existing mechanisms used to provide services to the barangay. For instance, multiple phases of consultations are conducted to determine which services do certain barangay needs that the RHU/MNAO can provide.

Despite this plethora of health and nutrition promotion activities, key nutrition workers shared concerns that the community has not change significantly in terms of their behavior towards health and nutrition. Community members are now more curious about health and nutrition, however, there are still some individuals who do not participate in the activities. There are improvements on the capacity and motivation of BNS to do their roles which complements that evolution of the F1KD program in becoming a significant intervention in the municipality.

Mechanisms and strategic and operational capacity for integrative program management

There is a certain level of appreciation, understanding, and commitment from LGU officials towards the value and the need for improving health and nutrition outcomes in the municipality. Full support

from the LCE and other LGU officials is ensured to trickle down to barangay level with approved ordinance. This strategic and operational capacity is a result of an organized and functioning MNC. The MNC, coordinated by a highly motivated MNAO/HEPO has a mechanism for coordination and meets quarterly. The scope of the MNC considers other sectors in the municipality with an established nutrition surveillance activity (i.e., mothers are trained on the use of MUAC).

Tarangan

Effectiveness, relevance, and sustainability of current F1KD interventions

Due to COVID-19 pandemic, some mothers have not been able to access birthing facilities to deliver their newborns. In 2020, the prevalence of teenage pregnancies was at 10%, higher than the target prevalence rate of 5%. The prevalence of low birth weight among newborns and stunting is high. Wasting and underweight is below the borderline. Around 75% of households have access to potable water, and there is a lack of water sources in the municipality aside from deep wells. Only five out of 41 barangays have been declared ZOD by DOH. The mayor himself has pursued efforts to have all backyard piggeries moved from residential areas to address sanitation problems.

Quality nutritious foods are available in the neighboring Pagsanghan local market. However, local production is not continuous because of typhoons. A limited variety of vegetables is available in the municipality. Many households are engaged in farming and fishing activities and are considered socioeconomically deprived. The area is typhoon prone which affects the livelihood and income sources of the population.

Regular routine programs such as feeding programs, micronutrients supplementation for new mothers and children, regular growth monitoring, immunization, prenatal care, newborn screening kits, administering of RUTF, and breastfeeding advocacies are implemented in the municipality. The municipality purchases and distributes nutrition package kits for malnourished children, and birthing kits for pregnant women and newborn children. They also provide incentives for women who deliver in birthing facilities.

The municipal agriculture officer (MAO) provides vegetable seedlings and training on organic vegetable production. In 2021, support on mushroom and lettuce production, egg production, and vegetarian food processing programs were provided. While the MSWDO provides day care services, learning materials on nutrition, family support program, nutrition education for parents, pre-marriage counseling, and home management sessions. Other nutrition-sensitive programs include SALINTUBIG, ZOD campaign, the construction of waste containment areas, construction and improvement of recycling facilities, provision of toilet bowls, and the construction of eco-friendly comfort rooms in barangays.

As a result of these strategies, stunting was reported to have decreased from 21% in 2010 to 17% in the year 2020. However, various limiting factors for achieving program results still exist such as the inadequacy of income across poor population, unsustained food production, and inadequacy of active case finding for children with SAM and MAM. Current practices that resulted in better nutrition include backyard gardening with seeds provided by LGU and monitored by 4P coordinators, as well as the implementation of ‘Pakbet Kada Bahay’ or the provision of mixed vegetables commonly used in a Filipino dish. This is supported by a local ordinance on Green Revolution to promote backyard gardening and ensuring food in every home. Every January, all barangays are visited for growth, vaccination, deworming, and nutrient supplementation of children. Health and nutrition congress also contributed to nutrition improvements in many barangays.

Policy environment and operationalization of F1KD integrated service delivery network

The municipality has established the Inter-Barangay Health Cooperation which is a system where barangays are clustered together to create a streamline referral system and for ease of distributing services. A target client list is used to ensure that vulnerable and disadvantaged groups have access to nutrition programs and services.

A municipal ordinance on F1KD or the 'Mag-Nanay Act' sponsored by the council leader on health was adopted from RA 11148. However, the implementation was side-tracked due to the COVID-19 pandemic. A technical working group was formed in 2021 to draft implementation guidelines of the said ordinance. Green Revolution was also issued as a municipal ordinance that mandates family backyard gardens to include malunggay, sitaw, petsay, okra, etc. Other local policies that support the implementation of health and nutrition services are: Resolution No.11-189 to strengthen the First 1000 Days Program and the Milk Code – a policy that regulates the marketing of formula milk and promotes that exclusive consumption of breastfeeding.

Lack of funding, resources (e.g., fuel for vehicles), and the lack of participation from some community members limit the implementation of the programs. These issues are resolved mainly through proper and regular communication. The MHO expressed the need to create and innovate new programs aside from the routine programs already being offered.

There is strong support given by developmental partners (e.g., Plan International, World Vision, UNICEF). These partners enable better service delivery by providing trainings and other resources. However, a challenge encountered with this partnership is the limited coverage of service delivery. To augment the gap in coverage, the municipality taking initiative to cover for the areas that Plan International is not willing to work with them. However, in areas with a Plan International presence, communities are willing to work and are supportive when they hear that the program is in partnership with the NGO.

Policy resource and support to current practices

The implementation of current nutrition practices in the municipality is supported by policies on health, nutrition, social services, agriculture, and education. Exclusive breastfeeding and the management of children with SAM are supported by guidelines issued by DOH and NNC. Supplementary feeding program and seed distribution are guided by polices from DSWD and DA, respectively.

In terms of support to current practices, the municipality receives support from different government agencies. For instance, DOH provides support for the implementation of nutrition promotion activities, capacity-building for volunteer health workers, and provision of nutrition commodities (e.g, RUTF). Similarly, NNC extend supports on the provision of training and IEC materials. Together with DOH, NNC guides regular growth monitoring of children and mothers in the community. There is a need for more trainings from NNC and more funding from DOH in terms of repackaging and distribution of RUTF for distribution to children and mothers.

DSWD provides funding and monitoring support for the implementation of supplementary feeding program. Additionally, DA provides training for farming and fishing and distributes seeds, seedlings, and cuttings. There is also support provided by DA on livestock distribution.

Communication strategies and institutional arrangements for knowledge exchange

Information dissemination on nutrition and F1KD is done through house visits; FDS for 4Ps beneficiaries, in partnership with the MSWDO; and nutrition education during Children's, Women's, Nutrition Month celebrations. Parent sessions are also held before supplementary feeding in day care centers with cooking demonstrations for nutritious foods in all barangays. Information on nutrition is disseminated through leaflets, booklets, pamphlets, and updates are also sent out through social media or Facebook posts. Community health and nutrition workers are also trained on management of SAM and MAM. An orientation on Nutrition in Emergencies (NiE) was conducted with MSWDO and MDRRMO. In 2021, the municipality integrated capacity development in the barangay disaster risk reduction management council (BDRRMC) on NIE with the support from World Vision. Key nutrition messages include the importance of nutritious food, how to plant seedlings, and prepare food for the family.

There is an increased participation in backyard gardening programs that spans beyond 4P beneficiaries. Mothers have become more knowledgeable on how to take care of their children. Some members of the community take initiative to ask the MAO for seeds. Many barangays allotted a budget for nutrition and sanitation and waste management. An estimate of 5% of each barangay's GAD fund is used for nutrition services/activities.

However, the limited mobility due to COVID-19 pandemic, especially to and from coastal barangays affects the reception and adherence to improve and positive attitude towards health and nutrition. There is also lack of space for gardening. As a response, households were encouraged to garden in containers. The municipality also coordinates with schools to partner with barangays and households for their 'Gulayan sa Barangay. Another issue is the limited budget for barangays to meet the requirements of the health and nutrition programs being implemented.

Mechanisms and strategic and operational capacity for integrative program management

Key nutrition stakeholders are familiar with the nutrition action scorecard and how it is being used to draft nutrition and health plans. They noted that it makes it easy to check their scores and see how their programs are being implemented. However, data accuracy remains a concern.

F1KD ordinance has been approved by the local council and mayor with budget allocated in the AIP. The LNC is partially functional and was only organized in 2018. The meetings of the committee are integrated in other inter-agency meetings which could demonstrate lack of focus and use of nutrition lens in discussions. The LNAP is prepared by an inter-agency committee and supported by a municipal resolution for its local adoption. The plan has a budget of Php6.3 million for all nutrition-related activities from all offices and units of the local government. Moreover, the MNC does not conduct monitoring of nutrition program implementation monitoring and review every quarter. There is a need to strengthen barangay level nutrition committees.

The department of nutrition under the mayor's office has an established coordination system and has a wide municipal scope covering 41 barangays and NGO partners. The MNAO coordinates this system of mechanism. Through the MNC, joint meetings with other LGU inter-agency committees are conducted every quarter to expand its members. There is no monitoring in place for this convergence. There is a perception among stakeholders that robust surveillance of F1KD activities is possible because programs are integrated at the barangay level. However, there is a need for capacity building to see this through.

Province of Northern Samar

Objective 1. Current F1KD intervention using standard development effectiveness criteria of relevance/appropriateness, results-orientation, innovation, and sustainability/replicability

Developmental problems and general nutrition service delivery

Like Samar province, the province of Northern Samar also experiences societal and developmental problems that have negative impacts on the generation of better health and nutrition outcomes. Although there is high prevalence of mothers practicing exclusive breastfeeding, (88.4%, PNAP, 2019), the province still has high infant malnutrition because of difficulty in promoting and adhering to prenatal care. There is also increasing prevalence of teenage pregnancy, aggravated by the pandemic. The prevalence rate of stunting among children aged 0-59 months is at 16.71%, while wasting is at 4.19%, and underweight children is at 7%.

The lack of a steady supply of water sources and potable water is a severe problem in Northern Samar. The province mountainous and the plains are easily flooded due to frequent typhoons. Streams are the best sources of water, which requires a lot of planning and spending. There is no implementation of ZOD, because many residents do not own the land their houses are built on and they are only taking temporary housing. Governor Edwin Marino Ongchuan encouraged the Department of Agrarian Reform (DAR) to expedite their work on land titling because this will not only improve people's living condition but will also contribute to improving nutrition by increasing not only gardening activities but also sanitation practices.

Poverty incidence in the province is still an issue and this has major impact on health and nutrition improvement. There is also a problem on food accessibility in the province. Pork, fish, eggs, poultry, vegetables, and fruits are not easily available in most communities across the province, especially when residents can only go to the market later in the day. Most vegetables and fruits come from Davao and Baguio. Fishing has not been a lucrative business because local consumption is fed through the products of neighboring provinces. While most communities are dependent on farming, this has not been any more profitable for farmers because the construction of infrastructures like road networks and irrigation systems has been slow.

The COVID-19 pandemic has greatly affected health and nutrition service delivery. The halting of trainings on governance, leadership, and preparatory trainings for the implementation of F1KD were affected. Local insurgency also affects the delivery of health and nutrition services as well as the construction of access roads and other infrastructures. Local mayors have been trying to solve this by involving the police and military in bringing the government close to the people. Moreover, internet access, which has proven to be quite essential during the pandemic, is also limited in the province.

Nutrition-related programs on supplementation, information, and agriculture

There is strong commitment to deliver basic health and nutrition services to community members by Governor Ongchuan by making sure that all government workers and local officials are targeting the same goal as far as governance is involved. By initiating the Kauswagan Caravan, Governor Ongchuan made sure that the government is brought closer to the people. Both national and provincial agencies deliver their services directly to barangays while immersing themselves to the local community context. This is done in partnership with the PHO through community deep dives and mini lectures.

The public information office (PIO) also investigates circulating education materials on nutrition and existing nutrition programs aside from materials provided by the national government. Example of these is the development of education materials to promote the importance of exclusive breastfeeding for the first six months of the newborn's life.

Micronutrient supplementation is also provided; however, distribution is challenging due to lack of community participation and infrastructure. The local health offices are trying to minimize the impact of these logistical problems by collaborating with the social welfare department for the distribution of commodities and services. In Northern Samar the nutrition program is within the remit of the local DSWD. During the COVID-19 pandemic, aid was given to families with a ratio of 50% canned goods and 50% vegetables specifically sourced from their communities. This aimed to provide food support.

Specifically, the municipality of Catubig has an ongoing program for gardening called Bahay Kubo. This is initiated and supervised by government scholars to improve nutrition and introduce both community responsibility and bridging leadership to their youth. However, there is a lack of activities to encourage caregivers to develop gardens for family consumption, with crops such as banana, papaya, and other root crops.

Limited health and nutrition human resource

The multi-agency PNC of Northern Samar is composed of committed and dedicated members coming from both the public and private spheres of society. The regional offices of the government agencies are also responsible and accountable with their duties towards the nutrition programs of the province through the support, assistance, and service they provided. Supply of nutrition commodities and other kinds of assistance are in a form of educational materials, medicines, and supplements needed. The PNAO has established a strong partnership with the municipal and barangay leaders and health workers.

However, there are no plantilla items for nutritionists in most LGUs. Most positions related to nutrition are add-on jobs given to nurses or midwives, who are provided with a monthly honorarium of circa Php1,000-1,500 for their efforts. Appointment to these positions (e.g., NAO, HEPO, BNS, BHW) is often political. This is seen to be the biggest deterrent to the implementation of the nutrition programs across the province.

Previously, the PNAO had a department of its own with the Provincial Social Welfare and Development Office (PSWDO). The PNAO is given Salary Grade 24, however, it dwindled into a cooking team with the nutritionists reduced to being cooks for the office of the governor. Instead of developing the nutrition programs, the governor dissolved the office for provincial nutritionist and transferred the office to a desk at the PHO. The governor also appointed a staff to single-handedly take over a plethora of nutrition programs for the whole province with Salary Grade 15 at the start, which was only upgraded to Salary Grade 18 after 20 years. In addition, the PNAO was also given few job-order and contractual employees.

Objective 2. Policy environment and operationalization of the integrated service delivery network for F1KD

The operationalization of the ISDN for F1KD and general nutrition services in the province is motivated by involvement and partnership with various international and national developmental organizations. These organizations provide several health and nutrition services for the provinces in the form of capacity building and health and nutrition human resource.

Involvement of and partnership with health and nutrition stakeholders

The provincial government has a strong partnership with various development organizations such as ZFF, Plan International, Social Action Centre of the Roman Catholic Church, UNICEF, World Vision, the Doña Mercedes Zobel de Ayala Foundation, and Ateneo de Manila University. The current collaboration with ZFF provides for the leadership trainings of nutrition governance as well as the introduction of the nutrition roadmap. Ateneo de Manila University also augmented their provincial health team with counterparts to the Doctors to the Barrio Program of DOH.

These partnerships support the province in profiling the service delivery network for their health programs and the adoption of a local universal healthcare policy.

Objective 4. Communication strategies, institutional arrangements for dissemination and diffusion of knowledge products, learnings, and insights across different levels of F1KD implementation

One of the main responsibilities of the PIO is to circulate education materials on nutrition and existing nutrition programs in addition to the materials provided by the national government. A complete explanation on the importance of exclusive breastfeeding for the first six months to the newborn's life is one of the information and education materials that the PIO has developed.

There is a perception that poorer communities in the provinces are increasingly becoming depressed and frustrated. This results to poor motivation to innovate and be creative in solving daily challenges. This lack of motivation is aggravated by the benefits provided through the 4Ps program. For example, while the DA do not have effective seeds distribution program in the province, such program is not sustainable because if not prodded to plant the next crop, 4P beneficiaries would rather wait for the subsidy than exert effort in growing crops. Some stakeholders believe that this lack of motivation and poor attitude towards generating community food supply sat behind the context that the province is prone to typhoons. Aside from dispirited farming communities, the provinces also suffer from a disheartened fishing community.

Objective 5. Capacity for an integrative program management, both strategic and operational at various levels

The province of Northern Samar is faced with various policy and human resources issues related to the implementation of general nutrition and F1KD services. The province needs a pivotal change in its health and nutrition working teams, policy environment, and leadership to better its nutrition outcomes.

The province finished its PNAP in September 2020 and integrated it into the Provincial Development Plan (PDP) 2019-2025. PNAP 2020 was implemented by January 2021. Infant malnutrition has been recognized as a serious problem in the province. However, the F1KD nutrition program is yet to be implemented, and there are certain difficulties regarding nutrition program implementation.

The estimated budget for the three broad projects identified in the PNAP: Nutrition-Sensitive Interventions, Nutrition-Specific Interventions, Enabling Mechanism is Php1.2 million. These broad projects are composed of 12 specific interventions. These include: 1) Philippine Integrated Management of Acute Malnutrition (PIMAM); 2) Maternal, Newborn, Infant, and Young Child Feeding; 3) Micronutrient Supplementation; 3) National Nutrition Program for Behavior Change; 4) National Dietary Supplementation Program; 5) Overweight and Obesity Management and Prevention; 6) Mandatory Food Fortification and Universal Salt Iodization; 7) Nutrition in

Emergencies; 8) Nutrition-Sensitive Projects; 9) Mobilization of Local Government Units for Nutrition Outcomes; 10) Policy Development for Food and Nutrition; 11) Strengthened Management Support to the PPAN; and 12) Establishment of Malnutrition Rehabilitation Wards in District Hospitals. However, the COVID-19 pandemic has put the implementation of the plan on hold because of the need to reorganize human resources to address the implementation of pandemic-related measures and interventions (i.e., social distancing policy). The pandemic also cancelled meetings, trainings, and travel plans necessary to carry out the nutrition programs.

