

Small-Quantity Lipid-Based Nutrient Supplement Program Implementation

Learning and Considerations for Scale-Up from International Food Relief Partnership Partners in Honduras, Niger, and Somalia

Report



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Acronyms

AIN-C Atención Integral del Niño en la Comunidad

(Comprehensive Care for Children in the Community)

ALIMA Alliance for Medical Action

ANC antenatal care

BEFEN Bien Être de la Femme et de l'Enfant au Niger

BHA Bureau for Humanitarian Assistance

COVID-19 coronavirus disease of 2019

EML essential medicines list FBF fortified blended flour

FEWS NET Famine Early Warning Systems Network

FGD focus group discussion

FSNAU Food Security and Nutrition Analysis Unit

FY fiscal year

GlobalMedic The David McAntony Gibson Foundation

HC health center

HHH Hope for a Healthier Humanity

HP health post

IDP internally displaced persons

IFA iron and folic acid

IFRP International Food Relief Partnership

IPC integrated phase classification

IRB institutional review board

IYCF infant and young child feeding

|SI | ISI Research & Training Institute, Inc.

LNS lipid-based nutrient supplement

LNS-MQ lipid-based nutrient supplement—medium quantity

MCH maternal and child health
M&E monitoring and evaluation

MOH Ministry of Health

MUAC mid-upper arm circumference
NGO nongovernmental organization
PLW pregnant and lactating women

PNC postnatal care

RFA request for application SAM severe acute malnutrition SBC social and behavior change

Standardized Monitoring and Assessment of Relief and Transition [survey] **SMART**

small-quantity lipid-based nutrient supplement(s) SQ-LNS

STA Société de Transformation Alimentaire

United States Agency for International Development USAID

World Health Organization WHO

Executive Summary

Introduction

Small-quantity lipid-based nutrient supplements (SQ-LNS), a fortified product, fill key nutrient gaps during the complementary feeding period, pregnancy, and lactation. Strong evidence shows that SQ-LNS effectively reduces stunting, wasting, anemia, and mortality among children ages 6–24 months. A small but growing number of studies show that SQ-LNS supplementation of pregnant women contributes to positive birth outcomes. However, less is known about the challenges and opportunities for expanding the use of this product and the best approaches to do so. The objectives of this learning activity were to—

- I. Document the factors that promoted and/or hindered successful implementation of SQ-LNS programs in highly food insecure contexts.
- 2. Garner perspectives on considerations for scale-up.

Methods

We used qualitative methods and convenience sampling to conduct this study in three of the United States Agency for International Development's (USAID) International Food Relief Partnership (IFRP)-funded SQ-LNS programs in Honduras, Niger, and Somalia. In each country, we interviewed program staff (Honduras: 8; Niger: 7; Somalia: 8); caregivers of children 6–24 months (Honduras: 23; Niger: 18; Somalia: 24); and pregnant and lactating women (PLW) (Honduras: 22; Somalia: 23). We also visited warehouses (Honduras: 2; Niger: 1; Somalia: 2) and distribution sites (Honduras: 3; Niger: 3; Somalia: 3). We coded and analyzed interview transcripts and site visit checklists for themes related to program implementation and considerations for scale-up.

Findings

The learning activity found that partners implementing SQ-LNS programs in Honduras, Niger, and Somalia operated through different delivery strategies and in varying program contexts. Despite this, one universal theme common across the partners was their strong relationship and coordination with national and/or local partner nongovernmental organizations (NGOs). Partners were committed to optimizing the resources they had to serve their communities because they felt that SQ-LNS filled a critical need. The learning activity also found similarities and differences in product acceptability, program models, complementary activities, monitoring and evaluation, and considerations for scale-up, described below.

- Acceptability: There was high acceptability¹ of SQ-LNS among program participants in all
 three countries, but dissatisfaction with the size of the product in Niger and Somalia where
 participants cited high food insecurity and dislike of the aftertaste in Honduras. Partners in
 Honduras also noted that in highly food insecure areas, SQ-LNS alone was not sufficient and
 that families needed food.
- Enrollment, duration, frequency: There was variation in how partners designed their SQ-LNS programs, with differences in eligibility criteria, supplementation duration, distribution sites, and frequency of distribution. For example, enrollment eligibility for children in Niger included children 6–11 months, whereas in Honduras and Somalia it included any child 6–24 months. Children received the product for up to six months in Somalia, up to 12 months in Honduras, and up to 18 months in Niger. Enrollment of pregnant women in Honduras and Somalia

¹ Acceptability is defined as a favorable attitude towards a product, which predisposes the individual to use the product as per instructions (Tolley et al. 2013). Sensory attributes, food practices, need perceptions, and the social environment influence acceptability (Klevor et al. 2016).

happened at any stage of pregnancy and PLW received the product for up to 12 months. The distribution frequency was every two weeks in Somalia, four weeks in Niger, and three months in Honduras. Partners distributed SQ-LNS at health facilities in Niger and Somalia, but also at community sites, volunteer homes, and participant homes in Honduras.

- Social and behavior change (SBC): There was a higher staff to participant ratio in Honduras (1:5 to 1:7) compared with Niger (1:13 to 1:18) and Somalia (1:13 to 1:25). This meant that staff in Honduras (primarily volunteers who lived in the same communities) spent more time giving participants information about SQ-LNS and in some cases, problem-solving on distribution days. The three-month distribution schedule of SQ-LNS in Honduras, but more frequent interaction with volunteers, may have freed up staff time to achieve this high ratio. Despite this, all three partners noted that human resources were a significant constraint to their programming. For example, in Somalia local NGO staff noted that 10 instead of 2 staff at the distribution site would be ideal.
- Complementary activities: Partners in all three countries added SQ-LNS delivery to an existing program or platform. In Honduras, SQ-LNS complemented the Atención Integral del Niño en la Comunidad (Comprehensive Care for Children in the Community), which operated through volunteers. In Niger, SQ-LNS was part of the partner organization's 1,000 days program, delivered through health facilities, and in Somalia, SQ-LNS was provided at health facilities along with routine health services. All three partners noted that funding in addition to that of IFPRI's was essential to making complementary activities (e.g., food rations, vaccines) available.
- Monitoring and evaluation (M&E): Although IFRP did not require partners to report on anthropometric measurements, the partners in all three countries tracked weight, height, and mid-upper arm circumference of children at varying frequencies. The partner in Somalia tracked weight of PLW but the partner in Honduras did not, as they assumed that pregnant women would be weighed at the health center. Partners in Honduras and Somalia reported challenges with data entry: entering data from paper forms to Excel or an electronic platform on time every month. However, partners anecdotally shared that program data showed improvements due to SQ-LNS, including lower cases of child malnutrition in all three countries when comparing the prevalence of malnutrition (underweight in Honduras and wasting in Niger and Somalia) at program sites before and after implementation of SQ-LNS. They also described higher vaccination rates in Niger and greater birth weight, breast milk supply, and child consultation visits at health centers in Honduras.
- Scale-up: Partners recommended expanding the SQ-LNS program through the health system in Niger and Somalia and through the health system's community-based AIN-C program in Honduras. Despite their willingness to expand, they noted several existing funding constraints that would need to be addressed, such as insufficient human resources; challenges with data entry; and inadequate funding for SBC materials (e.g., job aids to use while interacting with program participants).

Discussion and Recommendations

Based on what we learned from this activity, we recommend several actions for program implementation and scale-up relevant to the global nutrition community, IFRP SQ-LNS program implementers, and management of the IFRP award.

Global nutrition community:

- Develop program guidance to enable implementers to determine how to program SQ-LNS in their contexts. The program guidance should articulate how to program SQ-LNS in a highly food insecure setting. To date, evidence for the effectiveness of SQ-LNS programs has come from studies conducted primarily in development contexts. Several of these studies documented household food insecurity, which was not found to modify the impact of SQ-LNS on child growth (Dewey et al. 2021b). However, the level of food insecurity in Somalia is much more dire (crisis levels) than the settings in which the studies were conducted. Partners could use metrics such as the Famine Early Warning Systems Network Integrated Phase Classification to determine whether to program SQ-LNS alone or in combination with household-level food assistance. If partners are unable to provide food assistance, then the document should encourage referral to existing food security or social protection programs, or partners should implement SQ-LNS in partnership with an organization that can provide food assistance.
- Ensure that the guidance provides the evidence-based rationale for the elements of the distribution model. Evidence shows that children who start to receive SQ-LNS at close to six months of age are more likely to benefit (Galasso et al. 2019). This is because 20 grams of SQ-LNS meets half the non-milk caloric requirements of a child 6-8 months (Dewey and Brown 2003). Similarly, recent evidence shows that receiving the product for at least 12 months is as beneficial as receiving it for more than 12 months (Dewey et al. 2021b). However, it is unclear whether SQ-LNS supplementation for six months will confer the same benefit. Moreover, there is limited evidence on when in pregnancy to begin supplementation and for how long to provide the supplementation to PLW. As with all supplements for PLW, starting sooner is likely to confer the greatest benefit.
 - SQ-LNS program design should be evidence-based with the intended outcomes of the distribution model in mind at the outset. Usually, organizations implement SQ-LNS with the aim to improve nutrition outcomes for PLW and children under 24 months of age. Partners may integrate the distribution of SQ-LNS within a broader program that has other intended outcomes such as increasing child vaccination rates and ANC visits for pregnant women. However, it is critical for the distribution of SQ-LNS to be evidence-based when determining eligibility, the duration of supplementation, and which anthropometric measurements to take, if any, and how frequently.
- Mandatory inclusion of SBC in the program guidance for SQ-LNS programming. To support this, develop SBC materials that partners can adapt to their contexts to appropriately equip distribution site staff with the information they need to provide participants. This includes illustrations of the key information that staff must share with caregivers, which organizations could source and adapt from the USAID Advancing Nutrition and UNICEF Infant and Young Child Feeding Image Bank (iycf.advancingnutrition.org). Due to the volume of participants at each site and the time needed to take anthropometric measurements, staff in Niger and Somalia did not always have time to give caregivers all the information that they needed to give. Staff also did not have any written document to guide them. By contrast, volunteers in Honduras interacted with a small group of participants on a regular basis and were trained on how to counsel them, including problem-solving.
- Conduct operational research to understand how to scale-up SQ-LNS programs in areas with high levels of undernutrition. The addition of any new product comes with the need to orient, train, supervise, and remunerate staff. It also comes with the added responsibility of tracking program participants and, if anthropometric measurements are taken, accurately taking and tracking those measurements. Funding will likewise be required to procure SQ-LNS

products. At this time, organizations source SQ-LNS from the United States or Europe, but supporting regional and local production would be critical to ensure the timely delivery in the supply chain and the sustainability of the program. Adding the product to the World Health Organization (WHO) Essential Medicines List (EML) and national medicine lists would enable country governments to procure the products through their medical commodities budgets. Additionally, scaling up SQ-LNS will require disposing of a large volume of empty sachets in an environmentally sustainable way. It would be helpful to explore options to develop biodegradable sachets and strategies to collect and use empty sachets at home.