At the provincial level, politics does not seem to be a problem with respect to the nutrition program. The governor prioritizes and put a thrust in implementing health and nutrition programs. The governor has also the personality to rally all the municipal mayors with his inclusive, sincere, and competent approach to governance. Further, there are LCEs that are not only sensitive to nutrition issues and the need for strategic interventions; they are also competent and skilled with dealing the issues. Despite the COVID-19 pandemic, the governor sustained the work of the PNC as well as the Sangguniang Panlalawigan. They were able to approve the PNAP as well as the adoption of the Universal Health Care (UHC) Law and its IRR. All these policy measures will be adopted in the municipal level.

However, sustainability of the nutrition program is deemed to be affected by the forthcoming 2022 elections. Moreover, sustainability issue is also attributed to the lack of a dedicated PNO and other human resources needed to pursue the nutritional goals. At present, the PNO is a desk in the PHO, with support from casual and job order staff, including those who are also working with other health-related projects in the provincial government. This organization of the nutrition office is also similar with the case in other municipalities in the province. This limited staffing negatively impacts their engagements to do campaigns and attend trainings. With the PNAO going to retire in 2020, there is a risk of having inadequate personnel with enough training to assume the responsibility of a lead nutritionist. Further to this lack of human resource, there are also issues with respect to the work of and the incentives for the BHWs. In addition, the HEPO is also tasked with non-health promotion tasks, while the responsibility of health promotion is given to health program coordinators. Given these limitations, the governor has taken on the responsibility for promoting nutrition education by assigning the PIO to come up with communication strategies and packages in their local language (i.e., Waray).

The Case of Zamboanga Peninsula Region

Four participants for the KII represented sub-national government agencies of DOH, DSWD, DA, and NNC. The respondents for the interviews were aware of the developmental problems related to the implementation of F1KD in Zamboanga Peninsula or Region 9. One of the major developmental challenges in the region is the high incidence of poverty. Zamboanga Peninsula has some of the poorest provinces in the country and these include the provinces of Zamboanga del Sur and Zamboanga del Norte.

In terms of nutrition, the region is severely challenged by problems on maternal and child undernutrition, low coverage on quality maternal care, and poor adherence to exclusive breastfeeding. The implementation of interventions to ensure full protection for the first 1000 days of a child is also challenged by low birthweight among infants associated with malnourished pregnant women and unwanted pregnancies, resulting to premature deliveries. Although levels of stunting, wasting, and underweight continually decreased in the past two years, prevalence rates of these types of malnutrition are still considered high relative to standard indicators. Stunting is associated with poor prenatal practices, late initiation of breastfeeding at birth, inappropriate timing for introduction of complementary foods, inadequate micronutrient supplementation, and low adherence to immunization. Wasting is seen as a problem due to unavailability of high-quality nutritious food among poor families, and poor health and nutrition knowledge and practices among indigent families. While nutritious food is available in the local markets, this is becoming more expensive relative to the purchasing power of poor families in the region.

Poor maternal health and nutrition is associated with low adherence to prenatal visits among pregnant mothers and non-compliance in taking micronutrient supplements (i.e., iron-folic acid). The prevalence of teenage pregnancies is also decreasing; however, the current rate (4.7%) is still higher than the national performance standard of less than 4%.

These problems on malnutrition are compounded by problems on water supply, poor sanitation, and hygiene. There is low performance to access to safe water and sanitary toilets. Only 61% of households have access to water, while 60% have access to sanitary toilets. Many barangays, especially those in GIDAs have no potable and safe water supply.

Objective 1. Current F1KD interventions using standard development effectiveness criteria of relevance/appropriateness, results-orientation, innovation, and sustainability/replicability

Relevance and appropriateness of nutrition interventions

The implementation of F1KD spearheaded by DOH regional office is institutionalized at local level thru different program units of the Family Health Unit: maternal health, safe motherhood, immunization, and child health. There are holistic F1KD interventions covering maternal health and nutrition from pre-pregnancy to pregnancy; pregnancy tracking and referral to health facility for adequate prenatal care, dietary supplementation, and immunization of pregnant women, against tetanus and diphtheria; safe child delivery; care for infants 0-6 months old and young children 6-59 months old by ensuring that children received exclusive breastfeeding, immunization, complementary feeding, continuous dietary supplementation, and integrated management of childhood illnesses (IMCI). In collaboration with international and local development partners (e.g., KOICA, UNICEF, World Vision, Hellen Keller, ZFF, DOH-CHD, and NNC Region 9), the F1KD program was piloted in five municipalities in Zamboanga del Norte: Siayan, Sindangan, Leon Postigo, Godod, and Jose Galman.

Maternal and child health

Services to promote adolescent reproductive health are provided mainly by DOH-CHD and NNC. Knowledge and important information are provided to adolescents on maternal, newborn, infant and child health and nutrition in schools, peer education, and family life education sessions. As a counterpart intervention. LGUs in the region also conduct pregnancy tracking mostly among adolescents.

The regional office of NNC provides technical assistance to LGUs on nutrition program implementation especially the recently launched Tutok Kainan Dietary Supplementation Program. Tutok Kainan is a 90-day dietary supplementation program for at-risk pregnant women composed of Nutribun (fortified bread), fortified rice, and cooked nutritious food. NNC also help pregnant women in improving their understanding on the importance and benefits of MCHN, especially the importance of giving birth in health facilities. Facility-based delivery is promoted by DOH via the establishment of Basic Emergency Maternal Obstetric Newborn Care (BEMONC), training health workers on safe delivery, micronutrient supplementation (e.g., iron-folic acid, calcium), health education, pregnancy tracking, prenatal care, immunization and deworming for pregnant women, oral health for mothers, essential intrapartum care under Mother Baby Friendly Initiative (MBFI), dietary supplementation for pregnant women, initiated breastfeeding, and exclusive and continuous breastfeeding. To complement and increase coverage of these regional initiatives, LGUs in Zamboanga del Norte also provide similar interventions.

Aside from the provision of basic nutrition commodities and services for mothers and children, NNC Region Office 9 also spearheads and provides support in upskilling local health and nutrition workers (e.g., BNS, NAO, D/CNPC) on proper growth monitoring of infants and children and overall nutrition assessment. This series of trainings is complemented by a national educational campaign – Idol Ko Si Nanay – that promotes proper childcare and rearing practices by embedding health and nutrition measures from the Milk Code.

Interviewed stakeholders believe that the nutrition interventions implemented at the local level help in the prevention of different types of malnutrition. Nutrition information coupled with the provision of RUTF and ready to use supplementary food (RUSF) for cases of SAM and MAM enable them to reduce prevalence of stunting, wasting, and underweight among children. OPT or the regular growth monitoring activities also allow them to determine the nutritional status of 0-59-months old children. Postpartum women are also given with vitamin A capsules within one month after delivery to increase vitamin A concentration in their breastmilk as well as the vitamin A status of their breastfed children.

Other health-related programs implemented in the region are the oral health program spearheaded by DOH for pregnant women and children. The DSWD also coordinates with DOH on health and nutrition service provision to 4P beneficiaries such as immunization and deworming services, health check-ups, dietary supplementation.

Overall, the nutrition program resulted in less children getting sick. And the F1KD results in a healthy and well-nourished mother giving birth to a healthy baby, improved health, and nutritional status among 0-23 months old children. F1KD in times of emergency also help sustain good health and nutrition among pregnant and 0-23 months old children even during times of disasters.

Water, sanitation, and proper hygiene

Unsafe drinking water and unsafe food preparation lead to bacterial infections, diarrhea, ill health, and poor nutrition status. The DOH in collaboration with DILG implements SALINTUBIG for the provision of potable water supply in the communities. DOH and NNC also advocate for the observance of proper sanitation and proper hygiene across households to access clean and safe water. The province of Zamboanga del Norte also complements the SALINTUBIG project by constructing water reservoir in the barangays. This includes chlorination and disinfection of water sources, environmental sanitation, and other water development and environmental sanitation initiatives.

DOH also implements programs on WASH and ZOD. These include the provision of toilet bowls, deworming of school children and pregnant women, campaigns on environmental sanitation and proper hygiene. DOH and NNC also encourage LNCs to involve LGU sanitary inspectors who handle water, environment, and sanitation including toilet facilities which is already covered by the LGU health office. To complement this, the DSWD also implement its KALAHI-CIDSS program that install water system and sanitation and hygiene facilities in communities. DA also promotes biogas technology for animal waste management to ensure that sources of drinking water are clean, safe, and not polluted with animal farm wastes. The community is also trained in proper disposal of materials for meat processing and proper handling of food and cleanliness of food preparation areas.

To complement the efforts of sub-national government agencies, LGU provide water-sealed toilet bowls and intensify the campaign for ZOD and environmental sanitation. The ZOD program has been largely through the initiative of the barangays, with some are making arrangements with recipient to share cost of installation that they can afford. Some barangays offer cement while requiring beneficiaries to take care of other building materials. Others have other arrangements depending on the barangay leaders.

Nutrition-sensitive interventions on agriculture, fisheries, and social development

The DA provides food production support and livelihood assistance to ensure adequate nutritious food in the market. However, even if food is available in the market, community members still do not have enough purchasing power to access food. Hence, the DA focused on food production in backyards and support income generating projects such as small animal dispersal (e.g., swine, goats, chicken), rice or corn by-products, and handicraft making. These are provided with counterpart from LGUs and other households. The support provided by DA includes provision of seeds for vegetable gardens, training of LGU agri-technicians, women's groups, and IPs. Lectures on food and nutrition, hygiene and sanitation, and food preparation are provided to caregivers and mothers to ensure good food quality. Additionally, DA also provides production loan with no interest (i.e., Php20,000) to farmers in coordination with the Landbank of the Philippines.

In coordination with DepEd, DA implements the Gulayan sa Paaralan and train teachers and school children on vegetable production, provide free vegetable seeds, saplings of malunggay, and other fruit trees to start their own backyard gardens. Produce from these backyard gardens are sources of food and additional income source. DSWD also coordinates with DA and DAR for the implementation of backyard gardening projects of 4P beneficiaries.

Through the Bureau of Fisheries and Aquatic Resources (BFAR), fishing gears and nets are also provided to fisherfolk families with malnourished children. Moreover, DTI and DOLE also provide employment and livelihood programs and micro enterprises while DSWD extends support to the province through the Sustainable Livelihood Program (SLP) and Self Employment Assistance para sa Kaunlaran (SEA-K) Program. These programs support micro and small enterprises of 4P beneficiaries.

As a counterpart to the initiatives of regional government agencies, the province of Zamboanga del Norte also implements livelihood assistance through the Enhanced Gasang Bahandianon sa Umahan (EGBU) by providing fishing boats and gears, seeds, seedling, equipment for growing coconut, durian, coffee, mangosteen, and corn.

Other innovative nutrition programs

Several nutrition-centered innovations were implemented to help improve the nutritional outcomes of the women and children in the province. Most of these innovations focus on providing health and social services to women and children.

In 2017, Zamboanga City government initiated a program that provides dietary supplementation for pregnant women in addition to the existing micronutrient supplementation of newborn and infants, specifically those who are beneficiaries of the 4Ps program. The dietary supplementation program is supported by NGOs such as the International Christian Ministry by providing free food commodities such as RUTF and food packs.

The city government also supported the DOH Region 9 Human Milk Bank where women donate human milk to be given to children in hospitals (i.e., Zamboanga General Hospital) and during emergency situations. The promotion of exclusive breastfeeding in Zamboanga City was also strengthened during this period. The DOH together with the Zamboanga City Health Office conducted weekly visits to the different barangays to conduct mothers' classes, breastfeeding education sessions, and milk letting activity. Bottes of donated milk were sent to the Human Milk Bank, processed, and pasteurized, and were given to neonates in intensive care units of hospitals. In Salog, Zamboanga del Norte, the local government also provides one egg per day to all pregnant women.

To motivate and support pregnant and lactating women adhere to exclusive breastfeeding and other F1KD-related interventions, a group of BNS interchangeably stay in hospital to encourage mothers to breastfeed and counsel mothers on breastfeeding (Leche Materna Program). In other municipalities, mothers are motivated to adhere to F1KD interventions through an incentive and recognition system such as the Search for Ulirang F1KD na Ina ng Aurora and the Gawad Nutri Aktibo Awards for nutrition advocates in Zamboanga del Sur.

Other innovative health and nutrition interventions identified by the respondents were the annual Buntis Congress at municipal and barangay levels; NSOA which is managed by the nutrition offices of Dipolog City and Siayan; and the backyard gardening and livestock raising. All of which are replicable and scalable to cover more target beneficiaries.

Sustaining health and nutrition programs through partnerships, monitoring, and evaluation

Respondents noted that sustainability of improved health and nutrition outcomes could be achieved with regular monitoring, adequate funding, and partnership with local and international stakeholders.

Strong collaboration and partnerships are crucial in the implementation of the Regional Plan of Action on Nutrition (RPAN) for 2017-2022. The RPAN outlines multi-sectoral collaboration and serves as the framework for the functionality of such. Lead agencies in managing the RPAN implementation are DOH-CHD 9 and NNC Region 9. The implementation of the RPAN is within the remit of the Regional Nutrition Anti-Hunger Committee (RNAHC). The RNAHC is chaired by DOH 9 RD with NNC Region 9 serves as the secretariat. Various government line agencies (e.g., DOH, NNC, DA, DSWD, DILG, BFAR, DepEd, DTI, DOLE, etc.) are members of RNAHC and their roles are mainly for providing technical and financial assistance, as well as staff support. Relatively, theRNAHC could be considered as an active, functional nutrition committee with quarterly meetings and established communication protocols (e.g., virtual meetings, network groups).

A similar inter-agency partnership also exists at the local level – provincial. The partnership with the DOH and PNO have been established. Other development partners come and go depending on the number of years they provide technical assistance to the province. Stakeholders who have impact and influence on health and nutrition programs are also invited to join as member of the committee in developing partnerships for nutrition programs. Partners included units and offices from the provincial government (e.g., health, nutrition, planning and development, disaster risk reduction, agriculture, veterinary, etc.). National agencies were also invited and included such as DOH, DILG, TESDA, DOST. There is also representation from NGOs (e.g., Hellen Keller, UNICEF, World Vision, and ZFF). These partners provide technical assistance and capacity building on nutrition of health workers and allied health workers. DOH-CHD provides micronutrient supplements, RUTF, RUSF, weighing scales, height boards, among others. Aside from technical assistance, capacity building, and provision of commodities, partners actively participate in planning, budgeting, and implementation of health and nutrition programs. There is also representation from religious organizations.

The established network and relationship between nutrition partners are also faced with some challenges. These include limited availability of members and other partners for meetings and conflict in scheduling meetings. Due to the pandemic, there was also limited opportunity for face-to-face communication. Virtual meetings was not always possible due to the limited internet connection in the region. Despite these challenges, the functionality of the nutrition network is facilitated by their shared and common goal towards better health and nutrition outcomes for mothers and children; working as a team; and good working and harmonious relationship. It is worth mentioning that Region 9 has regional cooperation that could be an enabling platform for sustainability and replication.

In terms of health and nutrition program monitoring, the MELLPI Pro is used in inter-agency monitoring and evaluation. NNC 9 leads the Regional Nutrition Evaluation Team (RNET), who are mostly members of the RNC/RNAHC, monitors policy and program implementation at all local government levels. However, this monitoring and evaluation activity has been impacted by limited time and availability of members; lack of opportunity to travel; and limited technical support required during virtual meetings (i.e., access to computers).

Leverage points and limiting factors to implementation

A respondent from DOH-CHD Region 9 suggested a decreasing trend in malnutrition in the region based on the recent 2018 NNS. Several factors were identified that facilitated this improvement, especially the development of the F1KD-focused RPAN for 2017-2022. Through this, the implementation of F1KD interventions that included dietary supplementation for pregnant women and the management of children with SAM and MAM, helped at improving the prevalence of stunting in Region 9. In addition, the implementation of food production, livelihood, and employment program also contributed to this improvement, although, these programs need further

intensification to improve the level of appreciation and understanding of community members towards these services.

Moreover, a representative from the field office of DSWD in Region 9 cited that improvement of nutritional status of at least 80% of all DSWD target beneficiaries in the region was associated with the implementation of LGU mobilization, especially in providing counterpart financial support in subsidizing daycare workers for the handling and distribution of emergency kits and food packs. This level of support from the LCE enabled the provision of full staff complement for the implementation of DSWD-based programs such as the 4Ps, KALAHI, and SLP. There is also an existing information management and reporting system across the board that help in monitoring and evaluation of these programs.

This decrease in malnutrition prevalence and receipt of recognitions (e.g., Seal of Good Governance, Child-Friendly LGU, Nutrition Awards) were associated with several implementation factors as well. Respondents shared that support from LCEs in terms of financing and policy was critical to this success. Policies on nutrition (e.g., resolution, ordinances, plans) are important documents that ensure commitment and institutionalization of health and nutrition programs. In most cases, these policies ensure financial commitment to these programs. For example, integration of nutrition in the AIPs of LGUs helped secured budget used to implement interventions that helped improved nutrition outcomes. This support was also translated to increase in health and nutrition human resources that resulted to a more dedicated and committed nutrition works. This eventually resulted to functional networks and harmonious relationship between members of local nutrition committees at regional and local levels. Support from regional government agencies (i.e., NNC), either through technical assistance or financial incentives were also highlighted. For example, the honorarium received by nutrition volunteers, in addition to survivorship assistance, medical assistance, awards, collaterals, and other freebies with nutrition messages contributed to the generation of improved nutrition outcomes. Even though community nutrition work is not a tenured job in most cases, these incentives and benefits keep these nutrition workers dedicated and committed to their work. Another form of support highlighted by the respondents is the mutual partnership of the LCE and community leaders, reflected as a form of mutual funding of health and nutrition program (e.g., cost of feeding program).