IFRP SQ-LNS program implementers:

- Consider ways to increase staff interaction time with program participants. In Niger and Somalia, program participants wanted more interaction time with staff and had several questions about the product. This was primarily due to the low staff-to-participant ratio at the distribution sites. By contrast, participants in Honduras interacted with volunteers on a regular basis and met as a group once a month, allowing them to problem solve with program participants. Evidence shows that that frequency of interaction with program participants is critical to supporting nutrition behaviors. For example, the Alive & Thrive program found that near monthly visits by health or community workers was associated with 2-3 times higher odds of optimal IYCF practices in Bangladesh and Ethiopia (Kim et al. 2020). Thus, SQ-LNS program implementers should consider mobilizing an adequate number of staff to provide sufficient interaction time between staff and program participants.
- Co-implement, refer or link program participants with existing food security and social protection programs. In highly food insecure areas, partners recognize that SQ-LNS is not sufficient to meet the nutritional needs of program participants. It is therefore important for programs to co-implement with an organization that can provide food assistance. If this is not possible, partners can refer or link participants with existing food security and social protection programs if they themselves do not implement such a program. This will ensure that participants receive food or other assistance in addition to SQ-LNS. In Honduras, unlike Niger and Somalia, participants did not comment on the size of SQ-LNS because they were receiving household food rations, and pregnant women received food from the health facility. In this way, partners helped participants and members of their households meet their caloric requirements in addition to the nutrients from SQ-LNS. In highly food insecure areas, if partners are unable to, directly or in collaboration with others, provide food assistance then they should not implement SQ-LNS.

IFRP SQ-LNS award management:

• Provide technical reference materials on SQ-LNS communication, distribution frequency, and anthropometric measurements in the Request for Application (RFA). The IFRP Fiscal Year 2022 RFA provides applicants with instructions on what to include in the technical narrative, including the program goal and objectives; frequency, location, and process of distribution; integration with ongoing programs; coordination with nutrition and/or food security actors; description of complementary activities; and M&E. The RFA also refers applicants to two technical reference materials: one for M&E clarifying that the number of participants reached is the only required indicator; and the second on programming guidance (e.g., eligibility criteria, duration) and how SQ-LNS can be integrated with other programs such as those focused on nutrition, social protection, or food assistance. We recommend including three additional materials. The first reference material should provide guidance on what SQ-LNS-related information to share with program participants, including responses to common questions (e.g., how SQ-LNS differs from other LNS treatment products). The second reference

material should help planners adjust the distribution model to ensure that staff have adequate time to interact with program participants (e.g., staggering participants). The third technical reference material should list the anthropometric measurements to take for children and PLW.

- Expand award duration to allow for 24 months of implementation. At present, SQ-LNS does not arrive in the country until at least six months after the award has been signed with USAID. This leaves 12 months for implementation, including programming, reporting, and close-out. With this limitation, some partners provide SQ-LNS to children for six months, but there is currently limited evidence on the effectiveness of SQ-LNS given to children for less than 12 months (Dewey et al. 2021b). Similarly, the recommended duration of supplementation with SQ-LNS for PLW is 12 months; however, partners found it challenging to provide the product for this duration when they only had 12 months to implement and close-out their program. Because enrollment in the program occurs on a rolling basis, partners seldom had the target number of program participants on day one, thus making it impossible to provide SQ-LNS to program participants for 12 months. After experiencing this challenge once, the partner in Somalia was no longer planning to apply to program SQ-LNS for PLW in the next fiscal year. Thus, the award duration likely limits the number of partners who apply to program SQ-LNS for PLW.
- Increase the award amount to ensure that partners have adequate funds to implement high quality SQ-LNS programs. Partners were pleased with SQ-LNS but consistently shared that the award amount was insufficient to implement the program. They mentioned that the cost of the program was more than what the award covered and described subsidizing the award by cost sharing certain aspects. For example, in Honduras, the national NGO covered per diem for program staff and volunteers on SQ-LNS distribution day as a cost share. The program in Honduras also operated through a large number of volunteers who were unpaid, other than for transportation of SQ-LNS from IFRP and per diem from the national NGO. However, these volunteers were expected to interact with program participants about the product outside of distribution day, which they described doing. The unpaid services provided by the volunteers have largely been unaccounted for in the cost of the program. Partners in Niger and Somalia also voiced that the award did not meet the staffing needs of the program. Additional resources would also allow partners to do quality SBC, monitoring and evaluation, and supervision.
- Facilitate a platform for partners to share implementation experiences to strengthen SQ-LNS programming. From USAID Advancing Nutrition's Program Mapping and Gap Analysis conducted in 2020, we learned that experienced partners who had programmed an IFRP award for at least one award cycle had several recommendations (USAID Advancing Nutrition 2021). Similarly, new partners who had received the award for the first time had several questions about the distribution model and complementary activities. To support partners in implementing high quality SQ-LNS programs, a community of practice would serve as an ideal platform for partners to share experiences and resources, and to solicit feedback on specific implementation-related questions.

Conclusion

This learning activity documented the implementation experiences and considerations for scale-up from partners implementing IFRP-funded SQ-LNS for children 6–24 months and PLW in Honduras, Niger, and Somalia. We identified several areas that the global nutrition community can support in the implementation of SQ-LNS and specific recommendations for IFRP SQ-LNS partners and management of the IFRP award. SQ-LNS is a highly accepted product among caregivers, children 6–24 months, and PLW, but several operational considerations need to be factored in during implementation for high

quality programming. They include developing program guidance and standardized SBC materials, and providing sufficient resources to recruit, train, and supervise distribution site staff in efforts to scale up SQ-LNS programs through the health system and associated community platforms.

Introduction

Globally, among children under the age of five, an estimated 22 percent (1459 million) are stunted, 6.7 percent (45 million) are wasted, and 39 percent (219 million) do not reach their development potential (World Health Organization [WHO] 2021; Black et al. 2017). Children are especially vulnerable during the first two years of life, and protecting their health and nutrition requires several direct and indirect health and nutrition-sector strategies (Keats et al. 2021). Small-quantity lipid-based nutrient supplements (SQ-LNS) are a new intervention that can complement the mix of strategies to prevent stunting, wasting, and poor development outcomes from 6 to 24 months of life. The 2021 Lancet Series on Maternal and Child Undernutrition recommended SQ-LNS as a proven intervention to address malnutrition (Keats et al. 2021). Although there is strong evidence from trials on the effectiveness of SQ-LNS in improving child nutrition, survival, and development, there is little documentation of how to implement a SQ-LNS program (Heidkamp et al. 2021).

To fill this gap, USAID Advancing Nutrition conducted a learning activity with three SQ-LNS programs funded by the United States Agency for International Development (USAID) Bureau for Humanitarian Assistance (BHA)-managed International Food Relief Partnership (IFRP). IFRP is a congressionally mandated program that provides shelf-stable prepackaged foods to improve food security and nutritional status of vulnerable populations through local NGOs (USAID 2020).

The purpose of the activity was to document learning from IFRP partners implementing SQ-LNS programs for children 6–24 months and pregnant and lactating women (PLW) that USAID as a donor and program designers and implementers could apply to programming, considering scaling feasibility. Specifically, BHA was interested in learning about effective distribution models, implementation considerations in diverse contexts, and how to integrate and scale up SQ-LNS for both children 6–24 months and PLW.

Documentation of different existing distribution models would contribute to the global guidance currently under development. Global guidance on SQ-LNS implementation is needed and would support implementers to make distribution model decisions, such as targeting (individual vs. area), supplementation duration, distribution frequency, and standardized SQ-LNS information to share with program participants. Moreover, the focus thus far has been on research to show the effectiveness of SQ-LNS rather than on strengthening program implementation. Diverse distribution models would also offer implementers solutions to operational challenges that they currently experience or anticipate experiencing regarding their programs. Furthermore, the evidence for the effectiveness of SQ-LNS for PLW is growing, but more needs to be understood about how to program this product with existing maternal supplementation products (e.g., iron and folic acid [IFA]), and how the product has influenced the lives of PLW (e.g., appetite, energy, time).

Because SQ-LNS is designed to enhance the content of existing diets, it would be valuable to understand how to program this product in areas with different levels of food insecurity: alone or in conjunction with household food rations or cash/voucher transfers. In development contexts, SQ-LNS has shown to prevent child undernutrition regardless of household food insecurity, but it is unclear how the program would need to be adapted when implemented in humanitarian settings where, in addition to food insecurity and malnutrition, safety and security pose further threats to both the implementers and program participants (Dewey et al. 2021b). Despite these challenges, SQ-LNS has the potential to improve nutrition outcomes for children.

Integrating SQ-LNS in existing programs and platforms is one way to scale up, as has been noted with other nutrition interventions (Gillespie, Menon, and Kennedy 2015). However, integration also comes with its own challenges, such as setting up partnerships, training, and ensuring quality. Learning from existing implementing partners would expand the knowledge on the range of possible integration

approaches (e.g., through the health system, community platforms, or social protection programs), and problems encountered and solved to design and implement effective SQ-LNS programs at scale, which we defined as expansion of current programs reaching as many or all eligible children in a specific geographic area.

This case study aims to advance knowledge on how to implement SQ-LNS programs by capturing operational experiences from current IFRP-funded SQ-LNS program staff and participants (caregivers of children 6–24 months and PLW). Program planners and implementers can use the information from this case study to refine current and design future SQ-LNS programs. The findings may also be of interest to other USAID bureaus supporting efforts to prevent maternal and child undernutrition. The report is divided into the background, methodology, findings, discussion (including recommendations), and annexes.

Background

Small-Quantity Lipid-Based Nutrient Supplements

SQ-LNS are fortified products intended to fill key nutrient gaps during the complementary feeding period, pregnancy, and while lactating (Dewey et al. 2021a). One 20-gram sachet of SQ-LNS provides ~110 calories, micronutrients, macrominerals, energy, protein, and essential fatty acids (Arimond et al. 2015). SQ-LNS for children 6–24 months and PLW are similar in terms of the weight and calories they provide, but vary in terms of the nutrient content because they are designed to meet the daily recommended intake of micronutrients and macrominerals for children and PLW. The recommended duration of supplementation is a minimum of six months for children 6–24 months and 15 months for PLW (Edesia 2021).