Despite strong support and commitment on nutrition by local leaders, a wide-ranging challenge are still experienced by interviewed stakeholders regarding the implementation of some health and nutrition programs. There is a perceived lack of understanding about nutrition programs by LCEs and this results to lack of support for nutrition initiatives. Some local governments also have varying funding that goes towards the pot for nutrition, despite the release of a DILG memorandum suggesting for a proportion of LGU budget to be allocated for nutrition (i.e., DILG Memorandum Circular 2018-42). This perceived lack of understanding is also projected among members of LNCs who the ones should be advocating, mobilizing resources, and realizing the implementation of health and nutrition services in their communities. Most, if not all LNCs are not functional. Moreover, the fast turn-over of BNS removed due to political affiliation halts the implementation of most nutrition programs at barangay level.

The lack of understanding on the importance of nutrition is also translated to low level of support towards the implementation of F1KD. Some LNAPs do not include F1KD, as well as the local development plans and the AIP. As a result, some F1KD interventions are not budgeted. There is dependency on DOH funding nutrition programs related to F1KD such as IYCF and micronutrient supplementation. This belief translates to lack of accountability and responsibility from local governments in owning health and nutrition programs. Ideally, nutrition programs should be co-shared between the local government and DOH (i.e., 60:40 ratio). Due to this, some F1KD-related programs are impacted. For instance, there is limited to low pregnancy tracking in the area due to

lack of training among health and nutrition workers who could do tracking and referral of pregnant women to RHUs for proper and appropriate natal care. There is a suggestion that health and nutrition workers should be trained on the Harmonized Maternal Infant and Young Child Health and Nutrition.

Some respondents also shared that even if nutrition services of the government are available, these are hardly accessed by the target population because most of them live in GIDAs. Budget on transportation and other logistical requirement is also limited to bring these services in those areas. This challenge on accessibility was also exacerbated by the COVID-19 pandemic related lockdowns that limited the mobilization and delivery of health and nutrition services causing more limited travel and delivery coverage.

Impact of nutrition program and existing collaborations on nutrition outcomes

Due to the detrimental impacts of stunting on physical and brain development of children, DOH has intensified its efforts on stunting. While maternal and child undernutrition are high compared to WHO standards and based on available data for 2020, NNC Region 9 respondents noted the decreasing prevalence of stunting, wasting, and undernutrition in the region and the provinces. The PHO noted that outcomes on wasting (4.79% to 3.89%), stunting (10.98% to 9.29%), and underweight (6.07% to 5.61%) have improved. These continually decreased between 2018 and 2020. However, there seems to be a concern on the agreement between malnutrition data from FNRI and the data collected at the local level through OPT Plus.

Respondents believe that the strategies implemented in the local level had helped in achieving these nutrition outcomes. The collaborative and converged efforts from various health and nutrition stakeholders also contributed to this improvement, especially when programs are adequately funded. Vocal support from LCEs towards health and nutrition programs coupled with organized efforts motivate community health and nutrition volunteers.

From the standpoint of local respondents, the greatest problem related to FIKD is the quality of antenatal care. Most mothers do not go to the health center during the first trimester. Adherence to cultural practices (e.g., baylans, hilot) is still highly relied upon according to community members. The lack of prenatal care and late iron-folic acid supplementation have been associated with neonatal fatalities with congenital anomalies.

Objective 2: Policy environment and operationalization of the integrated service delivery network for F1KD

Respondents were aware of the different policies and their respective organizational mandate. Specifically, regional and provincial level respondents cited RA 11148 as the national policy mandating the implementation of F1KD programs.

Local stakeholders also understand that the implementation of health and nutrition policies at local level is spearheaded by national government agencies. For example, the DOH, as the lead agency in F1KD implementation, issues advisories on F1KD implementation (e.g., PIMAM, micronutrient supplementation). From 2018 to 2019, the DOH oriented provincial LCEs on RA 11148 and disseminated the IRR to the LGUs. Monitoring of F1KD implementation has been integrated with other sectors and agencies thru RNAHC.

The establishment and functionality of the F1KD ISDN have been supported by an RNAHC Resolution providing for the adoption of the ECCD F1K Program in the region. Local executive orders were also issued in some local governments that provide for the creation of technical assistance; and

monitoring and evaluation framework for ECCD F1KD areas. The local policies were developed with the participation of members of the Regional Technical Working Group (RTWG) and RNAHC. Concerned marginalized or disadvantaged sectors and groups were also consulted during the monitoring and evaluation activities. The issuances were adopted in all LGUs in the region specifically in the KOICA areas in Zamboanga del Norte (e.g., Leon Postigo, Siayan, Sindangan and Godod) and ECCD F1KD sites in Zamboanga del Sur (e.g., Aurora, Mahayag, and Kumalarang). DSWD Region 9 also disseminated relevant national policies to LGUs including F1KD. Given that the regional social welfare office has regional focal persons for nutrition-specific and nutrition-sensitive programs, the agency has strong capability in monitoring such programs through its municipal links.

There is a strong advocacy from DOH and NNC to issue local policies in support of F1KD among local governments. One success story is securing support from the local government of Zamboanga del Norte where a provincial ordinance on the F1KD implementation and its corresponding budget was on its second reading. The provincial health and nutrition offices participated in developing the ordinance and are supposed to manage policy implementation.

Existing ordinance related to nutrition is the creation of the PNC and the development of a comprehensive monitoring system for nutrition. Hence, issuance of policies on the F1KD implementation at the provincial level was crucial.

Other policies were also issued at the provincial level that support the institutionalization of F1KD. For instance, the municipalities of Jose Dalman and Leon Postigo, with the assistance from Hellen Keller International (HKI), formulated implementation guidelines supporting the integration of F1KD in the LGU's LNAPs and AIPs. It also identified key health and nutrition workers (e.g., midwives, nurses, etc.) who will be responsible for the implementation of the guidelines.

Key challenges in nutrition policy implementation

There were a couple of issues and challenges encountered in the policy development process. Severe delays in the committee hearings for the approval of the F1KD ordinance was experienced despite constant follow-up with the Sangguniang Panglalawigan, particularly the SP on Health and Nutrition. Lack of time commitment from relevant stakeholders and limited nutrition staff were highlighted as the main concern. There is still inadequate human resource despite the DOH augmenting deployed nurses, nutritionist-dietitians, and public health assistants for data management. Further, the LGUs lacked funds for which the NNC provided budget to fully implement the F1KD program. There were LCEs who prioritized infrastructure over F1KD despite consistent and persistent advocacy to LGUs for investing in nutrition based on RA 11148.

Integrated service delivery and referral in nutrition

Under the implementation of UHC, the ISDN in Zamboanga del Norte will focus generally on health and not specific to F1KD. However, the network for healthcare and nutrition providers have been already established in different LGUs such as the Philippine Integrated Management of Acute Malnutrition (PIMAM). Regionally, there is also an integrated health and nutrition referral system particularly related to PIMAM. DOH has existing MOAs with health facilities in the region and with LGUs (e.g., BEMONC, RHUs). However, none was specific to F1KD. DOH-CHD 9 implemented PIMAM for SAM, MAM, nutrition program for pregnant women and MCHN programs. Through the regionally established PIMAM, children with SAM are identified by BHWs and referred to RHU for out-patient care. If they had complications or need therapeutic care, they are sent to hospitals such as the medical centers in Zamboanga del Sur, Zamboanga del Norte, Sibugay Provincial Hospital, and the DOH-retained regional hospitals. Moreover, based on pregnancy tracking of LGUs, pregnant women are referred to midwives and nurses for consultation, health and nutrition interventions such as

prenatal, iron-folic, and calcium supplementation. To augment the human resources, the DOH deployed 16 nutritionists-dietitians in GIDAs of Zamboanga del Norte and Sibugay. They were tasked to assist LGUs implement nutrition programs, provide nutrition services, and bring nutrition commodities to the LGUs.

With RNAHC's functionality, regional government offices and other concerned sectors contributed to the ISDN. The roles and functions of each member agency were defined such as those related to referral, rehabilitation, monitoring of SAM and MAM cases. Reporting of cases was clarified, serving as the basis for forecasting and allocation of logistics and supplies in the entire region.

The establishment of ISDN seems to be sporadically and loosely implemented in the region. To strengthen this, there is a need to develop the capability and to expand opportunities of health and nutrition workers. There is a need to train the DOH's newly hired and deployed nutritionists-dietitians specifically on the conduct of OPT Plus, organization of LNCs, and other technical aspects of nutrition program implementation. There is also a need to strengthen and to improve the provision of technical assistance and capacity development for community health and nutrition workers and NAOs at all levels, to support the work of DOH-deployed nutritionist-dietitians. Moreover, existing networks of civil and professional organizations in the region should be utilized such as the Nutritionist-Dietitians Association of the Philippines (NDAP) and the Zamboanga Market Stall Owners. Moreover, there is a need to create opportunities for health and nutrition workers by setting up in-patient therapeutic facilities in hospitals that would cater to complicated cases of malnutrition.

At the provincial level, guidelines on the ISDN for F1KD is more established. RHUs and Level 1/2 hospitals manage the ISDN and referral in nutrition. The Provincial Governor's Office through the PNO was involved in the ISDN and referral in nutrition. Nutrition services are integrated in the health care system delivery of the province as well as in the referral of cases specifically SAM from the Outpatient Therapeutic Care (OTC) at the RHUs and to the Inpatient Therapeutic Care (ITC) at Zamboanga del Norte Medical Center. Health and nutrition services are readily available for pregnant and 0–23 months old children like prenatal, immunization, weighing, and others in all health facilities. The PNO managed the ISDN and referral in nutrition. The number and location of hospitals, rural health clinics, barangay health stations (BHS) providing ISDN include 27 RHUs, 2 city health offices, 317 BHS, and 12 government hospitals.

Services provided by the network of providers on nutrition and F1KD include monthly weighing, food supplementation, micronutrient supplementation, referral of high-risk cases, and treatment and management for nutritionally-at-risk mothers. These are provided by the local nutrition action office, local agriculture office, and local social welfare and development office. Partners or members of the ISDN include national government agencies (e.g., DOH, NNC, TESDA, DOST), and NGOs. Local governments collaborated with DOH and other concerned sectors to oversee the ISDN and referral in nutrition program. However, it was noted that the integrated health and nutrition referral system at the regional level was not always followed since the logistics and management system were not in place. The distribution of commodities was tracked but supply level province-wide was not monitored. The PHO ensured that management processes were taken care of to ensure delivery of services including distribution of commodities.

Key challenges in the establishment of service delivery network for nutrition

Several issues and challenges were identified related to the establishment of the ISDN for nutrition. Inadequate skilled health and nutrition human resources calls for the creation of permanent dedicated NAO positions in LGU that would oversee the establishment and operationalization of the ISDN. Most NAOs are not permanent and are only designated. Community health and nutrition

workers should also be properly compensated since they take responsibility of the bulk of the nutrition-related work in the community level.

Concerns on the logistics and supply of health and nutrition commodities requires for the improvement of forecasting and planning for the needs of LGUs in terms of health and nutrition commodities that would enable them to allocate adequate budget. This requires the integration of needed nutrition commodities in the LNAP. There are also geographical constraints on the delivery of local services. GIDAs are hard to reach areas, however, people in these communities are also the most deprived in terms of socioeconomic and health status. A more targeted approach for service delivery is needed in this context. For instance, the municipality of Polanco in Zamboanga del Norte conducts monthly community caravan where local health, nutrition, and social services are brought to the barangays. This strategy could be adapted in other GIDAs. Moreover, access to RHUs and hospitals is a classic example of inaccessibility issue among people living in GIDAs. This could be resolved by strengthening coordination and communication with PNAO and regular follow-up of cases at all levels.

The level of participation of target beneficiaries is also low in some areas. Hence, mobilization of and engagement with community and tribal leader is imperative to influence high intake of health and nutrition services among IP communities. Consultation with vulnerable and disadvantaged groups on how they can better access health and nutrition services could also help in improving service delivery for the said population.

Service delivery in times of emergencies and disasters is even more challenging as compared with normal times. During emergencies, health and nutrition services are made available in evacuation centers led by DOH-HEMS. DOH issues health and nutrition guidelines and advisories during health emergencies that guides local implementers on how to provide needed service during a specific phase of emergency. For instance, during COVID-19 pandemic which resulted to community lockdowns and quarantines, DOH-CHD 9 continued delivery of health and nutrition services, including advisories on strengthened promotion of breastfeeding and micronutrient supplementation in the context of constrained and limited mobility. Nutrition workers served as frontliners, deployed in check points, and act as COVID-19 contact tracers.

NNC 9 conducted inventory of LGUs with organized and functional nutrition clusters to ensure that the inter-agency members of the LNCs also included the local DRRMOs and that the agencies performed their roles and functions as prescribed in RA 10121 on NIE. For organized and functional LNCs, NNC 9 provided technical assistance to respond and provide nutrition services during calamities and disasters. For those not yet organized, NNC 9 advocated and trained LGUs on NIE. For those organized but not functional, they were oriented to re-organize nutrition clusters. During quarantine periods, NNC 9 also disseminated DOH information on health protocols to all local nutrition clusters to help in preventing the spread of COVID-19. NNC 9 shared COVID-19 updates and health protocols via the Nutri Eskwela daily programs of NNC radio stations in Siayan, Isabela, and Siay.

DSWD 9 also distribute nutritionally adequate food packs during emergencies and disasters. Vegetables, iodized salt, and other commodities in emergency food packs and kits were included in the regular emergency provisions. During COVID-19, DSWD 9 implemented the Social Amelioration Program (SAP), a cash subsidy program for 4P beneficiaries.

Objective 3: Policy, resource support for, and practices on F1KD at the regional level

There is high level of perceived awareness and familiarity on nutrition-related policies and guidelines among the respondents. Some policies highlighted which are relevant to F1KD are RA 11148; Expanded Maternity Leave (RA 11210); Pantawid Pamilyang Pilipino Program (RA 11310); the Expanded Exclusive Breastfeeding in the Workplace (RA 10028); and the Milk Code (EO 51).

Some government issuances also support the practice of F1KD at the regional level such as the policy on Micronutrient Supplementation (AO No. 2010-0010); Calcium Supplementation for Pregnant Women (DO No. 2016-0161); Guidelines on the Provision of Quality Antenatal Care in All Birthing Centers and Health Facilities Providing Maternity Care Services (AO No. 2016-0035); Policies and Protocol on Essential Newborn Care (AO No. 2009-0025); National Policies on Infant Young Child Feeding (AO No. 2005-0014); Mother-Baby Friendly Hospital Initiative in Health Facilities (AO No. 2017-0026); and the National Guidelines on the Management of Acute Malnutrition for Children Under 5 Years (AO No. 2015-0055).

Moreover, roles of national government agencies on policy development and implementation, as well as expectations on provided resources and augmentations were also identified as follows.

Table 5. Roles of governance agencies on general nutrition and F1KD program implementation

Regional Agencies	Roles in policy implementation	Resources provided to LGUs
DOH	Policy development and dissemination; provision of technical assistance and logistics and nutrition commodities as augmentation to LGUs (e.g., provincial, city, municipalities, barangays); capacity development; advocacy support; health promotion; recognition awards for LGUs; and monitoring and evaluation of nutrition programs	Provision of nutrition commodities (e.g., RUSF, RUTF, iron-folic acid supplements); support on health human resources; funding support to LGU proposals; funding for training and capacity building; funding for IEC materials
National Nutrition Council	Provision of technical assistance and reference materials; LGU mobilization; monitoring and evaluation; development, planning, and dissemination of policies	Provision of technical and IEC materials, anthropometric tools; medical and survivorship assistance, travel allowance, civil service eligibility assistance for BNS
DSWD	Implementation of 4P Program which includes health and nutrition education for families; support for sustainable livelihood; dietary supplementation; and provision of technical assistance	Provision of cash subsidies, food packs, dietary supplementation, and livelihood support
DA	Provision of technical assistance in food production and processing; livelihood support; and program monitoring and evaluation	Funds for training and RPs, seedstocks, farm inputs, farm animals, interest-free loans, technology

NNC 9 also guide LGUs in the formulation of LNAPs, including F1KD and its integration into the AIP and local development plans. For instance, in the development of LNAPs, NNC provided funds to conduct workshops, technical materials, communication allowance, among others. Moreover, the DOH and NNC have adequately assisted LGUs in F1KD; however, there were times when the supply of commodities were delayed, especially during the pandemic. DOH and NNC also assisted in the quarterly meeting with development partners thru video conferencing.

Despite the support on policy implementation and resources, respondents emphasized the need to intensify advocacy to LCEs, strengthen nutrition governance of LGUs, and create permanent plantilla positions for NAOS. Programs, projects, and activities are also needed to be harmonized thru proper coordination and collaboration with focus on F1KD implementation.