Evidence of the Effectiveness of SQ-LNS

There is strong evidence for the effectiveness of preventive SQ-LNS in reducing stunting, wasting, anemia, and mortality among children 6–24 months of age (Das et al. 2019; Dewey et al. 2021a). Evidence shows that children who take these products are also more likely to develop well: walk within the first year of life, and speak and interact with others in ways that are appropriate for their age (Dewey et al. 2021a). The 2021 Lancet Series on Maternal and Child Undernutrition included SQ-LNS as the eleventh intervention with strong evidence for implementation to address child malnutrition (Keats et al. 2021). A small but growing number of studies show that SQ-LNS supplementation of women during pregnancy has a slight, positive effect on birth outcomes (weight, length, small for gestational age, and newborn stunting) compared with IFA and is as effective as multiple micronutrient supplements (Das et al. 2018).

However, despite the evidence for effectiveness, organizations currently implement SQ-LNS programs in only a few select geographic areas (Heidkamp et al. 2021). This may be because the evidence for effectiveness of SQ-LNS in preventing child undernutrition is emerging, and only a small number of donors currently fund the implementation of preventive SQ-LNS for children (USAID Advancing Nutrition 2021). Moreover, SQ-LNS is not part of WHO's Essential Medicines List (EML); therefore, country governments are unlikely to procure the product through their budgets. Being a relatively new product, governments have not included SQ-LNS in national nutrition strategies and action plans. Thus, very little is known about the challenges and opportunities of expanding the use of this product and the best approaches to do so.

International Food Relief Partnership

Established in 2000, USAID's IFRP is an initiative that aims to provide shelf-stable prepackaged foods, such as SQ-LNS, to improve food security and nutritional status of vulnerable populations (USAID 2020). IFRP-funded programs are among the few in the world to distribute preventive SQ-LNS. Although funded as a congressionally-mandated program with its own specific objectives, IFRP programs present a unique opportunity to learn from their experiences. At present, IFRP SQ-LNS program awards are typically 18 months in duration and can reach a maximum of approximately 19,200 children 6–24 months of age for six months and 9,460 PLW for 12 months (USAID 2021). In previous work, USAID Advancing Nutrition supported IFRP by conducting a program mapping and gap analysis of small and medium quantity LNS partners (box I) and supported BHA with two focus group discussions (FGDs) on the needs, barriers, and facilitators of implementing small and medium quantity LNS for PLW. Through the FGDs, we learned that there was a need for a maternal supplemental product, but the demand for a new product was limited. This was because organizations were already grappling with numerous challenges associated with product-reliant programs, such as acceptability, compliance, quality, supply chain, sharing, low impact, and social and behavior change (SBC) communication.

Objectives

To examine implementation challenges identified by the program mapping and gap analysis report and the maternal LNS FGDs more deeply, and to gather considerations for expanding program size or scaling up operations, USAID asked USAID Advancing Nutrition to conduct a learning activity with select IFRP partners.

The objectives of the learning activity were to—

- Document factors that promoted and/or hindered successful implementation of SQ-LNS programs from IFRP partners and program participants, especially related to start-up; product use; logistics; coordination with nutrition actors; delivery of complementary activities; provision of SBC; and implementation of monitoring and evaluation (M&E) systems.
- Garner IFRP partner perspectives on considerations for expanding SQ-LNS programs in their contexts, including potential opportunities and constraints.

Box I. Key findings of program mapping and gap analysis

Implementation challenges—

- Inaccurate counts of eligible participants at start-up
- Inappropriate product use (e.g., sharing)
- Resources to provide complementary activities, such as growth measurements

Partners requested support in—

- Coordinating with nutrition actors
- Linking with complementary activities
- Developing SBC materials
- Designing the monitoring and evaluation plan
- Reaching a larger number of children through their SQ-LNS programs

Methodology

Study Design

We used qualitative methods to conduct a learning activity with selected IFRP partners to document the factors that promoted and hindered successful SQ-LNS program implementation and considerations for scaling up use of SQ-LNS in their specific contexts. The study design was a holistic, multiple-case design, in which the unit of analysis was the implementing partner.

Implementing Partner Selection

We selected a convenience sample of three IFRP partners based on USAID recommendations accounting for diversity in the geographic location and the complementary activities of their SQ-LNS programs (**box 2**). Complementary activities were defined as goods or services provided with SQ-LNS to improve the overall well-being of children and PLW.

Box 2. IFRP Partners in Honduras, Niger, and Somalia

Honduras

- International nongovernmental organization (NGO): Americares
- National NGO: Honduran Order of Malta
- Local NGO: Hope for a Healthier Humanity, Fundación Agrolíbano, Acción Honduras

Niger

- International NGO: The Alliance for International Medical Action (ALIMA)
- National NGO: Bien Être de la Femme et de l'Enfant au Niger (BEFEN)
- Local NGO: Bien Être de la Femme et de l'Enfant au Niger (BEFEN)

Somalia

- International NGO: The David McAntony Gibson Foundation (GlobalMedic)
- National NGO: National implementing partner
- Local NGO: National and local implementing partners

Data Collection

Given the coronavirus disease of 2019 (COVID-19) travel restrictions and/or safety concerns, we hired local consultants in each country to conduct the key informant interviews, site visits, group interviews, and informal conversations. The USAID Advancing Nutrition activity team virtually oriented one to two consultants in each country on the objectives of the study and the data collection tools. We also supported consultants during data collection to ensure data quality (Annex I provides the data collection plan and data collection tools).

The consultants conducted key informant interviews with program staff and group interviews with program participants—caregivers of children 6–24 months and PLW, as applicable—to explore implementation experiences (**table I**). They selected the interviewees, participants, and sites in consultation with the partners. Only caregivers and PLW 18 years of age and older were invited to participate in the group interviews. The consultants visited two sites: warehouse and distribution point.

During the site visits, the consultants also asked several questions of the program staff who were present on site. The consultants audio recorded interviews to assist with capturing information as accurately as possible. They documented additional information shared informally by program staff and participants as notes.

Local consultants followed national guidelines on COVID-19. They took precautions, such as wearing a mask and maintaining social distance. They also gave group interview participants masks to minimize transmission of COVID-19.

Table I. Data Collected by Informant Category

	Honduras	Niger	Somalia			
Key Informant Interviews						
International NGO staff	I	I	I			
National/local NGO (program)	2	2	2			
National/local NGO (logistics)	2	I	2			
Local NGO (distribution)	3	3	3			
Observations						
Warehouse visit	2	I	2			
Distribution site visit	3	3	3			
Group interviews						
Caregivers (children 6–24 months)	3	3	3			
Pregnant and lactating women	3	NA	3			
Informal conversations	2	3	I			
Total	21	17	20			

Data Analysis

The consultants translated and transcribed audio recordings of the interviews and group interviews into English from the language that they conducted them in: Spanish in Honduras, Hausa or French in Niger, and Somali in Somalia. They also translated notes and checklists for the warehouse and distribution site

visits into English. For analysis, the USAID Advancing Nutrition activity team and a consultant coded the transcripts by theme (e.g., successes, challenges, recommendations, constraints to scale-up) then used structured templates in Microsoft Excel. We conducted the analysis for each partner separately and then compared across partners.

Ethics and Confidentiality

The JSI Research & Training Institute, Inc.'s (JSI) institutional review board (IRB) deemed this work exempt from review because it did not meet the criteria for human subjects research. All individual and group interview participants gave verbal consent for their participation and written consent for photographs.

Limitations

There were several limitations to this study:

- Given that this was a qualitative study, the findings from this learning activity may not be generalizable to all IFRP partners because each partner differs in where and how they program SQ-LNS. However, the findings will be helpful to those considering operations in similar contexts.
- We intended to conduct FGDs but we felt that the discussions with program participants were
 more group interviews. Moreover, in Niger, our consultants recommended that individual
 interviews with program participants would have elicited richer responses because younger
 participants were more shy and less likely to speak up in front of older community members.
 We were unable to follow through on the recommendation because it was made after the
 group interviews.
- In Niger and Somalia, male consultants spoke to female participants, which could have influenced the quality of the data we received. It would have been better to have a female speak to the caregivers and PLW. To address this, we hired a female consultant in Honduras to conduct the group interviews.
- In Honduras, program staff (e.g., volunteers) expressed an interest in attending the group interviews with participants, and national NGO staff joined the interviews with local NGO staff. Because the learning activity was a collaborative effort, we allowed these individuals to join the interviews, but recognize that this may have influenced the quality of information we received because participants and local NGO staff may not have been able to speak as freely.

Findings

In this section, we first present a synthesis of the findings from the three partners followed by learning from partners in Honduras, Niger, and Somalia separately (tables 2–5). For the synthesis section, we present similarities and differences by operating context; program implementation learnings; product use practices; and considerations for scale-up.

Context: Synthesis

Development/ humanitarian: The implementing partners in Honduras and Niger implemented their SQ-LNS programs in development settings, whereas the partner in Somalia was operating in a humanitarian setting where extremist group activity posed additional challenges.

Undernutrition: The three implementing partners were operating in areas with high prevalence of different forms of undernutrition. For example, the prevalence of stunting (15–35 percent) but not wasting (2 percent) was high in program sites in Honduras, whereas the prevalence of wasting and stunting were high in program sites in Niger (wasting: 13 percent; stunting: 58 percent) and Somalia (wasting: 10–14 percent; stunting: 27 percent) (Instituto Nacional de Estadísticas y la Secretaria de Salud de Honduras 2021; Institut National de la Statistique, Niger 2020; Food Security and Nutrition Analysis Unit [FSNAU] and Famine Early Warning Systems Network [FEWS NET] 2021; Directorate of National Statistics 2020).

Food insecurity: The level of food insecurity varied across the program sites in the three countries. Based on the FEWS NET at the time of data collection, the program sites were estimated to experience minimal levels of food insecurity in Niger (FEWS NET 2021a); stressed or crisis levels in Somalia (FEWS NET 2021b); and crisis levels in Honduras, using the integrated phase classification (IPC) (FEWS NET 2022).

Program Implementation: Synthesis

Geographic scope: In each country, funding limited the program's geographic scope. In Honduras, the partner enrolled all eligible children and PLW within select municipalities in the Dry Corridor of five departments. In Niger, the partner enrolled all eligible children within the catchment area of select health facilities of a district. In Somalia, the partner enrolled a preset number of eligible children and PLW served by select health facilities in five locations.

Coordination: In all three countries, an international NGO collaborated with national and, in turn, with local NGOs to implement their SQ-LNS programs. The program in Niger did not have a local NGO partner because the national NGO had a local presence. The national and/or local NGOs coordinated with the Ministry of Health (MOH) in some capacity. All three international NGOs stated that a strong relationship with their national NGOs and the capacity of the national and local NGOs were key to the success of their programs. The partner in Honduras described challenges working through government health facilities, but partners in Niger and Somalia did not voice this, perhaps because they had established relationships with government health facilities through other programs.

Delivery platform: In Niger and Somalia, partners implemented their SQ-LNS programs through health facilities, whereas in Honduras there were multiple distribution points that included health facilities, community homes, schools, volunteer homes, and even participant homes. Although participants were expected to travel to the health facilities in Niger and Somalia, significant effort was made to take SQ-LNS to participants in Honduras, especially in remote areas.

Human resources: The partner in Honduras relied on volunteers who lived in the same communities as the program participants, whereas the partners in Niger and Somalia worked with both volunteers and health workers. Because they lived in the same communities, the volunteers in Honduras were able to monitor program participants more closely and were engaged with the participants in other program activities. This

Box 3. Observed Distribution Site Staff to Participant Ratio

Honduras: 1:5 to 1:7 Niger: 1:13 to 1:18 Somalia: 1:13 to 1:25

meant that there was a higher staff to participant ratio in Honduras compared with Niger and Somalia (box 3). Despite this, the partner in Honduras still found it challenging to mobilize an adequate number of volunteers and program staff for the distribution of SQ-LNS. Partners in Niger and Somalia also reported that they had insufficient staff involved in the SQ-LNS program to distribute/implement and monitor in the case of Somalia.

Enrollment, duration, frequency: The distribution model varied across the partners. In terms of enrollment eligibility for children, the partner in Niger enrolled children 6-11 months, whereas the partners in Honduras and Somalia enrolled any child 6-24 months (table 2). Children received the product for up to six months in Somalia, up to 12 months in Honduras, and up to 18 months in Niger. Enrollment of pregnant women in Honduras and Somalia was at any stage of pregnancy and PLW received the product for up to 12 months. The distribution frequency was every two weeks in Somalia, four weeks in Niger, and three months in Honduras. In Somalia, participants who lived further away from the distribution site requested monthly distribution. In Honduras, local NGO staff suggested distribution every four months in very remote areas due to poor road conditions.

Complementary activities: In terms of complementary activities for children, the partner in Honduras added the SQ-LNS program to the MOH's Atención Integral del Niño en la Comunidad² (AIN-C) program or a program inspired by AIN-C. This meant that partners trained volunteers involved in SQ-LNS programming in counseling, child growth monitoring, monitoring of pregnant women, and conducting home visits because these were the core components of AIN-C. Therefore, the addition of SQ-LNS distribution complemented the work that the volunteers were already doing. In Niger, SQ-LNS was part of the partner's 1,000 days program, which included antenatal care (ANC), birth delivery, neonatal care, vaccination, and feeding and care from six months to 24 months of life, but these activities were dependent on funding availability. In Somalia, the partner sometimes provided SQ-LNS with other products, such as family emergency kits,³ if the health facility offered them. The partner in Somalia also shared that even routine health services depended on funding availability. Local partners in Honduras also provided food rations, such as MannaPack Rice,4 to the household, but the partners/health facility did not provide them at the time of data collection. We did not learn about the provision of any other food for children or their families in Niger. In terms of anthropometric measurements, the partner in Honduras measured weight and length of children at enrollment and exit, and mid-upper arm circumference (MUAC) every three months. The partners in Niger and Somalia measured weight, length, and MUAC of children every four weeks.

For SQ-LNS PLW, the partner in Honduras provided SQ-LNS along with monitoring of pregnant women through AIN-C, health facilities, and pregnancy groups. Pregnant women received food from the health center, although health facilities were not providing them at the time of data collection. In Somalia, the partner provided pregnant women services available at the health center such as ANC and birth delivery based on funding availability. Certain health facilities in Somalia, but not the ones that distributed SQ-LNS, provided food and other products to pregnant women. Pregnant women in

² Translates to Comprehensive Care for Children in the Community.

³ One household water purification unit (ceramic filter, bucket with lids, spout, sponge) and one hygiene kit (10 bars of soap, 6 toothbrushes, 2 tubes of toothpaste), and one solar light.

⁴ Rice, dehydrated vegetables, and soy nuggets (Dowell 2014).

Honduras and Somalia took SQ-LNS in addition to IFA, if IFA were available from the health facility they visited. Some pregnant women in Honduras also reported taking multiple micronutrient supplements. For pregnant women, the partner in Honduras did not take any anthropometric measurements, whereas the partner in Somalia measured weight every four weeks.

SQ-LNS SBC: All three partners expressed that they would like to invest more in how they communicated information related to SQ-LNS with program participants. Although one of the local NGOs in Honduras had developed a SQ-LNS flipchart for volunteers to use with program participants, they did not have the resources to print sufficient copies for all 150 volunteers. Similarly, the partner in Somalia mentioned that they would like to print SBC materials for program staff to provide standardized information to program participants, which the partner in Niger agreed would be helpful. On distribution day, there was a higher staff to participant ratio in Honduras compared with Niger and Somalia (**box 3**), which meant that staff were able to spend more time giving participants information about SQ-LNS and in some cases problem-solving (**table 3**).

Monitoring and evaluation: All three partners used paper forms to collect information at the distribution site. The partner in Honduras had an electronic platform to enter information from the paper forms, whereas the partners in Niger and Somalia used Excel. Partners in Honduras and Somalia raised concerns about the time it took to enter data (**table 4**). In terms of reviewing data to assess change, partners in Niger and Honduras reported that there were fewer malnourished children in program sites after implementation of the SQ-LNS program compared with before. The indicator for malnutrition in Niger was wasting, whereas in Honduras the indicator was underweight.

Because the partner in Somalia had begun implementation only two months before data collection for this learning activity, it was limited in its ability to share perceptions of change among program participants because of the SQ-LNS program. The partner did note high acceptability of the product among program participants. The partner in Honduras had implemented the SQ-LNS program for a longer time (12 months) and reported an overwhelmingly positive response to the product among many pregnant women, including increased weight of newborn children and more breast milk production compared with previous pregnancies among lactating women. Partners in Honduras and Niger noted that SQ-LNS increased health service utilization in the form of more child consultation visits in Honduras and higher child vaccination rates in Niger.

Logistics: In Honduras and Somalia, partners noted that delays in the arrival of SQ-LNS resulted in program implementation setbacks. Both partners had requested USAID for an extension to the award. The partner in Niger did not face a similar challenge because it had surplus SQ-LNS from the previous award year. Although the partners in Niger and Somalia counted the SQ-LNS sachets for each participant at the distribution site, the partner in Honduras prepared bags of individual rations (30, 60, or 90 sachet bags) in advance of the distribution day. These pre-packaged individual rations saved time on distribution day, but increased the workload of program staff because local NGOs did not always have the resources to hire people to prepare these bags. Program staff and participants in all three countries reported challenges with returning empty SQ-LNS sachets. To overcome this challenge, some local NGO staff suggested that the program bury empty sachets in the communities.

Recommendations: Partners in Honduras, Niger, and Somalia made several recommendations about program implementation related to human resources, distribution model, SBC materials, complementary activities, M&E, and logistics (table 5).

Product Use: Synthesis

Consumption practices: There was an overwhelmingly positive response from program participants toward SQ-LNS. Caregivers in all three countries reported that children 6–24 months enjoyed consuming the product and often asked for more. Many pregnant women in Somalia and some in Honduras reported eating more than one sachet per day. Although participants in Niger and Somalia

found the size of the product to be too small, participants in Honduras found the size acceptable, possibly because they also received food rations, especially in highly food insecure areas. Unlike in Niger and Somalia, participants in Honduras disliked the aftertaste of iron and found it difficult to open the sachets of SQ-LNS for children and PLW without using scissors or a knife.

Benefits: Caregivers in all three countries noted that children looked good, gained weight, and had increased appetite after consuming SQ-LNS. Pregnant women in Honduras and Somalia also noted an increase in appetite and weight gain. Many pregnant women in Honduras attributed the good health of their newborn to the product, whereas some mentioned that the product, along with fruits, vegetables, and prenatal vitamins, resulted in a positive birth outcome (higher birth weight).

Recommendations: Program participants in Honduras, Niger, and Somalia made several recommendations about program implementation related to product acceptability, distribution model, human resources, and complementary activities (**table 6**).

Considerations for Scale-Up: Synthesis

Scope: All three partners expressed their desire to scale up the SQ-LNS program (**table 6**). The partner in Honduras shared that it could reach all eligible participants in the Dry Corridor of Guatemala, Honduras, Nicaragua, and El Salvador. In Honduras, the partner said it could reach 5,000 children in addition to the approximate 3,000 it was already reaching. The partner in Niger shared that it could reach an entire district with up to 200,000 children. The partner in Somalia mentioned that it could double the current target or reach up to 17,000 children. Partners in all three countries quoted these numbers taking into account the need and partnerships in place to expand the scope of their programs.

Considerations for scale-up: Although all three partners expressed their desire to expand the SQ-LNS program, they noted that it would be critical to address existing funding-related programming constraints, such as insufficient personnel and limited resources for SBC materials. Partners also shared that expansion through the health system would be ideal, such as through the health facilities in Niger and Somalia, and the AIN-C program in Honduras. They raised concerns about storage, primarily in the communities. The partner in Niger mentioned the need to consider developing biodegradable packaging given the significant challenge of returning and disposing of empty SQ-LNS sachets. All partners agreed that ensuring program quality would require close supervision. Partners in Honduras and Niger noted that an electronic M&E system would be necessary when operating at a larger scale and most reported that existing indicators were largely sufficient.