With the support on policy development and resource provision, various practices in nutrition service delivery and nutrition governance are implemented in various levels. In terms of nutrition governance, functionality of inter-agency local nutrition committees was assessed and evaluated. Gaps on health human resources and the establishment of a fully functional LNC were emphasized. Recognition system were also put in place to increase motivation of nutrition stakeholders in supporting and implementing nutrition programs. The Search for Ulirang F1K na Ina ng Aurora; the Search for Ulirang F1K na Ina ng Mahayag; Buntis Congress; ECCD-F1K Summit; and the Gawad Nutri Aktibo were among the established recognition system. The inclusion of these practices in the LNAPs and integration of nutrition programs, projects, and activities in the LGU's AIP sustain these practices.

Perhaps the most significant practices were the conduct of quarterly meetings of LNCs; federation meetings of BNS; incentivization of NAOs, nutrition coordinators, nutrition volunteers; continuous service delivery and micronutrient supplementation of pregnant women; exclusive breastfeeding; complementary feeding; and micronutrient supplementation of children. According to some provincial respondents, practices in nutrition governance that are worth sustaining include the updating and feedbacking through PNC meetings; monitoring of local government accomplishments through quarterly meetings; mobilization of BNSs; expanding of provincial livelihood assistance program; and maximizing other projects to integrate health and nutrition services. The need for adequate funding was also reiterated to strengthen and sustain F1KD activities.

Objective 4. Communication strategies, institutional arrangements for dissemination and diffusion of knowledge products, learnings, and insights across different levels on F1KD

Nutrition is a core element of DOH's Health Promotion Framework Strategy. This is reflected on the materials and guidelines for the communication plans implemented at local levels, through the DOH-CHDs. These include information and education materials, campaigns, advocacies, and public events.

Guided by health communication guidelines from DOH, DOH-CHD 9 implements communication plans for each health program; develop and disseminate IEC materials (in English and Tagalog); and does translation works of materials into more local languages such as Chavacano and Subanen.

NNC Region 9 also organize nutrition education sessions using quad-media (e.g., NSOA). The agency also develops and distributes collateral materials such as printed shirts, umbrella, mugs, button pins, twist fans, cardboard fans, face mask, etc. These are usually used during FDS for 4Ps families, pre-marriage and responsible parenthood counselling sessions, activity campaigns, etc.

At the local level, the implementation of BCC is within the remit of local program implementers such as NAOs, BNSs, BHWs, and RHU personnel. For instance, the province of Zamboanga del Norte

implements demand generation strategies to promote health and nutrition. These include advocacy activities (e.g., Buntis Congress, NSOA), FDS, distribution of health education and promotion tools and collateral materials (e.g., leaflets, brochures, tarpaulins, video shows, TV sets, etc.). Interpersonal communication interventions are also delivered such as home visits, prenatal counselling, face-to-face information for caregivers, among others. There is also a strong partnership with media (e.g., TV, radio, etc.) and this partnership facilitate the delivery of media forums and wider dissemination of key nutrition messages. NNC 9 has also strong social media presence where information on nutrition is mostly accessible.

NNC's key messages focus on the importance of F1KD, health, nutrition, sanitation, early education, psychosocial stimulation, food fortification, variation of food intake, eating the right food, investing in human resources (nutrition) is the best form of investment that promises the greatest return, etc. The DOH-CHD 9's F1KD-related messages were focused on adequate salt iodization, exclusive breastfeeding, family planning, safe motherhood and prenatal checkups, vitamin supplementation, immunization, deworming, and regular health checkups. These key messages are reflected in LGU's nutrition information campaigns on proper nutrition, health habits, sanitation and hygiene, quality prenatal care, immunization, micronutrient supplementation, breastfeeding, family planning, among others. Explicit mention of expected changed in behavior (e.g., caring for children, exclusively breastfeeding children, etc.).

The institutional arrangement at regional level was through the RNAHC chaired by the DOH, with NNC as secretariat. RNAHC meets regularly. Its members have defined roles and responsibilities. It partners with the Philippine Information Agency (PIA) for information dissemination such as weekly guesting at its Kapihan sa Zamboanga; live press briefing on health; COVID-19; heath event celebrations (e.g., Breastfeeding Month, Nutrition Month); and live streaming thru other media outlets and partners. They also partner with other NGOs (e.g., ZFF, ACF, etc.). The institutional arrangements were made with sectoral agencies across various levels of government for implementation of F1KD interventions. The commitment of partner agencies was dependent upon the mandate of their office particularly DOH, NNC, DA, DSWD, among others. The LGUs collaborated with NNC and DOH for assistance on development of key nutrition messages. DOH, NNC, and other development partners such as UNICEF led the implementation and supported F1KD at LGU level.

Provincial-level institutional arrangements were carried out through the PNC chaired by the governor and supported by PNAO/PSWDO. The focus of the PNC is to promote proper health-seeking behavior among pregnant and lactating women; exclusive breastfeeding; proper IYCF and dietary supplementation; safe water and sanitation practices; household and community food production; and family planning and reproductive health education. Based on the latest date from FNRI, the level of people's participation in nutrition program implementation was good. This was achieved through strengthened advocacy and promotion and the involvement the ZDN Federation of Parents Association in training and assisting in production of manuals.

Strategic partnership fostered by the provincial government is building relationships with community stakeholders to mobilize and empower them. There is a strong coordination mechanism between the health and nutrition sector and the indigenous people's groups in Zamboanga del Norte. This facilitates proper and appropriate communication of key health and nutrition messages. As a result, the province achieves full participation of local community during the delivery of health and nutrition services and campaigns (e.g., food supplementation, Buntis Congress, Nutrition Month celebration, nutrition education classes, etc.).

Innovative strategies on health and nutrition communication and education

Another fruitful result for this community level partnership is the implementation of NSOA in Dipolog City and Siayan in Zamboanga del Norte; and in Siay, Mahayag, and Aurora in Zamboanga del Sur. NSOA employed strategies to enable participation of vulnerable and disadvantaged groups. It had learning modules on 10 Kumainments to provide correct information on nutrition and address misconceptions. Listeners (students) were mothers and caregivers of children aged under-five years old. MNAOs acted as anchors of the radio program. While the NNC oriented the anchors and provided the technical materials. All students who completed the sessions were given graduation certificate and shirts; honor students were given radios. Those with incomplete sessions were given certificate of participation. There were barriers for the implementation of NSOA that limit the completion of sessions among the students. Some do not own a radio and would only join their neighbors, some have radio but do not have batteries. Sessions are not also replayed.

The DSWD Region 9 also spearheads FDS for 4P beneficiaries as one of the conditionalities of the program. FDS serves as the venue for 4Ps beneficiaries to enhance and acquire new skills and knowledge in responding to their parental roles and responsibilities particularly in ensuring children's health and nutrition. There were modules on responsible parenthood, health and nutrition, among others. Parents attend monthly face-to-face FDS sessions using modular packages which are anchored on selected themes for the month (e.g., Pamilyang Pinoy in September, Children's Month in November, Family Focus in December). Also implemented was the FDS on the Air and Radyo Nutrisyon for those in GIDAs. Technical resource persons are from DSWD, DA, and DOH. Compliance monitoring for this conditionality is done by local government links. This health promotion program contributed to encouraging parents to become more responsible; and community leaders to prioritize projects that would benefit poor households. LGU officials acted as resource persons in the FDS.

Challenges in implementing nutrition communication and education strategies

Wide-ranging challenges were encountered in implementing nutrition communication and education interventions. DOH has no impact assessment of health promotion interventions and no specific indicators on health promotion to gauge effectiveness of strategy. As they are in the process of developing the Health Literacy Assessment Tool for use at national, regional, and local levels; this could be an opportunity to have a well-defined and benchmarked indicator.

There is no plantilla position for HEPO in LGUs. The roles and responsibilities of HEPOs are only designated to nurses and midwives like the situation of designated NAOs in LGUs. This is sometimes aggravated by fast turn-over and transition of staff, such as when a BNS is replaced. Hence, they assumed additional workload on health promotion on top of their regular functions in health service delivery and health program management, usually compromised by the need to prioritize various activities. The issue on the limited number of staff at the local level vis-à-vis the need to implement a plethora of health communication and education programs impacts the implementation of necessary activities such as the coordination with the National Commission on Indigenous People (NCIP) for the translation of collateral materials to Chavacano and Subanen languages. There were limited actions that program managers could do in response to the numerous challenges such as conducting virtual meetings, training of LGU implementers (e.g., MNAOs, RHU staff, and BNS), etc. Development partners help in coordinating with other development partners in conducting community activities, mobilizing, and engaging local and sectoral leaders, and in following up.

Moreover, the LGUs do not have specific budget for health promotion activities (e.g., translation and reproduction of IEC materials, community events and health program launches). They were dependent on limited DOH budget which is inadequate for integrating health messages in various

program activities to implement the LGU communication plan for health and nutrition. The need for a BCC strategy for nutrition is also compromised by the lack of training of LGU staff. The establishment of health promotion units in LGUs with staff, plans, activities, budget plus the Health Promotion Committee of the LGU as part of the realization of UHC is vital to overcoming this challenge.

There is also a lack of available transportation used in community field works. During peaceful times, the people were requested to go down to nearby neutral ground to conduct health education activities and provide health services. During the COVID-19 pandemic all vehicles of the provincial government were used for COVID-19 response. This limits the mobility of provincial staff to conduct training and monitoring visits; and to deliver health and nutrition commodities.

Additionally, not all stakeholders are responsive and committed to the F1KD program and documentation of those who participate is done poorly. Poor attendance during nutrition education classes is exacerbated by mobility and mass gathering restriction due to the COVID-19 pandemic. Cultural practices and beliefs of religious groups contribute to low reception and acceptance to health services (e.g., oral polio vaccine). Some pregnant women also do not want to deliver in healthcare facilities due to the fear of contracting COVID-19.

Impact of nutrition communication and education strategies

Despite the challenges encountered in implementing health and nutrition communication and education strategies, stakeholders identified certain benefits and improvements. Some parents had better perception to health and nutrition and demonstrate positive behavioral change with good IYCF practices. Parents gained knowledge on nutritional feeding of their children, became more aware that the nutritional status of their children should be kept at the optimum levels, and improved health and nutrition practices. They ensured their child's physical wellbeing by giving the right nourishment. Parents brought their children to health facilities for health check-ups. Compliance on immunization and breastfeeding is also good.

Community leaders in barangays have also adopted, promoted, and disseminated key nutrition messages. Some provided additional budget for nutrition and supported health workers implement F1KD related interventions. Regular monthly barangay meetings of health workers and midwives are also conducted with attendance from DOH-deployed healthcare professionals. Furthermore, leaders of the municipality, city, province formulated plans integrated with nutrition programs. Some local leaders also increased budget for health and nutrition and innovated ways to improve the living standards of their constituents. They also became very supportive of health and nutrition programs, became well-versed on health, reviewed health system road maps, conferred with health and nutrition for gaps in service delivery, and met and dialogue with other LCEs. Some LCEs now appreciate nutrition and F1KD, although there was need for more advocacy.

Moreover, health providers had lesser workload and better accomplishment percentage due to improved health-seeking behavior, utilization of services, compliance to the health and nutrition advice. They were committed and motivated to implement the F1KD program.

Objective 5: Capacity for an integrative program management, both strategic and operational at various levels

The region had the capacity for an integrative program management. The nutrition action scorecard managed by the RHU midwife, was integrated in the LGU health scorecard with different nutrition-related indicators and discussed during the local health board meeting. These were usually utilized by the DOH and the DILG. LGUs could keep track of their progress in the different areas of services. It

also reflected their level of strengths and weaknesses of governance and the areas that needs improvement. The rural health midwife managed the nutrition action scorecard.

In terms of capacity to implement nutrition and F1KD programs, the regional government agencies such as DOH-CHD 9 and NNC 9 provide technical assistance to Zamboanga del Norte in crafting LNAPs and oriented LGU partners on the importance of nutrition and LNAP. LGUs are provided with templates and matrices as references and guides (including costing workbooks) to be filled out to ensure that all major nutrition programs, projects, and activities have been allocated with funds. Budgeting for LNAP was based on international revenue allotment (IRA) of LGUs, hence they adjusted their budget accordingly not based on the budget template. The F1KD could be included in the LNAP, but it needs to be advocated to LGUs. In the past, LGUs' budget for nutrition was as low Php5,000 annually, which is usually spent for Nutrition Month celebration. But with the support of LCEs, NAOs proposed projects to LCEs to address malnutrition cases. Receptive LCEs would identify and prioritize the LGU health and nutrition projects and activities. The NNC 9 reviews the LNAPs submitted by LGUs to determine if F1KD has been allocated with budget.

There is around 3,000 BNS who serve in the region with about 80% trained on Basic Course and NPM. All LGUs have been trained and equipped through series of trainings and workshops on how to integrate F1KD interventions and other nutrition-related interventions in their LNAPs and other local plans. Capacity gaps are also addressed thru provision of technical assistance from the region and consistent advocacy and lobbying of the nutrition plan/program. An inventory on the status of functionality of inter-agency nutrition committees was conducted.

Moreover, LCEs have general appreciation, understanding, and support for nutrition programs. They have organized functional LNCs and nutrition clusters. They have prepared and submitted to DOH and NNC their respective LNAPs that included F1KD and budgets. These plans are reviewed and monitored by DOH and NNC.

Challenges and facilitators

One of the challenges highlighted by the respondents is the lack of focus on F1KD interventions in LNAPs. On top of this, not all provinces in Region 9 have LNAPs due to lack of prioritization on nutrition by some local government leaders. Some respondents even indicated that they do not know the nutrition action scorecard and have not used such yet. Improvement on policies supporting the implementation of F1KD is imperative. As a response, the governor directed the conduct of the PNC's quarterly meetings for regular updating and feedbacking; implemented immediate interventions to address health and nutrition challenges; and directed municipalities to manage and monitor the nutrition performance of different barangays. However, while all the PNC members were ready and capable, not all of them were acquainted with F1KD. The F1KD became a regular agenda in the PNC's succeeding meetings.

The PNAP 2020-2022 which included plans for the implementation of the F1KD program has been approved, with activities detailed, budgeted, and integrated in the AIP. In developing the LNAPs, NNC guided the LGUs to align their LNAPs with the national and regional action plans on nutrition. Interventions at the provincial level included IYCF, Nutrition Promotion for Behavior Change, NiE, LGU mobilization and training, establishment of provincial nutrition office, and the establishment of nutri-bun center. Provincial LNAP was based on OPT Plus data and poverty indices however, LGU-specific LNAPs were not yet integrated in the PNAP.

Zamboanga del Norte allocated Php23 million for nutrition-related services. Within the PHO, the 2020 budget for nutrition program, specifically on MCHN, increased to Php1.6 million from Php1 million. The PNAO budget for operations increased to Php4.5 million from Php3 million. This includes

operations, supplementary feeding for pregnant women and children, honorarium of BNS, among others.

Human resource

The Executive Session for LCEs provided opportunity for local government leaders to gain deeper understanding of the health and nutrition status of the province and to prioritize health and nutrition challenges. Respondents noticed certain acts of leadership such as directing the monitoring of nutrition programs periodically so that health and nutrition challenges are identified early and addressed immediately.

The support staff for the PNO and PNAO are trained and mentored by the DOH-CHD 9, NNC Region 9, and UNICEF on NPM including leadership skills and nutrition governance. DOH Central Office mentored the DOH-CHD 9 staff on nutrition programs, provided training, issued, and disseminated policies and guidelines on nutrition program implementation. DOH-CHD 9 downloaded training and disseminated DOH policy issuances, manuals, and guidelines to LGUs and deployed health human resource and other health workers and partners. This process resulted in institutionalized nutrition program at LGUs including F1KD.

With DOH and PHO nutrition program, the BHWs, BNS, nurses, midwives, doctors were trained on PIMAM and IMCI. As a result, they could identify children with SAM and their needed interventions, OTC in RHUs, and ITC in hospitals. NNC 9 also mentored and provided capacity development on Basic Course for BNS, NPM, NiE, PIMAM, Growth Monitoring and Promotion with eOPT Tool workshop, Idol Ko Si Nanay, Pabasa sa Nutrition, IYCF, Family MUAC, ECCD Child Development Monitoring Checklist, etc. Learnings and competencies gained including resource-generation, prioritization, record-keeping, communication, counselling, and advocacy skills; anthropometric and nutrition assessment and monitoring, and nutritional status identification; computation of age in months, targeting and prevalence rates of malnutrition. This capacity development improved the KSA of LGUs as program implementers and as an individual. It also provided better understanding on social responsibility to impact inclusive positive change. It also added realization to local implementers that actions must be done today to generate better, healthier, well-nourished, and self-reliant generation in the future. For F1KD program implementation, nutrition governance project established nutrition-related committees, with all LNC members and nutrition stakeholders. All members contributed to positive change regardless of the size of their assistance rendered.

Health and nutrition stakeholders also highlighted skills gained from the BLT such as listening, empathy for others, self-awareness, and systematic thinking. Others mentioned that they were able to apply these skills in managing partnership and processes in connection with different stakeholders to facilitate implementation of nutrition programs. It also enabled them to embrace responsibility over a certain problem or situation, adapt as things change and to know the purpose behind every action rendered. It also fostered shared values and vision for collective action through trust-building relationships and co-creation. The program was helpful for most respondents especially in mobilizing LGUs in terms of training and strengthening LNCs. The training resulted to improved leadership roles taken by participants such as supporting interventions for nutrition improvement in their areas.