Table 2. Characteristics of SQ-LNS Program in Honduras, Niger, and Somalia

	Honduras	Niger	Somalia
Delivery platform	Varies: school, community center, volunteer home, health facility, participant home	3 health centers (HCs) [and their associated 16 health posts (HPs)]	15 maternal and child health (MCH) clinics
Enrollment	Child: 6–24 monthsPLW: pregnant women	Child: 6-11 months	Child: any between 6–24 monthsPLW: pregnant women
Assessment	Child: Weight-for-agePLW: pregnancy	Child: MUAC	Child: MUACPLW: pregnancy
Exit	Child: 24 monthsPLW: no longer breastfeeding	Child: 24 months	Child: 24 monthsPLW: after I2 months
Duration of supplementation	Child: up to 12 monthsPLW: up to 12 months	Child: up to 18 months	Child: up to 6 monthsPLW: up to 12 months
Frequency of distribution	Every 3 months	Every 4 weeks	Every 2 weeks
Complementary activities	 AIN-C or AIN-C inspired Family food ration or food for pregnant women (depends on funding availability) Early child stimulation (one local NGO) 	 I,000 days program component (depends on funding availability) Management of severe acute malnutrition (SAM), infant and young child feeding (IYCF) promotion, family MUAC training 	 ANC, postnatal care (PNC), basic curative, immunization (depending on funding) Health promotion, anthropometry (every 4 weeks) Family emergency kits (only in certain clinics)
SQ-LNS related communication	Prevents malnutrition; take one sachet per day; return empty sachet	Prevents wasting; take one sachet per day; no sharing	Take one sachet per day; side effects; no sharing/selling

Table 3. Observations at Distribution Sites in Honduras, Niger, and Somalia

	Honduras	Niger	Somalia
Number of staff	Paid staff: I-3Paid volunteers: I-3	Paid staff: IPaid volunteers: I-2	Paid staff: 2Unpaid volunteers: I–2
Number of participants	• 16–40	• 25–52	• 50–100
Staff to participant ratio	• 1:5 to 1:7	• 1:13 to 1:18	• 1:13 to 1:25
Time to receive SQ-LNS	• ~77 minutes (mins)—I I4 mins	• ~15 mins–125 mins	• ~30–101 mins
Returned empty sachets	Only I participant, others reported that empty sachets were collected monthly at home visits, health facility, or monthly meetings	Only at one of three sites	Only at one of three sites
Notes	 SQ-LNS-related information/ health talks provided at the end Early childhood stimulation activities provided as caregivers waited at one site 	Nutrition education and anthropometric measurements for first 2 hours followed by SQ- LNS distribution	 No designated waiting area Caregivers and PLW chatting while waiting

Table 4. Perceived Strengths and Challenges of the SQ-LNS Programs in Honduras, Niger, and Somalia According to the Partners

	Honduras	Niger	Somalia		
Perceived Strengt	Perceived Strengths				
Implementation	 Capable local NGO Implemented through volunteers who know the communities well Learned from experience in Guatemala 	 Higher vaccination rates Lower SAM cases Experience implementing program in Mirriah District Support from local authorities No delay because had SQ-LNS from previous year 	 High staff capacity Program participants using SQ- LNS correctly and returning empty sachets (not selling) 		
Supervision	Department coordinator/promoters closely monitor volunteers	Not mentioned	Close supervision from program focal person every month, M&E officer every quarter		
Participants	High acceptability of SQ-LNS among participants	Not mentioned	High acceptability of SQ-LNS among program participants		
Logistics	Experience and system in place at the national level to move large volumes of different types of products	Strong system in place (importation, warehouse, transport to HCs/HPs)	Not mentioned		
Perceived Challen	ges				
Funding amount	 Insufficient to hire data entry staff and logistics personnel to prepare packets 	Insufficient to hire required number of staff	 Insufficient to pay enough staff at the distribution site; M&E officer; or print SBC materials 		
Participants	Caregivers and PLW dislike the aftertaste of iron	Sharing and visiting multiple HCs/HPs	Caregivers found the size of SQ- LNS too small		

	Honduras	Niger	Somalia
Perceived Strengtl	hs		
		Caregivers found the size too small	
Logistics	 Six to nine-month delay in arrival of product Higher than expected transportation costs to deliver to remote communities 	Storage of SQ-LNS at HCs/HPs	 Six-month delay in implementation due to production delay in the U.S. Transport to Kismayo affected by Al Shabab
M&E	 Estimating target number during the proposal writing phase Delay in uploading monthly data to the online platform 	Not mentioned	Data entry at distribution site
Complementary activities	Taking anthropometric measurements more frequently than every 3 months given the number of volunteers available	Dependent on donor funding	Dependent on donor funding

Table 5. Recommendations from program staff and participants in Honduras, Niger, and Somalia

	Honduras	Niger	Somalia
Recommendations	s from Program Staff		
Human resources	Hire more staff, including volunteers and those on distribution day. Also account for staff to count the sachets and enter data in the electronic platform.	Hire more staff and permanent staff. It is important to give staff more training and more information on SQ-LNS so that they can effectively communicate it to caregivers.	Hire additional distribution site staff because two staff per clinic is insufficient to screen, verify cards, take anthropometric measurements of children and PLW, distribute SQ-LNS, and manage the crowd. An additional 2–10 staff should be recruited per clinic.
Distribution model	Continue the program from one year to the next. The product creates interest in the community and the community expects to be able to receive the product in subsequent years.	Consider who receives SQ-LNS because caregivers were dissatisfied when children exited the program after reaching 24 months of age.	Not mentioned
Empty sachets	Consider burying the sachets in the communities because they are challenging to collect and dispose of. Empty sachets attract ants and dogs.	Not mentioned	Not mentioned
Distribution	Change the distribution frequency to 4 months in very remote areas.	Improve the waiting area because some of the sheds need maintenance.	Not mentioned
SBC materials	Print sufficient number of flipcharts for volunteers.	Not mentioned	Provide a written tool for distribution site staff on what to

	Honduras	Niger	Somalia		
Recommendations	from Program Staff	<u> </u>			
			communicate to caregivers about SQ-LNS.		
Complementary activities	Not mentioned	Support home visits by volunteers and/or create "model" mothers to ensure the correct use of the product at home.	Program a preventive product like SQ-LNS with a treatment product (offered at the same site, but to different children based on need) to adequately address malnutrition.		
M&E	 Review existing data and conduct studies to evaluate the program because it has contributed to positive change among children and PLW. 	Not mentioned	Not mentioned		
Logistics	Not mentioned	Not mentioned	Provide each MCH clinic with stock cards to track SQ-LNS supply and prevent stock outs.		
Recommendations	Recommendations from program participants				
Product	 Reduce the aftertaste of iron, if possible. Improve packaging so that the sachet can be opened without scissors or a knife. 	Provide larger SQ-LNS sachets or additional sachets.	Increase the size of the SQ-LNS sachet or provide additional sachets to program participants.		
Distribution model	Provide SQ-LNS for children beyond 24 months of age.	Enroll children older than I I months in the program.	Not mentioned		

	Honduras	Niger	Somalia
Recommendation	s from Program Staff		
Distribution	Manage distribution sites such that program activities are not disrupted.	Improve the condition of waiting areas for SQ-LNS distribution (e.g., shaded areas, benches, mats).	 Construct waiting areas or bring chairs so that mothers can wait without sitting on the floor. Change the distribution schedule from bimonthly to monthly for those who live at a distance from distribution sites. Distribute SQ-LNS to PLW on the same day that children receive SQ-LNS.
Human resources	Not mentioned	 Provide additional training and support for volunteers. 	Not mentioned
Complementary activities	Provide inputs for a kitchen garden so that participants have access to food in addition to the product.	 Strengthen health education sessions, especially information about SQ-LNS. Improve the hygiene of child weighing scales and increase the number of scales. Provide vaccination at different times than SQ-LNS distribution. 	 Offer basic MCH services and supplies at the MCH sites where SQ-LNS is distributed. Provide porridge to children and PLW in addition to SQ-LNS, similar to the corn-soy blend that some other MCH sites offer. Improve child weighing scales for safety and accuracy.

Table 6. Perspectives on scale-up from partners in Honduras, Niger, and Somalia

	Honduras	Niger	Somalia
Scope	`		
Size/Scale	Dry corridor in parts of El Salvador, Honduras, Guatemala, and Nicaragua	Entire district (30 HCs; 200,000 children)	Double; current target of ~14,000 or up to 17,000
Considerations			
Funding	Additional funds	Additional funds	Additional funds
Human Resources	More staff	More staff (in new sites), training for volunteers	More staff per site (2–10 more)
Logistics	Larger warehouse	Storage at HCs/HPsBiodegradable sachetsVoucher system	Ship directly to Kismayo from the U.S.Expand main warehouse
M&E	 Set up electronic system for monitoring Add maternal anemia status as an indicator 	 Embed in the health system Assess maternal mental health 	Train staff on new indicators (e.g., child development)
Local production	• Unsure	 Possible with Société de Transformation Alimentaire (Nutriset franchise) 	Not possible at present
Quality	Supervision	Supervision	Supervision and market trackingSBC materials for staff



Honduras

Context

In Honduras, Americares partners with the Honduran Order of Malta to implement the SQ-LNS program in five departments of the Dry Corridor: Francisco Morazán, La Paz, Valle, Comayagua, and Choluteca (figure 1). During the data collection period for this learning activity in 2022, the FEWS NET predicted that departments in the Dry Corridor would experience IPC level 3: crisis or higher levels of food insecurity (FEWS NET 2022). The 2019 Demographic and Health Survey/ Multiple Indicator Cluster Survey estimated that the overall prevalence of stunting in Honduras was 13 percent and



Figure 1. Map of SQ-LNS program sites in Honduras

wasting was 2 percent (Instituto Nacional de Estadísticas y la Secretaría de Salud de Honduras 2021). However, the prevalence of stunting in the five departments where SQ-LNS was programmed was between 15 percent and 35 percent. The survey also found that nationally the prevalence of underweight (body mass index <18.5 kg/m2) among women of reproductive age was 4 percent and the prevalence of anemia was 22 percent (Instituto Nacional de Estadísticas y la Secretaría de Salud de Honduras 2021).

Americares and the Honduran Order of Malta have been implementing an SQ-LNS program for children 6–24 months and PLW in Honduras with IFRP support since 2020. The Order of Malta shared that it had also programmed SQ-LNS in Honduras with USAID funding six years ago. In 2019, Americares implemented an IFRP-funded SQ-LNS program for children 6–24 months in Guatemala and had adapted the program in Honduras based on its experience in Guatemala.

Program Implementation

Coordination: The national NGO staff shared that they coordinate with three local NGOs to implement the SQ-LNS program. They described challenges working with government institutions because of staff turnover and the time it takes to bring new personnel up to speed on the program. Despite this, some of the local NGOs worked with health centers, but reported such issues as limited flexibility of health center staff to accommodate delays in transportation (some local NGOs stored SQ-LNS at the health centers temporarily) and limited willingness to complete the required monitoring forms.

Delivery platform: The distribution of SQ-LNS took place at multiple locations: community center, school, health center, or volunteer home. Volunteers also delivered SQ-LNS to participants if participants were unable to come to the distribution site.

Human resources: The national NGO had two dedicated program staff for the SQ-LNS program who were responsible for logistics, monitoring, and reporting. Each local NGO had a slightly different human resources structure; one relied on 30–40 volunteers per department who were supervised by a department coordinator, and the other two worked with varying numbers of volunteers who were supervised by promoters, who were also unpaid but more skilled personnel. A local NGO staff person reported that it received a document from the national NGO and used the document to familiarize themselves with the product and, in turn, to train the volunteers. This document was the technical brief prepared by Edesia, manufacturer of the SQ-LNS products.

Enrollment, duration, and frequency: In terms of eligibility, the international NGO staff noted that any child 6–24 months who was not malnourished (based on weight-for-age) was eligible for the product. Pregnant women were eligible if they said that they were pregnant or they were visibly pregnant. Children and pregnant women received the product for a maximum of 12 months. The distribution frequency was every three months, but caregivers and PLW often met every month through pregnancy clubs and to weigh their children. The international NGO staff shared that recruiting pregnant women was challenging because pregnant women visited and received vitamins through health centers, whereas SQ-LNS was not distributed by the program at health centers. Some caregivers did not return if children older than 24 months of age were not given SQ-LNS. In some areas, local NGO staff noted that high levels of migration affected follow-up.

Complementary activities: The international NGO staff reported that there were limited complementary activities provided to participants during the distribution of SQ-LNS. The program took anthropometric measurements of children: volunteers/ promoters measured the weight and length at enrollment and exit. They also measured MUAC every three months. The local NGO staff noted that health talks were also provided to participants. One local NGO implemented an early childhood stimulation activity as children and their caregivers waited on distribution day: they offered age-appropriate toys to children and program staff interacted with children using the toys. Our consultant observed this activity. (See summary of findings in Annex II).

In terms of complementary activities provided to participants apart from the distribution day, national and local NGO staff described several efforts. Specifically, the SQ-LNS component was added to existing programs. Local NGOs were either directly approved by the Honduran Health Ministry to implement the AIN-C program, or were inspired by the approach and incorporated it along with other community development efforts, such as household latrine construction, floor improvement, roof improvement, literacy program, and youth employment/scholarship programs. AIN-C comprises counseling, home visits, and monitoring of pregnant women in addition to tracking child growth. Local NGOs also distributed food rations, such as MannaPack Rice for the family and snacks during weighing, although neither were being provided at the time of data collection.

No anthropometric measurements were taken of PLW on distribution day because it was assumed that they would be measured at the health center or at home by volunteers. In addition to MannaPack Rice, pregnant women were also eligible for special food through the health center, although neither were being provided at the time of data collection. Pregnant women received IFA or multiple micronutrient supplements from health centers, when they were available.

SQ-LNS SBC: There were similarities and a few differences in what staff at different levels reported that they shared with participants related to SQ-LNS, which included benefits of the product, not to share with others, and to return empty sachets. The national NGO staff also noted that they told participants that the product did not replace one's regular diet. One local NGO prepared a flipchart on SQ-LNS for volunteers to use as they interacted with participants. However, due to limited funding, the NGO had only printed one flipchart to be shared among 150 volunteers. At two distribution sites, our consultant observed volunteers/promoters sharing information about SQ-LNS with participants in a group (**box 4**). Volunteers from one organization described suggesting different ways for pregnant women to consume the product, such as eating small portions over the course of the day, or eating SQ-LNS with food, milk, or water; telling mothers about the benefits of SQ-LNS (e.g., the product will provide strength to deliver the baby and that the baby would be born beautiful); and making Post-It notes for mothers to remember to take SQ-LNS every day or assigning a supervisor to ensure that the mother took the supplement.

Box 4. Observed SQ-LNS-related information shared in Honduras

Pregnant and Lactating Women

- Contains vitamins and minerals; peanut-based
- Take one per day, will receive 90 sachets for 90 days today
- Do not share with others; manufactured exclusively for pregnant and breastfeeding women
- Return empty sachets
- Baby will benefit through mom (placenta, breastmilk)

Child

- After 6 months children will receive until 24 months
- Contains vitamins and minerals
- Prevents malnutrition
- Give one per day

Disability inclusion: The international NGO staff noted that they did not make any special considerations for children or caregivers with disabilities, but that the SQ-LNS program was open to everyone who met the eligibility criteria. They noted that special considerations should be made for children with disabilities because caregivers tended to hide such children. Moreover, they noted that the organization was making efforts to accommodate people with disabilities through other projects. One local NGO staff noted that they trained volunteers on how to handle children with special needs and that the organization provided financial support to those who needed medical attention, such as children with cleft palates.

Monitoring and evaluation: The international NGO staff shared that they had set up an electronic M&E platform that local NGOs used to enter data. Our consultant observed that the three local NGOs used different forms to track information on distribution day. Local NGO staff mentioned that there was often a lag in data entry because volunteers worked in remote areas and could only travel at certain times of the month to submit the paper forms to be entered. Data entry was also challenging for at least one NGO because the project did not pay for data entry personnel. This partner had asked the national NGO for funds to hire a data entry support person, which it believed would be approved. In addition to the forms, anthropometric data were entered on the child health card, which the caregivers kept.

Local NGO staff anecdotally shared that the SQ-LNS program had been successful because there were fewer malnourished children (based on weight-for-age), women reported improved birth weight and greater breast milk supply compared with a previous pregnancy, and health centers mentioned an increase in child consultation visits. Health centers also expressed appreciation for the SQ-LNS to PLW because some centers experienced stockouts of IFA at times. Partner staff further noted that there was demand for the product in the community and an expectation that newly eligible participants would receive it. They therefore suggested that the program continue from one year to the next. Local staff further suggested that an evaluation of the program would be worthwhile because it had been so successful.

Logistics: Staff at different levels noted that the six- to nine-month delay in the arrival of SQ-LNS after the award had been signed and the reduction in the program duration from 18 months to 12 months put them at risk of being unable to distribute all the SQ-LNS they had requested on time. Given this scenario, they shared that a request for an extension had been made to USAID. Based on experience implementing an IFRP-funded SQ-LNS program in Guatemala, the international NGO staff reported that it reduced the target number in Honduras because enrollment in the program happens on a rolling basis, therefore, the program did not find the target number on day one. As a result of this, not all participants received the product for the full 12 months of supplementation.

By visiting the warehouses, we learned that national and local NGOs were storing SQ-LNS adequately. (See summary of findings in Annex III). However, one local NGO staff member noted that due to fluctuations in fuel prices, the transportation cost to communities often changed and thus deviated from the budget. Moreover, it was challenging to find vehicles to transport SQ-LNS to certain communities due to poor road conditions. In these areas, local NGO staff recommended that the distribution frequency be extended to every four months. The national NGO staff felt that they had sufficient experience importing and delivering large quantities of products because they did this on a daily basis with several products, including food and medical supplies.

To make the distribution of SQ-LNS efficient, all three local NGOs prepared bags of 90 sachets (enough for three months) in advance of the distribution day. One local NGO staff person noted that it also prepared smaller bags of 30 or 60 sachets for participants who were eligible for a shorter supplementation duration. Another local NGO staff person noted challenges with preparing these bags because it did not have funds to hire people to prepare them, but mobilized existing staff. They also described the difficulties that participants shared about collecting and returning the empty sachets. Local NGO staff were currently asking participants to return empty sachets, which were buried, taken to the incinerator, or loaded on garbage trucks.

Recommendations from partners: To improve the program, partner staff noted suggestions related to human resources, better disposal of empty sachets, and a longer gap between distributions (**box 5**).

Box 5. Recommendations from Partner Staff in Honduras

Human resources

• Hire more staff, including volunteers and those on distribution day. Also account for staff to count the sachets and enter data in the electronic platform.

Program duration

 Continue the program from one year to the next. The product creates interest in the community and the community expects to be able to receive the product in subsequent years.

Empty sachets

• Consider burying the sachets in the communities because they are challenging to collect and dispose of. Empty sachets attract ants and dogs.

Distribution

• Change the distribution frequency to four months in very remote areas.

SBC materials

Print a sufficient number of flipcharts for volunteers.

M&E

• Review existing data and conduct studies to evaluate the program because it has contributed to positive change among children and PLW.

Product Use

Consumption practices: The majority of caregivers described giving SQ-LNS to their children as is. For younger children, mothers reported using a spoon or placing a small amount on their finger and feeding at different points during the day. Some caregivers said that they mixed SQ-LNS with milk or gave milk or water afterwards due to the aftertaste of iron. Caregivers noted that the milk was powdered milk prepared using filtered water. The majority of caregivers gave one sachet per day before or after a meal, but older children asked for more than one sachet. If they had to store the product temporarily, they put it in a container with a lid or a bag. One caregiver also said that she put it in the fridge to store temporarily, but this was not common. Caregivers noted that they stored unused

products in a bag, suitcase, cupboard, or fridge. For empty sachets, they described collecting them in an empty bag, otherwise it would attract ants and dogs.

PLW described similar practices, but commented strongly about the taste and smell of iron. Some also noted that they ate more than one per day and consumed it with food (milk or rice) because they liked it that way or so as not to feel nauseous after eating SQ-LNS. Despite the taste and smell, PLW were committed to taking the product due to the benefits. A few shared that they felt sleepier after eating the product and one described drinking water afterward to feel less sleepy. Several caregivers and PLW noted that opening the sachet was challenging. They used scissors or a knife to open the sachet and, as a result, some of the product was wasted (**box 6**). Although no caregivers and PLW reported any adverse reactions to the consumption of SQ-LNS, local NGO staff noted a few cases in children and that they had suspended the product for these children.

Box 6. Quotes about SQ-LNS from Honduras

Benefits

[A] lady told us, "I had a baby before and I had problems because I did not get milk with the previous pregnancies, and now since I have taken [SQ-LNS], the child came out with good weight, beautiful skin and healthy." Besides that, when they put him to breastfeed, she says, "I got a lot of milk. In my life I have never had as much milk as now."

Local partner staff Honduras

In my case, the other girl was born underweight. This one [delivered after consuming SQ-LNS] was born with a good weight.

- PLW, La Paz Department

Feedback

One must be aware of giving [children] a glass of juice or milk, for the taste in the mouth. Because [after] finishing the packet, just 15 minutes after, one has an iron taste.

- Caregiver, La Paz Department

Because if you only eat [SQ-LNS] and you don't eat well, you don't eat fruits, vegetables, vitamins, all that, you won't benefit from it.

- PLW, Choluteca Department

Perceived benefits: Caregivers described several benefits of giving SQ-LNS to their children, which included improved appetite, weight and height gain, increased level of activity, and well-nourished compared with children who did not get the product. PLW mentioned that they also had improved appetite, and one noted that she was less anemic after taking the product. A few PLW mentioned that children born after the mother ate the product during pregnancy were "beautiful" and "chubby." However, some caregivers noted that they did not experience any difference because birth weight was dependent on consuming other foods in addition to SQ-LNS. They shared that no one in the community or their family objected to the product. In fact, others in their community also wanted to enroll their children in the program.

Views on complementary activities: Caregivers and PLW described positive responses to complementary activities, which they described as vitamins from the health center during pregnancy and even after; health talks on how to take care of children and hygiene practices during the distribution day;

and anthropometric measurement of children. One group of pregnant women noted that they enjoyed attending the meetings because it was an opportunity to relieve their stress and to socialize the baby so that they were not shy. Caregivers and PLW did not describe any challenges with coming to the distribution sites or with the services provided.