To improve the training and help participants establish effective, relevant, and sustainable nutrition governance systems, there is a need for presentations of situational analysis, making them realize their current reality, the root cause of the problem and suggest relevant solutions and lastly letting them own the problem for them to make plans out of their own resources, know their capability and know people and stakeholders who can help and extend help in solving the problem. It was also

suggested that training should include supportive supervision component to sustain program and improve data management.

Objective 6. Mechanisms to integrate F1KD and align at various levels

There was no regional committee specific to F1KD. However, the Regional Nutrition Governance Program was ongoing, led by the regional director of DOH, regional nutrition program coordinator of NNC, and with the support from DSWD. The RNAHC has only three old timer-members and has many new representatives from various agencies due to retirement, re-assignment. There was a need to rebuild the RNAHC and strengthen its team rapport.

The monitoring and evaluation system would provide evidence on F1KD and would serve basis for identifying and/or strengthening mechanisms to integrate and align F1KD at various levels. There were public health assistants at all local levels who oversee data collection and management. The inter-agency evaluation team also conducted their own evaluation using MELLPI Pro spearheaded by the NNC. In November 2020, the RNAHC members were re-oriented on MELLPI Pro. However, the RNET did not do field visits because of the COVID-19 pandemic. They only reviewed documents from LGUs.

There are multiple ways of integrating F1KD within the LGU governance and operations. In Zamboanga del Norte, the convergence for nutrition is lodged in the provincial governor's office thru the LNC. The Provincial Nutrition Governance Committee (PNGC) specific to F1KD program, headed by the governor, is composed of various sectors from PNAO/PSWDO, inter-agency representatives, provincial ZFF and UNICEF representatives. The governor required member agencies to periodically update the committee.

The coordinating mechanism on nutrition within the LGU was lodged at MHO and nutrition office. Its scope included overseeing, managing, supervising, implementing, providing technical assistance, and the reporting system channel. In terms of implementation, member agencies have their own plans on nutrition. Their plans were integrated in the LNAP. Each agency would implement their identified activities. The person and office responsible in the plan implementation were defined in the LNAP. LNC members were expected to participate in planning and implementation process.

Some municipalities and communities are not yet capacitated to engage in F1KD nutrition surveillance and have not established their own F1KD information system. The provincial government was still working on the development of its own provincial monitoring scheme of F1KD interventions. The information management system only includes OPT Plus results and other nutrition and health information that have been reported from the grassroots up to the municipal/city for consolidation. Consolidated reports were submitted to the province and to the region. The barangay and municipal LGUs has complete recording all pregnant women, 0-59 months children, and children with MAM and SAM. However, OPT data were not submitted on time, incomplete, and not reliable for use in developing LNAPs. As a response some LGUs use the Expanded NNC from the provincial level which do not have aggregation by municipalities. Moreover, LGUs could handle nutrition surveillance with internet connection and deployed PHA. However, community involvement in F1KD nutrition surveillance was still in the very early implementation stage. Community support groups, informal associations, households involved in F1KD, were supposed to be engaged by training them on family MUAC, transferring knowledge and skills through counselling sessions and nutrition education classes. Service delivery tracking and monitoring and evaluation of F1KD interventions were implemented through combined, harmonized, and coordinated efforts and activities of the PNC and the different development partners. The scope was province-wide.

Municipal level baseline assessment: Leon Postigo, Godod, and Sindangan

In this section, we discussed the implementation of nutrition services and F1KD-related interventions in three municipalities in Zamboanga del Norte: San Jose de Buan, Pagsanghan, and Tarangan.

Leon Postigo

Effectiveness, relevance, and sustainability of current F1KD interventions

About 1% of the under-five children population are cases of stunting, wasting, underweight. Although prevalence of malnutrition decreased over the past four years, latest data show that out of 2,833 0-5 years old children weighed, 126 are stunted, 78 are wasted, and 188 are underweight. Overall, prevalence rate of malnutrition is 5.32%, reduced from 7-8% rate in previous years. There is also an increasing prevalence of teenage pregnancy in the municipality, especially in IP areas. Last 2020, 14% of 432 pregnant women were teenagers. Most pregnancy cases in the municipality usually come for consultation during the third trimester which is already late. There are also parents who would prefer home delivery over facilities.

Moreover, 10-15% of households still have no safe water and sanitation. Most of these households are located in GIDAs and/or armed conflict areas. Due to this, cases of diarrhea from waterless barangays usually overwhelm district hospitals. In some highway barangays, water supply is not 24/7 and there are frequent supply interruptions. Moreover, although availability of nutritious foods is not a problem, poverty and joblessness is still prevalent especially in GIDA. Farmers have a hard time delivering products to the market as roads are largely inaccessible and there are only few farm-to-market roads.

This problem is exacerbated by low quality of nutrition intervention implemented in the municipality specifically on prenatal care, teenage pregnancy, and child health and nutrition. Pregnancy tracking, pre- and postnatal check-ups, birthing services, micronutrient supplementation, and immunization are provided although inadequate. School visits and information drive are conducted, especially among high school and Grade 6-10 school children, but this was discontinued during quarantine period. Instead, health teaching and advocacy on the prevention of teenage pregnancy was conducted after home visits. Child health and nutrition interventions are also provided such as newborn screening， OPT Plus, immunization, promotion of exclusive breastfeeding, complementary feeding, dietary supplementation, deworming, and micronutrient supplementation; however, adherence is poor.

In waterless areas, the source of water is the river and reservoirs, which are visited and chlorinated by the municipal government. Visits to waterless GIDAs are also conducted where residents were taught how to put chlorine in their water sources. With the help of the province and municipal government, two highway barangays now have 24/7 supply of water. In addition, the municipality, augmented by the province, procures sealed toilet bowls which are freely given to households with sanitation problems． There is ZOD program implemented in two barangays that resulted in decreased incidences of diarrhea.

About 80% of barangays are part of the livelihood program of the province. Under this, nine barangays established a 1-hectare communal garden. Selected households are also required to maintain backyard gardens. With the support from MAO, demonstration of communal gardening is also conducted. There is also a communal garden in the local school. Seeds and seedlings dispersal

(e.g., rice, corn, vegetables); livestock dispersal (e.g., pigs, goats, cows); as well as fingerlings are provided by the MAO. The municipality also implement supplementary feeding program in daycare centers as well as livelihood training on dressmaking, food processing, and welding.

Generally, these nutrition interventions help improve the nutritional status of mothers and children. Prevalence of stunting, underweight, wasting were reduced and respondents are hopeful that these will be reduced further. Before 2019, Leon Postigo was among the top 10 municipalities with high cases of malnutrition in the province. Currently, they rank 19 among Zamboanga del Norte's 27 municipalities.

Some nutrition interventions are deemed effective despite some problems encountered. An immediate outcome is that nutritious food is readily made available and some households would spend less of their income for food. However, although all barangays were covered by the health and nutrition program, not all households accept the benefits provided due to their religious and cultural beliefs. Water supply infrastructure still needs improvement and sanitation commodities (i.e., toilet bowls) distributed to households are still inadequate. Some population still need to value and observe proper hygiene and sanitation practices, especially in areas which are hard to access (i.e., GIDAs). The focus on F1KD contributed to improved capability of trained health and nutrition staff. They are now more equipped or have better knowledge to explain reasons for immunization, early prenatal consultation, iron folic acid supplementation, and similar nutrition interventions. Developing and disseminating unified key messages on nutrition to mothers, fathers, and other family members through counselling also contributed to positive changes, as mothers are now encouraged to take iron-folic acid supplements even if many are averse to the taste.

The implementation of nutrition interventions in the area is influenced by different factors such as the financial support for local nutrition programs by the LCE and supportive NGOs such as UNICEF and Feed the Children sponsored training for community leaders on nutrition governance. Some provide logistical support and assistance, while other create a supportive policy environment for nutrition and augment health human resources. However, despite the annual budget increase for nutrition, it is still not enough to meet the needs of other barangays. Another limiting factor is the quick turnover of LCEs and their assigned health and nutrition human resources who are usually designated and not considered a regular position. There is also limited supply of RUSF and other similar nutrition supplies for distribution. In such situations, these supplies are rationed and given only to the most needy of barangays. The geographical landscape of the area is also a problem exacerbated by armed conflicts.

Generally, all strategies and approaches were deemed sustainable. However, if LCEs and BHWs are changed after an election, orientation and training will have to be done again. The Adopt-a-Malnourished Child Project launched by the former LCE that helped mobilize and better-off residents of the municipality to sponsor malnourished children and provide for their food could also be replicated.

Policy resource and support to current practices

Respondents shared that they are not sure of or have forgotten specific policy issuances and/or memorandums on nutrition, specifically on F1KD by regional or national agencies. However, they are aware of the Magnanay Act shared by the regional DOH and NNC; DBM Memorandum Circular 2018 on LGU's 10% increase per year on nutrition budget; guidelines for feeding malnourished children; NNC memo for BNS's with travel allowances; and DepEd guidelines on supplementary feeding. Respondents also surmised that regional offices of DSWD and DA have made policy issuances for nutrition-related programs such as the supplementary feeding program and agricultural development programs.

Except for DOH and NNC, most respondents are also unsure of the role that other regional agencies play in the nutrition program. They surmised that regional offices have a hand in the consolidation of reports and logistics. The regional DOH provide supplements and augment human resources for health while the regional NNC provide other nutrition logistics, particularly when nutrition supplies are not procured by the LGU. Both regional offices channel nutrition logistics for municipalities and barangays through the provincial government. The DSWD and NNC regional offices provide funds for supplementary feeding, information materials, and allowances for BNS. Training is also provided by regional offices in coordination with the provincial and municipal LGUs.

There is no integrated health and nutrition referral system at the regional level. The network established is province-wide and nutrition is included in the referral system. Regional offices contribution to the ISDN is through the provision of training and logistics. Moreover, the logistical requirements are included in the annual operations plan of the municipality. Table 6 presents the health facility and health human resource in the municipality forming the referral system.

Table 6. Health facilities in health human resources forming the service delivery network in Leon Postigo

Health resource	Inventory
Hospitals and clinics	0 public/private hospitals and clinics in the municipality; district hospital in Siandangan is 30 minutes travel time and the provincial hospital is about 2 hours travel 1 accredited and operating birthing facility; 1 birthing facility for GIDA barangays (not accredited due to lack of ambulance and limited access roads); and 1 birthing facility which stopped operation due to problems with water supply and sanitation
RHUs and barangay health stations	1 RHU and 18 barangay health stations
Physicians	1 physician servicing around 27,314 population
Nurses	2 LGU nurses and 12 DOH augmented nurses
Midwives	5 midwives
Nutritionists	0 nutritionist as of January 2021
Medical technologists	1 DOH augmented medical technologist
Sanitary engineers and inspectors	0 sanitary engineer and 1 sanitary inspector
Barangay health workers	100 barangay health workers - 80 with honoraria from LGU and 20 volunteers from barangays
Barangay nutrition scholars	19 barangay nutrition scholars

DOH handles the overall management of logistical requirements needed to set up the ISDN for F1KD program. Central and regional offices download logistical allocations to the provinces, which in turn are allocated by the province to municipalities and municipalities to barangays. At the provincial level, there is a coordinator managing logistics needed by municipalities. At the municipal level, the MNAO manages nutrition logistics (i.e., they are responsible for procurement and allocation of nutrition supplies needed by barangays). They also do early requests and early procurement to manage stockouts. Aside from the support, NNC also provides trainings upon request. Respondents expressed satisfaction with NNC's quick response to these training requests. For the DOH, respondents deemed that the augmentation of health human resources was adequate but complained of stockout problems they encountered in 2017. There were also instances when downloaded logistics were on the brink of expiration or already expired.

Respondents included behavior change and awareness raising interventions, particularly the practice of giving key messages that inform people on the importance of good nutrition and the significance of the nutrition interventions being implemented in their communities. This is most important in dealing with cultural norms and beliefs that existed for generations. Another significant practice is

the early detection, particularly early tracking of pregnant women by BHWs who are knowledgeable of the community and are assigned accordingly to monitor particular sectors. Masterlisting of children which should be prioritized in the nutrition interventions, as well as the practice of submitting early requests for procurement of nutrition commodities had benefits on the delivery of nutrition interventions and improvement of nutrition outcomes.

Despite the support provided to the local government, some challenges are encountered by local nutrition implementers. There are concerns on the logistics management and supply chain problems of nutrition commodities downloaded to the local government. There is also a need to re-train RHU staff and BHWs since most of whom are aging and require improved proficiency on how to provide complementary feeding and nutrition counseling. Despite the support of LCEs, a third party voice to mentor them on the importance of prioritizing health and nutrition concerns of their constituents still makes a difference. DILG intervention on this matter seems to be needed. Most of these challenges are impacted by limited budget on health and nutrition programs.

Communication strategies and institutional arrangements for knowledge exchange

There are some relative success in meeting behavior change objectives for Leon Postigo. There is a perceived enhanced knowledge and actual practice among mothers, caregivers, and parents on what nutritious food to give to their children, how to do complementary feeding, and breastfeeding. For example, micronutrient supplements were initially rejected for making rice soggy and bland but this was eventually accepted after correcting some misconceptions among mothers, caregivers, and parents. The bigas-monggo complementary food also became popular among children. Additionally, there were more mothers that gave birth in the health facility and submitted their children for immunization.

Community leaders and officials also allocated or realigned their respective budgets for the implementation of the calendar monitoring method and holding of mothers classes. Meals for participants were even give and prepared by the barangay. Local leaders also supported the nutrition programs by increasing the nutrition budget and engaging in activities on nutrition. When the RHU lobbied for the Magnanay Ordinance, they were very supportive and immediately gave their approval for its enactment. It was observed that some local leaders (estimated at 10%) still lack initiative and are not open or reserved in expressing their thoughts on the F1KD program.

Moreover, healthcare providers became more equipped in delivering key messages to community members. They also became more confident in dealing with mothers. As a result, accomplishments increased as they became empowered on the proper implementation of the program. Training was provided largely to BHWs, BNS, midwives, and nurses. Leon Postigo reported that barangay captains and councilors on health sponsored and joined training activities. Most training activities are done in coordination with DOH, NNC, and NGO partners. Training activities were deemed effective as it enhance knowledge and helped improve participants' skills in counseling and program implementation, monitoring and evaluation. Knowledge cascaded by training participants to mothers resulted in beneficiaries' enhanced nutrition knowledge and capacity to identify malnutrition danger signs on their children.

Challenges encountered in implementing these communications strategies were language barriers; cultural barriers or conflict with indigenous beliefs and practices; uncooperative husbands; fake news; inaccessibility due to rough terrain and no/poor road conditions; armed conflict; lack of funds for program activities and limited budget, especially of barangays; limited health human resources; and the adverse impact of COVID-19 pandemic response on program operations. For instance, there were some barangays who were initially hesitant about the program because they had limited budget. There were also some barangays who refused to have their children immunized because it

was unacceptable to the Subanen tradition. There were instances that they were met with hostility when conducting and promoting immunization and deworming activities, with some indigenous communities threatening to behead RHU staff and BHWs and insulting them for their interventions. Fake news on vaccinations were also prevalent and impacted existing vaccination programs.

Partnership and collaboration with sectoral governing bodies supporting the implementation of F1KD program

Vertical collaboration (i.e., with regional bodies of DOH and NNC) is manifested for training and communication activities provided to provinces, municipalities, and barangays. The common practice consists of re-echoing or cascading training provided to the LGU, with the LGU in charge of gathering participants and providing for their hotel accommodations and food.

Promotional campaigns on proper health-seeking behavior, breastfeeding, IYCF, family planning, and reproductive health is largely conducted by the MHO/MNAO, with the regional DOH and/or NNC providing informational materials, updated knowledge, and logistics. The LGU usually takes care of the venue and attendance of participants. For promoting WASH and other programs. Horizontal collaboration is between the MHO-MPDC, MENRO, MSWDO, DepEd. For example, the MAO largely promotes household or community food production with the MSWDO.

People's participation is largely manifested through mothers' classes and thru counseling services. Many community leaders are mobilized. However, besides the mothers' support groups, no other mechanisms were formed. The presence of NGOs and religious groups working on nutrition and related concerns are also felt in the communities and the region provided tools to ensure participatory processes are observed in program implementation. However, social and community mobilization activities were avoided since last year, in keeping with protocol limited large gatherings. To reach out and enable participation of vulnerable and disadvantaged groups, the RHU/MNAO largely rely on BHWs from the barangay to reach out to the people.

Language is a barrier is a common problem in partnering and collaborating with other partners due to limited knowledge of LGU staff on local Subanen language. There is also an issue in accessibility. Cultural differences is also a barrier which are somewhat perceived as a form of hostility by local nutrition implementers. Tribal communities have strong belief system which is reflected in lack of adherence to health and nutrition interventions provided to them.

Operational capacity for integrative program management

There is a provincial health scorecard observed every year but it is a tool that is not focused on nutrition. They were unable to revisit this tool since then, after the BLT was derailed due to the Marawi incident and the recent death of the LCE. The percentage of malnutrition is the indicator for nutrition in the provincial scorecard.

Local government officials, especially the LCE, are committed to the nutrition program. They were introduced to the nutrition program and realize that nutrition is still an emergency in Leon Postigo. It should be noted that the mayor passed away last October 2020 and was replaced by the former vice mayor. The vice mayor position was in turn occupied by the former council lead on health and nutrition. Respondents averred that all LGU officials are approachable and committed to the F1KD program.