In one area, participants noted that the distribution was conducted in community homes that were used for multiple purposes (e.g., school and community activities). Not having a designated space for the distribution day meant that program participants often had to vacate the space midway through distribution activities. Therefore, some participants requested better management of the distribution site. One participant also suggested that inputs for kitchen gardens be provided so that they would have access to food in addition to the product.

Recommendations from caregivers: Caregivers provided several recommendations about the product, distribution, and complementary activities (**box 7**).

Box 7. Recommendations from Program Participants in Honduras

Product

- Reduce the aftertaste of iron, if possible.
- Improve packaging so that the sachet can be opened without scissors or teeth.

Eligibility

• Provide SQ-LNS for children beyond 24 months of age.

Distribution

• Manage distribution sites such that program activities are not disrupted.

Complementary activities

• Provide inputs for a kitchen garden so that participants have access to food in addition to the product.

Considerations for Scale-Up

Scope of scale-up: The international NGO staff described that they could expand to all countries in the Dry Corridor in Guatemala, Honduras, Nicaragua, and El Salvador. In Honduras, the national NGO staff shared that they could expand to at least five more departments (in addition to the five that they were currently operating in) and reach an additional 5,000 children (they were reaching ~3,000). They noted that they already had local partnerships in those departments. Local NGO staff concurred that they could expand and had other partners who were interested in expanding the program, including universities, health centers, and mayors.

Considerations for scale-up: Partners shared several considerations to expand their program:

- Funding: NGO staff across all levels expressed that they would need additional funds for human resources, logistics, M&E, SBC materials, and quality assurance to expand the program.
- Human resources: In terms of human resources, the national NGO staff felt that they would need additional personnel for data entry and coordination of distribution. One local NGO staff person noted that they would need to recruit more volunteers and, in some cases, new volunteers because many of them had been serving in that capacity for more than 20 years. They further shared that new volunteers would need training, equipment (e.g., scales for weighing), and transportation and food on distribution days.

- Logistics: The international and national NGO staff noted that they had the capacity to manage the logistics for an expanded program. The national NGO staff mentioned that they had the capacity to store up to ten 60-foot containers in their current warehouse. However, one local NGO staff member felt that they would need more storage space because they were currently at capacity.
- Monitoring and evaluation: The international NGO staff noted that an electronic platform
 would be important to manage data from an expanded program. The use of tablets for data
 entry at the distribution site should be considered. They did not feel a need to add any more
 indicators, but would consider measuring hemoglobin levels of pregnant women if the budget
 would allow it.
- **SBC:** The local NGO staff noted that they would need additional funds to print a sufficient number of the SQ-LNS flipcharts that they had developed. They would ideally give each volunteer one flipchart. They would also like to purchase promotional materials, such as caps, to increase awareness of the product in communities.
- **Supply chain:** NGO staff at all levels were unsure whether the product could be locally produced.
- Coordination: In terms of coordination, the international NGO staff noted that the capacity of
 the local partner would be key to expanding the program. This included capacity for storage,
 transport, and human resources (e.g., volunteers). One local NGO staff person shared that SQLNS complements AIN-C well and could be implemented in collaboration with local NGOs that
 implement this program. NGO staff at all levels also felt that support from the community
 would be critical.
- Quality: For quality assurance, the national NGO staff noted that close supervision would be required, which the two national NGO staff would be able to provide. However, local NGO staff expressed that they would like more support from the national NGO even now. They further shared that the current budget did not cover program monitoring by program staff, which the organization covered as a cost share.

Appropriateness: NGO staff across levels noted that SQ-LNS was highly accepted by children, their caregivers, and PLW. One local NGO staff noted that although the product contributed to the nutritional status, in food insecure areas, participants also needed food.



Niger

Context

In Niger, ALIMA partners with BEFEN to implement the SQ-LNS program in Dakoro district of Maradi region (figure 2). During the data collection period for this learning activity in 2021, the FEWS NET predicted that Dakoro district would experience IPC level I: minimal levels of food insecurity, which means that households in this area were able to meet their food and non-food needs without engaging in atypical and unsustainable strategies to access food and income (FEWS NET n.d.; FEWS NET 2021a). However, certain districts adjoining Dakoro district were classified as stressed or minimally stressed, but likely to be at least one phase worse without the current programmed humanitarian assistance (FEWS NET 2021a). A Standardized Monitoring and Assessment of Relief and Transition (SMART) survey from 2020 estimated that the prevalence of



Figure 2. Map of SQ-LNS program sites in Niger

global acute malnutrition in the Maradi region was 13 percent and the prevalence of stunting was 58 percent among children under five years of age (Institut National de la Statistique, Niger 2020).

ALIMA and BEFEN have been implementing an SQ-LNS program in Niger with IFRP support since 2016. ALIMA/BEFEN shifted the program from Mirriah district, Zinder region to Dakoro district, Maradi region in December 2020 because funding limitations from other grant streams reduced the scope of the program in Mirriah district to a few health centers for an ongoing randomized controlled trial. The program is no longer in Mirriah district.

Program Implementation

Coordination: The international NGO staff shared that the national NGO coordinated with the MOH, Chief Medical Officer in Dakoro district, and other local NGOs to implement the SQ-LNS program. The MOH was aware of previous studies conducted on food supplements and was therefore open to SQ-LNS. Similarly, the Chief Medical Officer was also open to the program because of the heavy burden of malnutrition (wasting) in the district. The national NGO shared information on the program with the MOH and other NGOs.

Delivery platform: In terms of the location, national NGO staff reported that the SQ-LNS program was implemented through MOH-managed health centers and health posts (or health huts). ALIMA/BEFEN's IFRP program in Dakoro district was run at 19 sites: three health centers and their associated 16 health posts.

Human resources: The national NGO staff described several people involved in SQ-LNS program implementation. They included staff at the distribution site and management staff based in Dakoro and Niamey. At the distribution site, government nurses (two per health facility) and community volunteers (one at health huts and two at health centers) were involved. At the three health centers, the health center in-charge was also involved. A nurse supervisor oversaw implementation of the program at all health facilities. All staff, involved in the distribution or its supervision, received monthly payment for their involvement in the SQ-LNS program. Management staff included the logistics officer, referral doctor, and medical coordinator. The logistics officer ensured the timely transport and storage of SQ-

LNS. The referral doctor based in Dakoro oversaw all aspects of program operations and reported to the medical coordinator in Niamey.

Staff received training before implementing the program. National NGO staff shared that a trainer involved in the SQ-LNS program in the Zinder region provided one-day training to staff at the health facilities in Dakoro district. During the training, four key pieces of information were shared with distribution site staff: SQ-LNS prevents malnutrition; it is not a substitute for food; do not share with other children; and give one sachet per day to the intended child.

Enrollment, duration, and frequency: The international NGO staff reported that their SQ-LNS program enrolled children between 6 and 11 months of age. They noted that although the guidance was to enroll children as close to 6 months as possible, there may have been instances where older children under 24 months were also enrolled in the program due to demand from caregivers. Children received the product for a maximum of 18 months or until they became 24 months. To pick up the SQ-LNS ration, caregivers came to the health facility every four weeks (28 days). The national NGO staff shared that in addition to age, children were screened using MUAC. Those in the red or yellow were referred for treatment, and those in the green were enrolled in the SQ-LNS program (**box 8**).

Box 8. ALIMA/BEFEN's SQ-LNS Eligibility Criteria

- Age: 6–11 months
- Not undernourished:
 - MUAC red or yellow: refer for treatment
 - MUAC green: enroll in SQ-LNS program

Complementary activities: For complementary activities, the international NGO staff shared that the SQ-LNS program was part of the organization's 1,000 days program. However, the ability to implement all components depended on the availability of funding from other grant streams. One health center also treated children for wasting. Staff at this site shared that because of SQ-LNS, there were fewer children enrolled in the severe and moderate acute malnutrition treatment programs. Staff also reported that because of the SQ-LNS program, there was an increase in the number of children who were vaccinated in the area.

SQ-LNS SBC: There was variation in how staff reported what SQ-LNS-related information distribution site staff gave caregivers. The national NGO staff mentioned that they emphasized the importance of SQ-LNS: it prevents wasting and to only give SQ-LNS to the intended child. They also mentioned that SQ-LNS was not a replacement for food. Our consultants noticed that staff involved in distribution primarily focused on telling mothers to give one sachet per day to the intended child due to limited time per caregiver. At one site, staff also shared the benefits of the product with caregivers.

Disability inclusion: Program participants and staff did not recall disabled adult caretakers participating in the SQ-LNS program. However, they said that a few children with physical disabilities were enrolled in the SQ-LNS program, with one staff member adding that most physical disabilities were related to polio. All participants we spoke with voiced their perception that no individuals were excluded from the SQ-LNS program based on having a disability. Our consultants did not observe SQ-LNS provision to disabled individuals at the sites they visited. Although participants and staff clearly expressed their belief that no discrimination should exist against people with a disability, details were not shared about how inclusion was achieved in the program. However, one staff member noted that disabled individuals received immediate attention when they arrived for SQ-LNS distribution, without waiting in long lines.

Monitoring and evaluation: Our consultants saw that the SQ-LNS program used four specific tools to track participant information: participant card (Nutributter ration card); daily consumption record;

monthly consumption record; and register. (See summary of findings in Annex II.) The participant card was the same in all three sites and included the name of the child, name of the mother, ID number, village, health facility name, and date of each visit. This card also had the ALIMA and BEFEN logos, but did not include any anthropometric information. Anthropometric data were documented on the child health card. Health workers or volunteers recorded information on these tools and sent them to the referring doctor in Dakoro. The referring doctor conducted the analysis and sent the monthly report to the medical coordinator in Niamey.

National NGO staff anecdotally shared that they looked at program data to assess how well the SQ-LNS program was working. They noted that this information was not shared with anyone beyond their level and that it was not a scientific study. By doing this, they noticed that there was a reduction in the number of SAM cases in all areas from 2020 and 2021, but the reduction was more pronounced in areas covered by the SQ-LNS program. The international NGO staff also described a cohort study conducted among 1,700 children who received SQ-LNS in Mirriah district that demonstrated the benefits of the product among children who received it.

Logistics: The consultants who visited the warehouse in Dakoro described the building as well organized and sufficient to store SQ-LNS and other products. (See summary of findings in Annex III.) The warehouse manager noted that there had not been any stock outs at the warehouse since he started working there and described several tools to track products: stock cards; exit cards; entry cards; and return cost binder. The national NGO did not experience any issues with customs because the product was considered tax exempt. There was also no delay in implementation of the SQ-LNS program because there were surplus products from Mirriah district, Zinder region that were used to begin implementation in Dakoro in December 2020.