The number one priority of the local government is developing farm-to-market roads, which is still related to nutrition. Additionally, the budget for nutrition was never reduced, and could be considered among the top five priority concerns of the municipality. Views on nutrition are largely

shared by other local public servants in various communities. However, there are some barangays, particularly those with no prevalent malnutrition cases, who do not prioritize it as much. Since the MHO also oversees and approves local allocations for the GAD, the MHO also lobbies for the inclusion of health and nutrition in the barangay's local GAD budget.

The MNC is the inter-agency body on nutrition in Leon Postigo. It meets every quarter and can be considered functional. All barangays have a nutrition council but respondents have conflicting statements regarding its composition (inter-agency or not). The MHO said most BNCs are not well-developed and this situation is being looked into. Members of BNCs are usually the barangay captain, BNS, midwife, councilor for health and nutrition. Respondents are uncertain if all 18 barangays have a functional BNC (i.e., if these members meet and function as a council), although all concurred with the observation that these barangay nutrition stakeholders are very active whenever the RHU/MNAO conducts visits and nutrition program activities.

The inter-agency nutrition council members at the municipal and barangay levels have not received training on nutrition. Barangay captains, council on health, BHWs, BNS have acquired training on nutrition. There are 19 federated BNS in Leon Postigo, however, it is uncertain if all of them already completed basic nutrition training. There is poor monitoring of trained BNS due to the frequent turnovers of BNS and BHWs after the conduct of local elections. Moreover, village officials from GIDA barangays are not educated or are only elementary school graduates and are thus handicapped in managing local nutrition and F1KD programs.

Respondents believe that barangays are ready and capable of implementing nutrition plans and programs. However, the inter-agency nutrition council members at the municipal and barangay levels have not received training on nutrition. Trainings on nutrition attended by the MNAO are usually rolled out to BNS, so it is surmised that many have undergone recent training activities on iron-folic acid supplementation, behavior change, and other aspects of nutrition. There is a need for basic literacy training especially in GIDA barangays. Other suggested training for the BNCs is on nutrition governance and NPM. The regional and provincial nutrition agencies conduct mentoring programs during nutrition evaluations involving all MNAOs in the province. This contribute to better management of the nutrition program, and enhanced capability to prioritize health and nutrition concerns. UNICEF played a big part in the training provision which include NPM, PIMAM, and IYCF. These trainings capacitate local nutrition workers to implement better nutrition programs and services.

The provincial government makes the call for planning and provides the venue where the development of MNAPs are enhanced. The RHU and MNAO drafts the local plan and presents it to the LCE who endorses the plan for legislative approval. The PNAO is given a copy of the approved MNAP. The regional health office helps oversee and provides assistance in the provincial planning workshop. Members of the council gather in a planning workshop to review the municipal nutrition situation and sets appropriate interventions as well as the budgetary requirements. The plan and budget is then integrated in the AIP of the municipality.

National and regional nutrition action plans are somewhat adopted in the MNAP with local data used to guide needed health and nutrition interventions. However, there is no specific plan for F1KD aside from including every component of F1KD in the LNAP. Included in this plan are IYCF services; advocacy on exclusive breastfeeding; meeting and workshops with program managers, partners and barangays to strengthen maternal nutrition and overall F1KD components; complementary feeding program; establishment of nutrition support groups; micronutrient supplementation; and prenatal checkups.

The consolidated annual budget for nutrition-specific services is Php1.4 million sourced from the GAD budget and channeled to the MNAO. Other agencies have separate budget allocations for their nutrition-sensitive programs. Barangay budgetary allocations for nutrition are likewise sourced from GAD. Of the Php1.4 million budget for nutrition-specific services, around Php200,000 is for F1KD, particularly allocated for F1KD training of BHWs and BNS, as well as advocacy activity to promote exclusive breastfeeding.

Leadership roles observed from the LCE and local nutrition workers are the support to the implementation of nutrition programs reflected by strong advocacy on budget allocation and lobbying for nutrition improvement. These acts of leadership were vital for the achievement of nutrition targets. For example, the budget for the feeding program was limited but after approval of the budget increase for nutrition, this resulted in more effective and focused interventions for the malnourished children. Another act of leadership was the re-echoing of training to 19 BNS and mentoring the coordinator on feeding by the local NAO. However, nutrition is a huge program that requires a dedicated LNC and local NAO. The current MNAO-designate who also works as a nurse is challenged by the number of concerns and tasks required by the RHU. Concerns of providing adequate number of BNS to cover all areas of the municipal government was also shared. There are six highway barangays with big populations that need additional BNS. Additional budget is also needed to train and equip other barangay officials on nutrition and expand the establishment of mothers groups and youth groups.

Mechanisms to integrate F1KD and align at various levels

Coordination is done through the MNC but seems to be an out-of-focus type of coordination. There is still a need to strengthen coordination between agencies in targeting common beneficiaries of development interventions to address determinants of malnutrition. There is also convergence but only done to avoid duplication of interventions or similar programs (i.e., feeding programs are taken over by the MSWDO once RHU/MNAO children clients reach 3 years of age).

Moreover, only the local health office conduct client and service delivery tracking, monitoring and evaluation. There is no coordination with MSWDO and MAO on tracking and evaluating conditions of malnourished recipients of feeding and dispersal projects. Data on F1KD, together with other routine health and nutrition programs, is sourced at the barangay level on a monthly basis. Other supportive agencies each have their own information management systems based on their respective flagship programs. Integrated information systems at the local level are based on data required by regional offices. Manual tallying of results and accomplishments is undertaken by the barangay with reports submitted monthly to nurses and/or midwives and subsequently presented to the LCE. RHU conducts data quality checks by matching target client lists of BHS with those contained in the consolidated barangay reports.

To ensure data accuracy in forecasting and maintenance of F1KD supplies and technologies, barangay nurses or midwives get their respective supplies in the RHU. The MNAO maintains an inventory of nutrition supplies, especially supplies for immunization. Before supplies run out, oftentimes during the first quarter, the RHU undertakes advance procurement if the municipality is assigned to procure supplies. For supplies provided for by the province, regional or national DOH, the RHU waits for them to download the logistics mentioned in the municipal annual operational plan that indicates supplies needed for the year. Moreover, the nurse sits in the regular session of the barangay. Health accomplishments are presented to inform the barangay council on what needs to be prioritized in the budget. F1KD information (e.g. OPT Plus results, barangays with high prevalence of malnutrition) is also disseminated during MNC and Liga ng Barangay meetings. Data generated are used as reference for subsequent health and nutrition interventions or plans.

Godod

Effectiveness, relevance, and sustainability of current F1KD interventions

MCHN are the common problem in the municipality. Most pregnant mothers attend late prenatal check-ups and the prevalence of home deliveries is high. Although there have been no reported maternal deaths, home deliveries are still high, comprising more than half of total deliveries. A marked rise of nutritionally-at-risk pregnant women was also observed at 40%. Godod also ranked third among 25 municipalities in Zamboanga del Norte with the highest incidence of teenage pregnancies.

There is reduced incidence of low birth weight, stunting, and wasting among 0-5 years old children. Prevalence of stunting among 0-5 years old children is 13.2%, wasting is 2.69%, and underweight is 8.97%. Cases of malnourished children who are mostly from GIDAs have recovered. However, there may be unregistered infant mortalities. The MHO believes that neonatal or newborn deaths may be higher than reported, as these incidences are usually not recorded in GIDA.

There is improved access to water and sanitary toilets but there is frequent water service interruptions due to substandard pipe connections that break down regularly. As a 4th class municipality, poverty incidence remains high in Godod at 60-64%. Although supply of nutritious food is adequate, many households are still food poor or cannot afford to buy food. The COVID-19 pandemic exacerbated the poverty problem, as many people lost their jobs or were economically displaced. It was noted that their rural economy is recovering, albeit slowly, thru the LGU's agricultural and infrastructure projects.

Prenatal care, facility-based delivery, postpartum services, inclusive adolescent reproductive health services, micronutrient supplementation, health communication and education, family planning, and home visits are the common health and nutrition interventions conducted in the municipality. For maternal and child health services, newborn screening, intrapartum care, exclusive breastfeeding, immunization, growth monitoring, management of childhood illnesses, infant and young child feeding, dietary supplementation, and management of acute malnutrition are provided.

Emergency response measures, especially during the COVID-19 pandemic were also provided. There was provision of food packs and hygiene kits during emergencies. Food assistance were also given by the LGU on a regular basis during the quarantine period in addition to the availability of birthing services; prenatal and other MCHN services. Arrangements were made with mothers of monitored children to observe and bring them to the health center after a 14-day quarantine where baseline and/or follow through laboratory tests are conducted. Moreover, lectures and other similar services were limited to small groups not exceeding to 10 participants. Food provided in supplementary feeding programs were still prepared in the barangays but were brought to the children's houses.

The municipal government also put up water projects to improve the water system to Level 3 with the plan to still permanently fix broken pipes and expand the system to reach areas that are still waterless. The MHO also ensures that the water is safe for consumption by regular water analysis tests conducted by a sanitary inspector on Godod water sources. This is done at least once a year. Moreover, toilet bowls are also provided to Godod citizens and with follow-up visits to recipient households after 1-2 months to ensure that these are used for the intended purpose.

The DA's Special Area for Agricultural Development (SAAD) Program, a livelihood development program, conducted by the province covered Godod and somewhat ensured food for domestic or household consumption. The MAO also dispersed seeds, seedlings, farm animals, as well as tools and equipment for backyard gardening and communal food production in various barangays. Home-

delivered supplementary food and pandemic cash grants for IPs and 4P beneficiaries in nutrition-deficient communities are also provided by health and nutrition and social welfare personnel. The municipal government also financed the construction of the Godod-Salug National Highway as well as the partial construction of several barangay roads. Many Godod barangays are 10-20 kms from the población and the LGU budget enabled construction of at least 1-2 kms of road. These projects provided people with a source of income and improved service delivery efforts and people's access to health and nutrition programs. Livelihood programs indeed helped ensure families always have nutritious food in the home through their backyard garden; food produced was mostly used for domestic consumption, providing households with nutritious supplements to mostly canned goods rationed by the LGU.

Respondents believe that the nutrition and F1KD program contributed to improving the nutrition situation in the municipality of Godod. Between 2016 and 2020, there were improvements on facility based delivery (22% to 43%); prevalence of low birth weight infants (21% to 3%), maternal mortality (114 cases to zero); teenage deliveries (10% to 5%); stunting among 0-5 months old children (33% to 13%), wasting among 0-59 months old children (7% to 3%); households with access to safe water (85% to 88%); and households with sanitary toilets (81% to 85%). Antenatal care (84% to 67%) and the prevalence of nutritionally-at-risk pregnant women (25% to 40%) got worse between the same period. There were data on immunization but the MNAO suggested that this indicator also dipped because mothers were afraid of bringing their children to the health facility and there were limitations to people's mobility.

Factors influencing achievement of objectives

Respondents believe that the most important facilitating factors that produced good results for the F1KD program was people's participation in the program and buy-in of the F1KD program. To encourage participation, a whole community approach or strategy was used to mobilize various sectors towards building people's capacity to attain good health and nutrition, especially for F1KD. Under the whole community approach, people are empowered through development assistance, community organizing, and community education in order for them to uplift rural communities from income and food poverty. Other development assistance programs such as dispersal of farm animals, seedlings, fingerlings, farm equipment, garden tools, as well as the provision of financial grants and technical assistance on communal gardening were also believed to have contributed to the municipalities nutrition improvement. The Buntis Congresses which includes raising awareness and following-up clients on the importance of antenatal care, birthing plans, family planning, lactation coaching, and dietary supplementation for mothers was also identified as a significant nutrition improvement activity.

Community visits which are conducted regularly by the MSWDO to reach out and provide ECCD to children in GIDA barangays were deemed effective. Parents, especially of 4Ps beneficiaries are required to attend FDS where proper hand washing, backyard gardening, among other health, nutrition, and development topics are promoted. This is conducted once a month through community visits before the pandemic. Currently, FDS topics are broadcasted via radio because of limitations on mobilization. Social workers also do community immersions to observe the community and determine programs needed by the people. In the process, community groups are established and *bayanihan* initiatives are encouraged. As a result, some community groups help members who have no sanitary toilets to construct comfort rooms in their households. Moreso, daycare workers assist BHWs with their supplementary feeding program. The MHO also indicated that regular monitoring and evaluation of interventions to identify gaps and ensure that interventions are effective, appropriate, and considerate of local culture is another factor for the achievement of program objectives.

Barriers and facilitators to health and nutrition program implementation

Pregnant mothers and children in 10 of 17 barangays of Godod are located in GIDAs. They are discouraged from traveling far and in difficult terrain to avail of appropriate health and birthing services. Vehicles, even the *habal-habal* cannot traverse these areas. Health and nutrition personnel have to hike by 3-4 hours just to reach Godod's GIDA barangays.

The Subanen people also have very strong cultural beliefs. They do not consider a woman pregnant unless her belly protrudes, which explains delays in seeking prenatal care. The practice of *buy'* or arranged marriage among their children is a factor for high prevalence of teenage pregnancies. It is common for Subanen girls as young as 13 years old to be married and conceiving a child.

The MSWDO also observed that parents do not enroll their 2-4 year-old children in daycare but attendance is high during supplementary feeding sessions. The MNAO is doubtful that children given dietary supplementation get to eat three main meals a day, as agreed upon with the parents. Commonly, children beneficiaries are not adequately feed outside the feeding sessions.

As suggested by community stakeholders, the improvement of nutrition outcomes in Godod depend on the accessibility of health and nutrition services. This means constructing more barangay roads, improving internet access, access to water testing facility, improved sanitation, and more provision of nutrition commodities (e.g., RUTF, RUSF).

Policy environment and operationlization of ISDN

Respondents were not familiar with ISDN but said their referral system starts at the household level, as mothers were trained to detect if their children are malnourished using the MUAC measure and refer them to the BHS/RHU for care. Cases that cannot be handled in the municipality are transferred to referral hospitals. Mild to moderate cases are referred to the infirmary (e.g., Sindangan or Liloy hospitals). Other referral hospitals include the Dr. Jose Rizal Memorial Hospital (Level I), Corazon Aquino Memorial (City) Hospital (Level I), Zamboanga del Norte Medical Hospital (Level II). Aside from these, there are two private referral hospitals – the Zamboanga del Norte North Hospital and Hospital ng Kabataan in Dipolog City, which is around 3 hours travel time from Godod. The MNAO manages the ISDN in Godod with the health office serving as the referral institution. Table 7 presents that health facilities and health human resource supporting the service delivery network in the municipality.

Table 7. Health facilities in health human resources forming the service delivery network in Godod

Health resource	Inventory
Hospitals and clinics	0 public or private hospitals clinics in the municipality; district hospital in Siandangan is 30 minutes travel time from here; provincial hospital is about two hours travel time 3 clinics were established by DOH but only 1 has license to operate; 2 have become stockrooms
RHUs and barangay health stations	1 main RHU and 15 barangay health stations covering 17 barangays
Physicians	1 physician serving 17,424 population
Nurses	1 public health nurse and 12 DOH augmented nurses
Midwives	2 midwives deployed in peripheral barangays for emergency deliveries; 5 based in birthing clinics;4 DOH augmented midwives
Nutritionists	1 DOH deployed nutritionist
Pharmacists	1 pharmacist for supervision of medical supplies

Health resource	Inventory
Medical technologists	1 medical technologist
Sanitary engineers and inspectors	1 rural sanitary inspector
Barangay health workers	85 barangay health workers
Barangay nutrition scholars	18 barangay nutrition scholars

Services provided by the network of providers on nutrition include the provision of RUTF, RUSF, iron supplementation, vitamin A supplementation, deworming, and immunization services. However, there is a perceived low quality of prenatal care, in the sense that pregnant women begin consultations only during the 2nd or 3rd trimester. The RHU, BHS, and BHWs encountered difficulties in the early detection and/or tracking of pregnant women and this was compounded by the rise of teenage pregnancy in many barangays. To respond to this, the doctor procured a pregnancy kit and conducts tests on women, including teenagers, who visit the health center for any kind of check-ups

Moreover, the pandemic also compounded problems regarding people's health-seeking behavior. Mothers cannot go and/or bring their children to the health center for check-ups, immunizations, monthly weighing, and acquisition of micronutrient and food supplements. To address this, the RHU conducted home visitations and advocacy.

The policy for the adoption of Magnanay Act in Godod was approved by the local council. Components of the municipal ordinance includes all F1KD interventions. However, only 4 out of 17 Godod barangays have local ordinances for the (mandatory) implementation of F1KD interventions. There are also concerns that women's association and IP organizations were not consulted in the development of said policies.

Programs related to F1KD for implementation are developed and planned based on local capacity. These are then carried out at the barangay level by deployed nurses and midwives. These inform the implementation of guidelines on F1KD policies given to barangays to inform them on how the ordinance will be enforced.

Partnerships and sectoral collaborations to delivery health and nutrition services

Partners include different departments sitting in the MNC, as well as regional offices of the DOH/NNC and NGO partners. DSWD is a partner in the supplementary feeding program, including children enrolled in day care centers. They also monitor or keep records for OPT. DA is a partner in capacitating parents with malnourished children. The agency provides parents with animals and seedlings for livestock raising and backyard gardening endeavors.

NGO partners such as UNICEF and ZFF provided training and nutrition commodities (e.g., RUSF, RUTF, vitamin supplements). ICM (I Care Ministry) also contributes in logistics, supplies, and volunteers. People's organizations such as farmers cooperatives and IP organizations provide inputs on the needs assessment of families and communities.

Partners contributions are utilized in communities. Partner agencies implement their own programs and health personnel sometimes provide them assistance at the barangay level. Barangays do their share by allocating budgets for health and nutrition; supplies and contributions of partners are shared among barangays.

Policy resource and support to current practices

The MHO and MNAO said there are many executive and administrative orders related to health and nutrition both from the national and regional DOH and NNC, such as on F1KD, vitamin A

supplementation, and RUTF. DSWD also have policies on supplementary feeding, connected to their ECCD program, as well as the DA. The mayor also added the DILG also have policies on nutrition.

As mandated by policies, DOH deploys health human resources such as nurses and nutritionists at the municipal level. DOH and NNC conduct program monitoring and provides training for BHWs, BNS and health personnel, some of which are related to F1KD. Regional offices of these agencies provided weighing scales, height boards, micronutrient supplements (e.g., micronutrient powder, vitamin A, iron tablet, iodized oil capsules). Moreover, the regional DSWD provides supplies for the supplementary feeding program while the regional DA provides seedlings for backyard and communal gardening as well as tools and equipment. Some NGOs like the ICM food commodities for dietary supplementation (e.g., RUSF, RUTF). The LGU conducts regular inventory of these nutrition supplies to ensure prompt purchase or requests for procurement of commodities such as RUTFs, RUSFs. It was noted that there are separate inventories of health and nutrition supplies.

The support provided by both the NNC and DOH (e.g., policy guidelines, program updates, training, technical assistance, commodities) were adequate and recommended continuity of the interventions. While appreciative of these forms of support, the local leaders mentioned that commodities such as vitamins were not enough and LGUs are short of financial resources to provide for the nutrition interventions needed by food-poor families. Regular monitoring or follow-up weighing of children, to determine if the malnourished ones were successfully rehabilitated; provision of food and vitamins, feeding programs; community immersion; community education to raise people's knowledge were identified to encourage proper nutrition and F1KD implementation practices. However, there is a need for stronger solidarity among all barangays for the nutrition governance system currently in place; more participation of the mayor in influencing barangay Captains to comply with nutrition policies and programs; additional ordinance for F1KD program sustainability; more effective monitoring and implementation; and more barangay roads to improve health and nutrition access and outreach interventions to improve more the nutrition situation in the municipality.

Communication strategies and institutional arrangements for knowledge exchange

Mothers and caregivers in Godod can tell if their children are malnourished and promptly bring them to the RHU for treatment. Health seeking behavior among them improved, as the BHS/RHU identified more pregnant women—especially those in their teens—in their first trimester for antenatal care. However, some male figureheads in the households are opposed to their partners visiting the health facility and attending health and nutrition activities. Some of them have negative attitude towards health and nutrition program. It was suggest that interpersonal (e.g., counselling) interventions could be provided to these male figureheads. They could be included in family planning education and family development sessions.

Moreover, more households were observed to now have backyard gardens and applied what they learned from food production seminars to grow their own food. However, there were still some households who expressed their preference for receiving cash assistance rather than vitamins and micronutrient supplements.

Community leaders in barangays became a bit participative in nutrition projects. They developed initiative and act on F1KD concerns on their own. Most importantly, they seek the BHS/RHU help to address nutrition concerns. Moreover, municipal leaders also developed and passed ordinances on F1KD and nutrition in general. Healthcare providers livelier in advancing the F1KD and other nutrition programs. They re-echoed what they learned in various *purok*s in the barangay and held mothers' classes. Respondents said their work became easier when mothers learned the MUAC

technique for identifying undernourished/ malnourished children; and services rendered became more efficient.

Each agency is responsible for the promotion of their respective nutrition and nutrition-related programs. Agencies discuss communication strategies and target activities to be implemented at the barangay level with regional/provincial counterparts. The LGU provides information-education-communication materials and takes charge of expenses for training/communication activities conducted in communities. Information materials (e.g., pamphlets) as well as resource persons for training usually come from regional line agencies. At the barangay level, nurses and midwives assigned in the barangay take charge of health and nutrition and F1KD promotion activities. For instance, DSWD and DA conduct their own (communication and program) activities for supplementary feeding and food production interventions, respectively. *In terms of capacity-building,* training (including F1KD) was provided to the 80-81 BHWs and 18 BNS of all barangays in 2020. Training was deemed effective because trainees became more knowledgeable on how to implement F1KD components and improved on their counseling, monitoring, and evaluation skills.

People's participation was described as satisfactory, in the sense that people follow instructions of doctors and guidelines of BHS/BNCs. There was no partnership groups or local mechanisms formed. However, before the pandemic, Godod launched social mobilization activities such as 'Buntis Congress' but was discontinued. This practice (and others of a similar nature) was discontinued starting last year. Nutrition communication and educational activities become more limited due to community quarantine policies (i.e., ban on mass gatherings).

Operational capacity for integrative program management

Respondents were recently trained on the Nutrition Action Scorecard and have yet to discuss its utilization by the LGU. They described local officials' appreciation, support, and commitment for nutrition as satisfactory, citing LGUs' budgetary support for health and nutrition and collaboration among government officials and agencies to achieve nutrition objectives. Despite this, the MNAO thinks some officials and officers from other agencies still have a vague understanding of F1KD.

Health and nutrition among the top 2 to top 3 priorities of the municipality, along with infrastructure and economic development. Respondents believe these views and priorities of MGU officials are shared by other local public servants in various communities.

The MNC is the inter-agency body on nutrition in Godod and is composed of the mayor, RHU, MNAO, other agencies as well as the leader of the League of Barangay Captains. Although deemed functional by respondents, the MNAO said they met irregularly in the previous year (should have been quarterly). Most respondents except for the mayor said that all of Godod's 17 barangays have inter-agency nutrition committees, with some barangays even having NGO members. The basic composition of BNCs includes the captain, BNS, BHW, ad day care worker and is unsure if this could be considered as inter-agency. Most respondents are uncertain about the functionality of these BNCs because because they meet irregularly.

The respondents are confident that local nutrition committees are ready and capable of implementing nutrition and F1KD programs, as long as they are properly guided and supported by the municipal government. However, only nurses, BHWs, and BNS have training on NPM. *The* BNS are federated and were trained on basic nutrition and NPM. *They* are also capable of planning and coordinating with other sectors. *M*oreover, participation of barangay officials in health and nutrition programs is deemed necessary.

The F1KD plan is integrated in the 3-year LNAP of Godod. Included here are all programs and services related to F1KD, as well as other nutrition programs such as feeding programs. A planning workshop is conducted by the MNC where all nutrition and related programs and activities are set with corresponding budgetary requirements. Relevant PPAN components are incorporated in the LNAP using local needs and priorities from health and nutrition assessment as the basis for the plan development. Moreover, the consolidated annual budget for nutrition-specific and nutrition-sensitive services and. products is around Php4 million. The municipality was able to source funds for LNAP from the GAD fund. These budgetary allocation were channeled to agencies under the MNC such as health, agriculture, and social welfare. Of the Php4 million budget for the LNAP, it is estimated that Php500,000 was allocated for F1KD; Php800,000 for nutrition in general; while almost Php2 million is allocated for health. Around 85% of this budget were utilized in 2020. However, actual spending for F1kD cannot be determined because of the unavailability of the report.

Mentoring was done by the NNC and UNICEF which resulted to better monitoring and supervision of the program at the barangay level. *Nutrition training* were provided by the NNC and DOH as well as UNICEF and includes training activities on IYFC, F1KD, Nutrition in Emergency, lactation management, Idol ko si Nanay, among others. *Competencies gained* were enhanced knowledge on how to better implement the nutrition program and subsequently increase program accomplishments (i.e., they acquired better counselling skills for pregnant and lactating women as well as mothers of children 0-23 months old). It also enhanced their planning skills.

Acts of leadership evident from local leaders and nutrition implementers include re-echoing training and providing orientation on the nutrition program to midwives, BHWs and BNS. These acts helped in improving nutrition service delivery in the barangays. However, the MNAO and mayor are unaware if they have participated in BLT. The MNAO believes the recent training she attended was BLT but she cannot elaborate on what changes in her knowledge, skills, and attitude it brought about. She said she shared the lessons learned with some of her colleagues in the health and nutrition office but it was too soon to apply lessons learned and perform acts of leadership. Her recommendation to improve the training was to suggest having more of her LGU colleagues attend it. The mayor on the other hand cannot anymore recall lessons learned from the training.

Mechanisms to integrate F1KD and align at various levels

Coordination happens within the members of the MNC, and that convergence of nutrition actions are also facilitated by the committee. Health and nutrition stakeholders from the regional to barangay level conduct client and service delivery tracking, monitoring, and evaluation of F1KD interventions. The regional DOH and NNC provides reporting forms that the MHO/MNAO accomplishes every month. There is no coordination on this matter with agencies such as the DSWD and DA. The Field Health Survey Information System (FHSIS) undertaken monthly by the DOH is the only information management system on F1kD that is in place.

Mothers and parent leaders are involved in F1KD information management particularly in monitoring beneficiaries' compliance with backyard gardening and childcare obligations. However, the MHO is unsure if there are plans to develop an integrated F1KD tracking system and response.

Sindangan

Effectiveness, relevance, and sustainability of current F1KD interventions

Adherence to prenatal can still be improved with cases of home deliveries, maternal deaths, and mobility problems of nurses and midwives in doing home visits during the pandemic. The municipality still has high prevalence of teenage pregnancies with 64 out of 443 pregnant women

were teenagers in 2020. Moreover, there is still a big problem with regards to stunting and wasting. Ten percent of children are severely underweight, 9.4% are stunted, and 9.4% are stunted. Most barangays with cases of malnutrition are located in coastal areas. The problem with low birth weight is not that series with around 2 or 3 newborn have low birth weight out of 100 deliveries. In addition, around 10-20% of total households have problems with water and sanitation. Water is a long standing problem and many barangays have households with no toilet ownership or share a common toilet with other households.

The municipality has basic maternal and child health services. Maternal health program include pregnancy monitoring, prenatal checkup, birthing services, and the provision of a lactating facility. Meanwhile, adolescent reproductive health programs largely comprise of reproductive health education and counseling services. The RHU conducts barangay cluster visits (areas with the most number of teenage pregnancies) and provides health education for adolescents. Child health and nutrition program include immunization, micronutrient supplementation, newborn screening, facility delivery, exclusive breastfeeding, growth monitoring, among others.

As the local nutrition committee was just recently re-organized, after office and budget dissolution, nutrition programs of the municipality are still being organized. They starting visiting the top 10 barangays in terms of stunting and wasting and conducted feeding programs and seedling dispersal. The municipality need major support in terms of F1KD implementation by creating a system of delivery on a number of basic MCHN program such as growth monitoring for 0-59 months old children, consultation and referral for SAM and MAM cases, dietary supplementation, and expanding these services during and after the COVID-19 pandemic.

WASH services also needs improvement to realize ZOD. The municipality needs to level up from the provision of basic services such as toilet bowl provision and improvement of water system (i.e., installation of water refilling stations). Community members also benefit from seedling (e.g., rice, corn, vegetables) dispersal, provision of tractor to farmers, fertilizers, boats, and livestock. Children and their families benefit from social work programs such as supplementary feeding, counseling services, and delivery of cash and food aid during the COVID-19 pandemic.

A number of barriers are experienced by health and nutrition implementors in delivery services and programs. There is unpredictable and limited budget for nutrition especially during the COVID-19 pandemic response period. There is also limited knowledge on NPM causing unsustainable delivery of interventions. Moreover, there is negative attitude of some beneficiaries on nutrition (i.e., hesitancy in taking vitamin supplements). Due to these, it is challenging to be innovative and make services sustainable in the municipality. One innovative project they identified was the launch of a caravan for family planning where 200 women were encouraged to have implants. There practices related to F1KD is considered standard (e.g., home visits, complementary feeding).

Monitoring and data reporting is a major problem. The municipal nutrition data was lost with the dissolution of the nutrition office and departure of the former nutrition officer. Due to this, there is greater certainty on the nutritional assessment of the impact of previously implemented health and nutrition programs. Moreover, there are delays in referrals that might have caused problems in avoiding unnecessary maternal deaths and there is poor health-seeking behavior among pregnant women.

Little impact on nutrition were observed by some respondents. Some children were more resilient to illnesses and there is a perceived reduction of underweight cases among 0-5 years old. There were also less cases of diarrhea with caregivers becoming more hygienic and water resources were less to prone to pollution and soil-transmitted infections. Some poor households also became food secured with the livelihood and agricultural programs that they benefited from. Other health and nutrition

services that potentially had impact on nutrition are pregnancy tracking, masterlisting, FDS, and deployment of health and nutrition professionals in barangays.

Sufficient budget for health and nutrition, communication, and information dissemination from municipality to barangay (and vice versa) using various platforms (e.g., Facebook, broadcast, print) could help reach out and inform far flung barangays about health and nutrition services. Ultimately, the legislation on the institutionalization of the F1KD program needs to be adopted in the municipality.

Policy environment and operationlization of ISDN

Respondents were not familiar with the ISDRN but said there is a referral system observed for moderate and severely malnourished children. Underweight children who need hospitalization are referred to the district hospital for out-patient services, as there is no malnutrition ward anymore. If a case cannot be handled by the district hospital, it is elevated to the provincial hospital. Children who need such services are identified through OPT or picked up during consultations. Below is the inventory of health facilities and health human resources in Siandangan that form the service delivery network.

Table 8. Health facilities in health human resources forming the service delivery network in Siandangan

Health resource	Inventory
Hospitals and clinics	1 district hospital; 1 private hospital; 1 pediatric clinic (1 pediatrician); 1 internist clinic; 1 family medicine clinic; and 3 birthing clinics under the RHU Note: Provincial Hospital is one & a half hour travel time
RHUs and barangay health stations	1 health center and 50 barangay health stations covering 52 barangays
Physicians	10 physicians (2 in RHU, 5 in hospital, 3 private) for a population of 104,000 Population is 104, 000
Nurses	23 nurses; 4 are based in RHU
Midwives	13 midwives
Nutritionists	1 hospital-based nutritionist
Medical technologists	3 RHU-based medical technologist 5 medical technologist based in other settings
Sanitary engineers and inspectors	2 sanitary inspectors
BHWs	circa 340 barangay health workers
BNS	

Services provided by the network of providers on nutrition include growth monitoring; provision of food supplements; and conduct of health advocacies. Among the providers, stakeholders, partners are the ZNFEPA, Feed the Children, UNICEF, ZFF, and COMPASSION (a church or faith-based NGO) who provide technical assistance, leadership and governance training, medications and food aid. The extent of ISDRN implementation, specifically on F1KD is province-wide. NGO partners assist specific communities. The MHO is the referral managing institution, reporting to the PHO in coordination with the PNAO.

Certain challenges are experienced by local health and nutrition implementors in the operationalization of the service delivery network. There are capacity gaps, specifically the lack of training among health personnel on the management of SAM, NPM, and orientation on PPAN.

Availability of needed commodities is a challenge as these are out-of-stock most of the time due to budget constraints. There is also a weak coordination with barangays and households.

The municipality deals with health human resources constraints by resource sharing (i.e., a DOH-deployed nutritionist make rounds in Sindangan and at least two other municipalities). They rely on DOH-deployed health personnel. They also rely on NGO partners and the provincial health office to fill supply constraint (e.g., Feed the Children provides *vitamin A* for pregnant women; PHO provides micronutrient powders and RUSF). The local government also purchases nutrition commodities, particularly vitamin supplements. Communities deal with service delivery constraints with the mobilization of women's associations and 4Ps groups. The latter conducts FDS, which contain F1KD messages, among other information. There is a "community inventory" of households with children that will need immunization as well as pregnant women; those that need sanitation facilities, those that are responsible for maintaining (and procuring their food needs) from communal gardens. The BNS and IP organizations are also mobilized to ensure access of GIDA barangays to health and nutrition services.

Nutrition and F1KD-related policies are already enacted or currently in the process of local adoption (e.g., Magnanay Act, Milk Code, Asin Law, WASH, Solid Waste Management, Tutok Kainan). The ordinance on breastfeeding consists of rooming in to facilitate exclusive breastfeeding. This advocacy is aimed to encourage mothers to exclusively breastfeed their babies 0-6 months old and no formula feeding allowed unless really necessary. The national F1KD policy is not yet adopted but there are plans to replicate this because there is no localized implementation guidelines local F1KD implementation.

Aside from agency partners, there are CSO partners such as UNICEF-ZFF, Feed the Children and the Zamboanga United Federation of Parents Associations (ZNFEPA) who contribute nutrition commodities such as vitamins and provide support for training health and nutrition personnel, local officials and BHWs. Partner contributions are used to support health and nutrition programs.

Policy, resource support for and practices on F1KD at the regional level

The MHO and MNAO are aware of policy issuances related to nutrition such as issuances on breastfeeding and F1KD. However, there is lack of awareness regarding DSWD and DA policies (e.g., supplementary feeding program, ECCD, backyard gardening, etc.). Other respondents also believe there are regional policy issuances on breastfeeding, F1KD, maternal health and nutrition. The DILG was also mentioned among agencies with policies on or related to nutrition.

In terms of resource support, DOH provides direction, thrusts of key LGU priorities, provides assistance in terms of resources and nutrition commodities. The regional DOH also holds webinars. NNC also has a lot of issuances and in particular (e.g., during the COVID-19 period) directed the LGU to continue service delivery functions, as well as identified what should be the content of food packs for distribution. Consistency in program monitoring by DOH and NNC was highlighted. However, it was also highlighted that the MHO/MNAO would need more support in terms of nutrition leadership and governance training, particularly for understanding the interaction of determinants of nutrition and how to customize interventions based on the context of Siandangan.

The MHO/MNAO oversees overall logistics management at the municipal level. Moreover, the nutrition coordinator consults end users at the barangay level who must submit their logistical needs and procurement requests. The nutrition coordinator collates all local procurement requests so that the MHO/MNAO can include these in the AIP. It will then be subjected to the procurement process which include submission to the procurement office, bidding process, actual procurement, check-up of deliveries, issuance of requested logistics upon submission of liquidation reports and inventory of

previous stocks by the RHU. Issuance of requested logistics are supervised by the LCE. Once stocks are replenished, the nutrition coordinator allocates these to respective barangays. At the barangay level, the midwife manages the distribution of nutrition supplies to identified malnourished children, with the aid of BHWs and BNS who are monitoring these children.

Communication strategies and institutional arrangements for knowledge exchange

The MHO/MNAO were just trained on behavior change and thus expected results were not yet achieved. It is noted that mothers and caregivers are usually compliant with the health and nutrition counsel they were given. There was also some improvement in their health and nutrition practices. Community leaders in barangays have become more cooperative and had made allocations in their budget specifically for nutrition. They also developed their own BNAPs. Healthcare providers on the other hand have become more mobilized for various health and nutrition campaigns.

Challenges on the implementation of communication strategies are still experienced as they are individuals who refuse to reach out to health and nutrition care providers especially during the COVID-19 pandemic. Lack of funds and insufficient health and nutrition staff exacerbate efforts for nutrition communication and education. There is a need to ensure that these communication and education activities are included in the AIP through strong lobbying with the LCE for budget allocation.

There are a number of capacity-building activities that needs to be rolled-out and followed up in the municipality. The Training on Behavior Change Communication was held and so far covered BNSs of almost all barangays. Support from NNC, UNICEF, and KOICA helped make this training possible. F1KD training is incorporated in the Maternal Neonatal and Child Health and Nutrition (MNCHN) Training which is implemented in coordination with World Vision. The training was attended by BHWs, BNS, midwives and nurses from almost all 52 barangays.

People in the municipality are cooperative and participative in F1KD promotional activities. They are gathered by their barangay officials to attend these events. Partners' groups that were mobilized for nutrition include women's organizations in every barangay. Organizations of BHWs and daycare workers are likewise mobilized for F1KD activities. To reach vulnerable and disadvantaged groups, they rely on the endorsement of barangay officials and local BNC members to build trust and goodwill for the program.

The COVID-19 pandemic is a major deterrent on the implementation of nutrition initiatives in the municipality. The confidence of healthcare providers to go around the community, especially those who are nearing their senior years, is compromised. More often, they have limited supplies for protective equipment and disinfectants. Due to this, some health personnel became unwilling or found it hard to apply behavior change sessions. Some trained BHWs/BNS does not received honorarium and are oftentimes politically replaced.

Operational capacity for integrative program management

The respondents were not familiar with the nutrition scorecard but were familiar with the DOH scorecard. They agree that municipal, and even barangay officials, have good appreciation of nutrition and F1KD. These officials are supportive and participative to the program. The mayor in particular is committed to health, nutrition, and sanitation programs as evidenced by quick action on important matters regarding these concerns. In terms of commitment and understanding, respondents are uncertain and said there may be gaps, especially on matters that involve funding. They cited instances that tested the level of commitment of local officials on nutrition and F1kD, such as the hesitancy of some barangay officials to fund or generate resources for implementing a

120-day feeding program for the undernourished; the commitment to have a fully-fledged MNAO; irregular meetings of the MNC; low utilization of the budget due to realignment for COVID response; and the lethargic implementation of the nutrition program during the period of community quarantine. Nutrition ranks among the top 3 to top 5 priorities of the municipality. However, other higher-ranking development priorities, such as water for example, have a direct impact on nutrition. Respondents also believe that views and priorities for nutrition are shared, as manifested by the local budgets where infrastructure development enjoys a big allocation, followed by agriculture, then food and nutrition.

The Sindangan MNC is deemed functional by most respondents, although problems regarding multi-tasking of members in various levels were noted. All 52 barangays have a BNS and the BNC is usually composed of only the BNS and the barangay captain, with possible assistance of BHWs. Respondents are also uncertain if barangay nutrition structures are still functioning, although all barangays have developed their BNAPs with the support from DILG.

There is a perception that local nutrition committees are ready and capable of implementing nutrition programs. Even if municipal champions are 'new' to the task, there are existing manpower and structure that could be operationalized. However, they need to be properly guided and supported. There are 68 BNS in Sindangan and they are federated and represented by their president. Most BNS, especially the old ones, have had basic nutrition training and NPM. There is also a notion that BNSs plan and coordinate with other sectors for local implementation of nutrition programs. It is recommended that nutrition local health and nutrition stakeholders should be trained on nutrition leadership and governance.

The municipality of Sindangan has a 3-year LNAP, which aims to reduce the prevalence of stunting and wasting, at least by 20% from the baseline. The strategy to achieve this is to strengthen F1KD interventions by improving the quality of pre-natal services; maternal, infant and child healthcare (e.g., immunization, food supplementation); improve availability of nutrition services in RHU; and improve health-seeking behaviors. The plan also includes the conduct of OPT Plus for early detection of at-risk children and mothers. The plan underscores that the interventions will center on ensuring that pregnant women are ready for motherhood and will give birth to a healthy child.

Municipal health and nutrition stakeholders (i.e., MNC) gather to review the municipal nutrition situation and considers actions to be undertaken from a menu of proven and/or promoted interventions. After this, funds are allocated and presented to the body (nutrition council) for approval. Once approved, the MNC makes sure it becomes part of the municipal budget or the AIP of the municipality. NNC also provides a template and a menu of PPAN interventions, which the municipality works through. This planning guide enables the MNC to choose relevant interventions that can best address their local nutrition situation. It also comes with automatic computation of costs of chosen interventions, which can be presented to possible NGO donors for financing if the LGU budget falls short. The plan is based on RHU data and situational assessment.

The consolidated budget for nutrition-specific and nutrition-sensitive services, products, information as specified in the LNAP for this year amounts to Php8.1 million (from GAD). There were no allocations for barangays, as the nutrition budget for the BNAPs are sourced from the DILG Social Development Fund. Agencies in charge of nutrition services and activities specified in the LNAP were given the budgetary allocation. The MSWDO and MAO also have their own source of funds for specific nutrition-sensitive activities (e.g., supplementary feeding, agricultural dispersal). Heads of offices are in charge of the budgetary allocations, as they are the ones who make the purchase requests that have to be approved by the LCE. Unfortunately, the respondent could not recall how much was allocated for F1KD. Reports on F1KD and nutrition expenditures were still unavailable.

However, there were perceptions that F1KD and nutrition budget utilization was low due to probable budget realignment for COVID-19 response.

On human resources for nutrition, m*entoring in relation to nutrition programs* was informal. The MHO/MNAO was trained on information management, particularly during emergencies and behavioral change communication. Results of training led to better conduct of nutrition assessments. *Acts of leadership* were manifested during MNC reorganization and securing of supplemental funds for the honorarium of BNS. These acts helped in ensuring sufficient human resources (BNS) who will implement the nutrition program at the grassroots level.

To implement the needed program for F1KD, the BNS and BHWs, as well as BHS, should be in place. With this, commodities and financing can ensue. There is no separate project structure but the MHO/MNAO believes that the MNC was re-organized because of the project. It is the MNC who provides direction, guidance, and oversight functions to the MNAO and nutrition coordinator, as well as the BNS and BHWs who implement and monitor and gather data at the grassroots level. There is a level of understanding that nutrition issues are not just the concern of the RHU but the concern of all LGUs acting as a team to address it.

Mechanisms to integrate F1KD and align at various levels

The MNC and MHO/MNAO coordinates nutrition concerns. Most respondents are not aware of convergence for nutrition, however, the MHO/MNAO believes that there is convergence through the MNC. There appears to be no inter-agency coordination on F1KD despite the existence of vertical coordination among local leaders, health, and nutrition workers. Tracking coordination is done during council meetings and during program implementation reviews.

Only midwives, BNS, and BHWs are involved in F1KD nutrition surveillance at the barangay level. Community groups and households have very minimal involvement in information management. The MHO/MNAO believes that midwives, BNS, BHWs could be capacitated to enable community engagement in nutrition surveillance. The LGU plans on going digital to streamline the integration of referral system and nutrition services but in the meantime, typical practices associated with manual systems are implemented.

Conclusion

The comprehensive baseline assessment of the First 1000 Days (F1KD) program in the provinces of Samar, Northern Samar, and Zamboanga del Norte provides a detailed examination of the current state of maternal and child health governance in these regions. This evaluation highlights both the successes achieved and the obstacles encountered, offering a clear pathway for future improvements. The assessment underscores the critical need for a robust, multi-sectoral approach to enhance the implementation and impact of the F1KD program.

One of the notable achievements of the F1KD program is its successful integration into local governance structures. The provinces under study have demonstrated a strong commitment to improving maternal and child health outcomes. This commitment is evident in the establishment of LNCs and the appointment of nutrition action officers, which have played a pivotal role in facilitating the implementation of various nutrition-specific and nutrition-sensitive interventions. These structures have enabled a more organized and systematic approach to addressing nutrition and health issues within the first 1000 days of a child's life.

Moreover, the program has significantly increased awareness and improved practices related to maternal and child health among local communities. Educational campaigns and capacity-building initiatives have been instrumental in disseminating knowledge about proper nutrition and healthcare practices during this critical period. As a result, there has been a noticeable improvement in community engagement and participation in health programs, which is essential for the sustainability of these initiatives.

The F1KD program has also made strides in fostering collaboration among various stakeholders. By engaging national and LGUs, non-governmental organizations, and community leaders, the program has created a more cohesive effort to address health and nutrition challenges. This multi-sectoral collaboration has led to more comprehensive and effective interventions, addressing the diverse needs of the population.

Challenges and Barriers

Despite these successes, the assessment identifies several significant challenges that hinder the full realization of the F1KD program's objectives. One of the primary barriers is the inconsistent availability of resources, including funding, personnel, and healthcare facilities. In many areas, there is a persistent shortage of trained healthcare providers and essential medical and nutrition commodities, which limits the program's reach and effectiveness. The scarcity of resources not only affects service delivery but also hampers the ability to scale up successful interventions.

Coordination among stakeholders remains another critical challenge. The assessment reveals that efforts are often fragmented, with various actors working in silos. This lack of cohesive strategy leads to duplication of efforts and inefficient use of resources. Additionally, there is a need for a more robust framework to ensure that all stakeholders are aligned in their goals and methodologies.

Socio-economic factors such as poverty and limited access to education continue to pose significant barriers to achieving the program's objectives. These factors contribute to poor health outcomes and present additional challenges in implementing sustainable health interventions. The assessment highlights the need for integrated approaches that address these underlying determinants of health to create a more enabling environment for the F1KD program.

Key recommendations

To overcome these challenges, the assessment provides several strategic recommendations:

Strengthening governance structures

There is a critical need to enhance the capacity of LNCs and other governance bodies through continuous training and development programs. This includes fostering leadership skills among local officials to champion nutrition initiatives and ensure effective program implementation.

Resource allocation and management

Ensuring consistent and adequate funding for the F1KD program is paramount. This involves advocating for increased budget allocations at both the national and local levels and establishing efficient resource management systems. Improved financial management practices can help optimize the use of available resources and ensure sustainability.

Improving health and nutrition care infrastructure

Investing in health and nutrition facilities and ensuring the availability of essential medical and nutrition supplies is crucial. This includes building new health centers in underserved areas and upgrading existing ones. Additionally, enhancing the supply chain management for medical and nutrition supplies can help address shortages and ensure timely delivery of services.

Enhanced multistakeholder collaboration

Promoting better coordination and collaboration among various stakeholders is essential. This can be achieved by creating multi-sectoral platforms for dialogue and cooperation, ensuring that all efforts are aligned towards common goals. Establishing formal mechanisms for coordination can help streamline activities and improve efficiency.

Addressing socio-economic barriers

Implementing programs that target the underlying socio-economic determinants of health is necessary. This includes initiatives aimed at poverty alleviation, improving access to education, and providing livelihood opportunities to vulnerable populations. Such integrated approaches can create a more supportive environment for health interventions.

Monitoring and evaluation

Establishing robust monitoring and evaluation mechanisms to track the progress of the F1KD program is critical. This involves setting clear indicators and regularly collecting and analyzing data to inform policy decisions and program adjustments. Continuous monitoring can help identify areas for improvement and ensure accountability.

Proposed action plan

To translate these recommendations into action, a detailed plan is necessary:

Governance and capacity building

- **Training programs:** Develop and implement comprehensive training programs for LNCs and healthcare providers. These programs should focus on leadership, project management, and technical skills related to nutrition and health.

- **Policy advocacy:** Engage with national policymakers to advocate for supportive policies and increased budget allocations for health and nutrition programs, especially for mother and children. Highlighting the long-term benefits of investing in maternal and child health can help secure necessary resources.

Resource mobilization and management

- **Financial planning:** Develop detailed financial plans that outline the required resources and potential funding sources. This includes exploring partnerships with private sector organizations and international donors.

- **Efficient resource use:** Implement systems for efficient resource management, including transparent procurement processes and regular financial audits. Ensuring accountability can help build trust and secure ongoing funding.

Healthcare infrastructure development

- **Facility upgrades:** Conduct assessments of existing healthcare facilities to identify gaps and prioritize upgrades. Building new facilities in underserved areas should be complemented by enhancing the capacity of existing ones.

- **Supply chain management:** Strengthen supply chain management systems to ensure the timely availability of medical and nutrition supplies. This includes improving forecasting, procurement, and distribution processes.

Enhanced coordination mechanisms

- **Multi-sectoral platforms:** Establish formal platforms for multi-sectoral coordination at the national and local levels. These platforms should facilitate regular dialogue, joint planning, and collaborative implementation of health initiatives.

- **Integrated strategies:** Develop integrated strategies that align the efforts of various stakeholders. This includes creating shared goals, harmonized methodologies, and coordinated action plans.

Socio-economic interventions

- **Poverty alleviation programs:** Implement programs that address the root causes of poverty, such as livelihood training and microfinance initiatives. Empowering communities economically can create a more supportive environment for health interventions.

- **Educational initiatives:** Enhance access to education by providing scholarships, building schools, and promoting adult education programs. Education is a key determinant of health and can significantly impact maternal and child health outcomes.

Monitoring and evaluation systems

- **Data collection and analysis:** Establish robust systems for data collection, management, and analysis. This includes using digital tools to streamline data processes and ensure real-time tracking of program outcomes.

- **Continuous improvement:** Implement mechanisms for continuous improvement based on monitoring and evaluation findings. Regular feedback loops can help refine strategies and ensure the program remains responsive to emerging needs.

Long-term vision

The ultimate goal of the F1KD program is to create a sustainable and comprehensive approach to MCHN that can be replicated in other regions of the Philippines. Achieving this vision requires a long-term commitment to continuous improvement, innovation, and collaboration.

Sustainability

Ensuring the sustainability of the F1KD program involves building local capacity, securing consistent funding, and fostering a culture of health and nutrition wellness within communities. This includes empowering local leaders and communities to take ownership of health and nutrition initiatives.

Replication and scalability

Documenting successful strategies and best practices can facilitate the replication of the F1KD program in other regions and local government units. This includes developing detailed guides and toolkits that can be used by other local governments and organizations.

Innovation

Embracing innovation is crucial for addressing complex health and nutrition challenges. This includes leveraging technology for health education, monitoring, and service delivery, as well as exploring new models of care that are more responsive to community needs.

Partnerships

Building partnerships can enhance the impact of the F1KD program. Engaging with local and international organizations, research institutions, and other regions and provinces can facilitate knowledge exchange, provide additional resources, and promote best practices in MCHN.

Key takeaway

The baseline assessment of the F1KD program underscores the critical importance of a comprehensive, multi-sectoral approach to improving MCHN. While significant progress has been made, there is still much work to be done to address the persistent challenges and barriers. By

implementing the strategic recommendations and detailed action plans outlined in this conclusion, the F1KD program can achieve its full potential and make a lasting impact on the health and well-being of mothers and children in the Philippines.

The findings and insights from this baseline assessment provide a valuable foundation for future efforts for the F1KD program and other initiatives for MCHN. These highlight the importance of continued commitment, collaboration, and innovation in achieving sustainable health outcomes. As the F1KD program evolves and adapts to emerging challenges, it has the potential to serve as a model for other regions and provinces in the Philippines that are striving to improve MCHN outcomes.

Ultimately, the success of the F1KD program depends on the collective efforts of all stakeholders—government agencies, non-governmental organizations, community leaders, healthcare providers, and the communities themselves. By working together towards a common goal, it is possible to create a healthier, more equitable future for all.

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