National NGO staff described a few challenges with SQ-LNS-related logistics. The warehouse manager noted that they did not have a thermometer to check the temperature, especially during certain months of the year when the temperature got very high. A national NGO staff person noted that they initially experienced challenges with storing SQ-LNS at the health center/health post store with other medical supplies because the product was not recognized by the Nigerien state. The consultants noted that at the health facilities visited, SQ-LNS was stored with other commodities, such as amoxicillin, syringes, and MUAC tapes.

Recommendations from partners: To improve the program, partner staff noted what they needed in terms of human resources, distribution, and complementary activities (**box 9**).

Box 9. Recommendations from Partner Staff in Niger

Human Resources

• Hire more staff and permanent staff. It is important to give staff more training and more information on SQ-LNS so that they can effectively communicate it to caregivers.

Eligibility

• Consider who receives SQ-LNS because caregivers were dissatisfied when children exited the program after reaching 24 months of age.

Distribution

• Improve the waiting area because some of the sheds need maintenance.

Complementary Activities

• Support home visits by volunteers and/or create "model" mothers to ensure the correct use of the product at home.

Product Use

Consumption practices: All caregivers reported receiving 28 SQ-LNS sachets monthly and feeding the participating child one sachet per day. Most caregivers said that they fed SQ-LNS to their children at any time of day, whereas a few noted a preference for the mornings. Caregivers varied in their reported disposal of SQ-LNS sachets, with only one group mentioning that they brought used sachets back to the distribution site. Another group said that they burned the sachets.

Caretakers unanimously agreed that their children enjoyed SQ-LNS, that there was no difficulty getting their children to eat it, and that there were no reported side effects. They especially highlighted the favorable taste, smell, color, and ease of consuming SQ-LNS, meaning that children did not get dirty when they ate it. In fact, the only dislike reported was that nearly all caretakers viewed the SQ-LNS sachet as too small and said that children finished it immediately, with some children asking for more.

Perceived benefits: All caregivers shared overwhelmingly positive perceptions about the benefits of SQ-LNS for young children, ranging from better growth, relief from the effects of teething, playing more, and overall contributing to good health (**box 10**). Several caregivers expressed their belief that consuming SQ-LNS could protect children not only from malnutrition, but also illnesses like malaria and diarrhea.

Box 10. Quotes about SQ-LNS from Niger

Benefits

We observe that the child who consumes [SQ-LNS] thrives better than another child who does not consume it.

- Caregiver, Baban Kori

My daughter no longer whines and therefore I have time to go about my household and other chores.

- Caregiver, Sabon Machi

I would ask [caregivers] what they thought about SQ-LNS and they would just hold up their kid and [say]...look at his hair, look at his skin, just look at him...

- Global Partner

Feedback

We only want the SQ-LNS partner to increase the [SQ-LNS] size. Otherwise, the taste, color, and packaging are good.

- Caregiver, Kornaka

When asked to reflect on how they, as caregivers, were affected by their child's consumption of SQ-LNS, one caregiver shared that her child was less demanding and therefore the mother had more time to take care of other tasks. Program staff confirmed hearing such remarks from caregivers. Another caregiver shared that to reduce feeding, before the child asked for another breastfeed, she gave SQ-LNS. Caregivers reported no criticism from others about giving SQ-LNS to their children; rather, they commented that other mothers wanted to give SQ-LNS to their own children.

Views on complementary activities: Caregivers mentioned that various complementary services were offered with SQ-LNS, including vaccinations, growth monitoring, and information on hygiene, nutrition, and health. One mother said that having her child measured allowed her to know whether the child was growing well, and another woman said that she valued the advice provided by health workers. Most caregivers said that they received advice from distribution site staff about feeding their child only one sachet per day and that children should drink more water. However, some women shared their preference that vaccination be provided at a different time than SQ-LNS. All caregivers expressed general satisfaction with the distribution of SQ-LNS, including the convenient location at the health facility, the organization of the process, and the monthly frequency. Even two women who lived around 10 km away from the distribution site concurred that the distribution location suited them, commenting that they devoted one day a month to retrieving the product. A few challenges with distribution were noted, including one woman's comment that she found the distribution site staff overwhelmed, which meant that the distribution took a long time.

Recommendations from caregivers: Caregivers provided several recommendations about the product, distribution, and complementary activities (**box 11**).

Box 11. Recommendations from Program Participants in Niger

Product

• Provide larger SQ-LNS sachets or additional sachets.

Eligibility

• Enroll children older than 11 months in the program.

Distribution

• Improve the condition of waiting areas for SQ-LNS distribution (e.g., shaded areas, benches, mats).

Complementary activities

- Strengthen health education sessions, especially information about SQ-LNS.
- Improve the hygiene of child weighing scales and increase the number of scales.
- Provide vaccination at different times than SQ-LNS distribution.

Human Resources

Provide additional training and support for volunteers.

Considerations for Scale-Up

Scope of scale-up: NGO staff reported currently using the maximum available IFRP grant resources for SQ-LNS distribution, although the program currently reaches only three of 30 health facilities in the district. They also expressed interest in scaling up distribution, despite varying perceptions about what scope of expansion would be feasible. They included—

- Providing SQ-LNS to an entire district in Maradi Region, an entire district in Zinder Region, or even an entire region.
- Reaching 200,000 children served by 30 health centers and associated health huts.

Considerations for scale-up:

• **Funding:** NGO staff at different levels considered the main constraints to expanding SQ-LNS distribution to be financial, which contributed to inadequate staffing and logistical concerns with

storage and waiting areas. National NGO staff believed that local technical expertise to expand was present, but noted that the costs of the SQ-LNS program were difficult to cover with an IFRP grant unless there was already a program in the area.

- Human resources: National NGO staff noted that their organization was supporting staffing at health posts that lacked government funding for staff positions, and that these health posts could be tapped for the distribution of SQ-LNS. However, distribution site staff noted that additional staff and volunteers would be necessary. But even staff who said that additional distribution site staff might not be needed said that additional management personnel would be necessary, such as a project manager, M&E support at the health facilities, and coordinators to supervise health facilities.
- Logistics: Staff shared that improved logistics and infrastructure would be necessary to expand the program. They stressed the need for improved and larger distribution spaces (optimally, a large and modern shed) and support to restore a water tower at a distribution site. It would also be critical to assess whether funding for an expanded SQ-LNS program could accommodate a bonus for volunteers because they were principally responsible for distributing SQ-LNS and carrying out sensitization and anthropometry, but they relied on receiving a monthly incentive of 15,000 FCFA (~USD 25) provided by the SQ-LNS project. International NGO staff shared that although storage capacity in Niamey or the region would be feasible, resolving local storage capacity, including temperature control, stock monitoring, and maintenance of tools could pose a challenge.
- Monitoring and evaluation: International NGO staff suggested developing a voucher system for SQ-LNS to improve the tracking of individual children, estimating that it might require three to four months to develop such a tracking system, based on existing registries. National NGO staff noted that scale-up would require additional staff to conduct data management and analysis using appropriate software, and staff to carry out site monitoring. Staff also noted specific indicators to track (box 12).

Box 12. Suggested M&E indicators for scale-up

Coverage

• Number of children reached/ Number of children targeted

Stock management

• Number of boxes available, incoming, and outgoing

Wasting

Number of children who were enrolled who became moderately or severely wasted

Previously wasted

 Number of children enrolled in the program who were previously wasted (but recovered)

Maternal mental health

- Level of anxiety and depression
- Supply chain: National NGO staff mentioned SQ-LNS supply as a potential challenge for scaleup given the lack of local availability and the scaled-up quantity of sachets that would have to be shipped from the United States. International NGO staff noted that local production might be possible given the presence of Société de Transformation Alimentaire (STA), a Nutriset franchise. Nutriset produces LNS products.

- Coordination: National NGO staff said that expanding SQ-LNS distribution would require
 advocacy and the sharing of tools and resources with national stakeholders, such as the MOH,
 donors like UNICEF, and other implementers. At the community level, they stressed the need
 to create understanding and support for SQ-LNS so that it was used as intended to prevent
 malnutrition.
- Quality: To ensure program quality for scale-up, the international NGO staff said that the
 organization would hold discussions with experts and the MOH about how to design a
 distribution model that best integrated SQ-LNS in existing health services, including SQ-LNS
 supply chain management. They also stressed the importance of supervision for quality
 assurance.

Appropriateness: When asked for their perspective on the appropriateness of a product like SQ-LNS for the program context in Niger, national NGO staff shared that although the product did not meet the needs of older children and members of the household, it had still contributed to reductions in child malnutrition.



Somalia

Context

In Somalia, Global Medic collaborates with a national implementing partner to implement the SQ-LNS program in Afgoye, Beletweyne, Kismayo, Mogadishu, Wanleweyn (figure 3). The national implementing partner in turn partners with local NGOs to implement the SQ-LNS program. During the data collection period for this learning activity in 2021, the FEWS NET predicted that poor deyr rains since October 2021 would intensify food insecurity in Somalia (FEWS NET 2021b). Prolonged drought would contribute to water shortages, the likelihood of crop failure, increased staple food prices, and high levels of livestock losses. Most of the program implementation sites were classified as being at IPC level 3: crisis levels of food insecurity, with Afgoye deemed to be at IPC level 2: stressed levels (FEWS NET 2021b). Several program sites (e.g., areas between Mogadishu and Kismayo) were also affected by Al Shabab (extremist group) activity (Council on Foreign Relations 2021). The prevalence of global acute



Figure 3. Map of SQ-LNS program sites in Somalia

malnutrition among children under five years of age in Mogadishu and Kismayo was projected to be 10 percent to 14 percent (FSNAU and FEWS NET 2021). The Somali Demographic and Health Survey found that nationally, 27 percent of children under five years of age were stunted. The same survey found that 15 percent of women of reproductive age were underweight, but that 33 percent were overweight/obese, and the prevalence of anemia was 49 percent (Directorate of National Statistics 2020).

GlobalMedic and implementing partners have been implementing an LNS program in Somalia since 2018. They received the IFRP award in FY 2018, 2019, and 2020. In previous years, the two organizations implemented medium quantity lipid-based nutrient supplement (LNS-MQ) for children and it was only in FY 2020 that they implemented SQ-LNS for children and PLW. With the LNS-MQ program, the implementing partners targeted children 6–59 months with moderate acute malnutrition. At the time of data collection, the implementing partners had only begun implementing the SQ-LNS program in September 2021 (less than two months before the site visits).

Program Implementation

Coordination: National NGO staff shared that the SQ-LNS program was implemented through MCH clinics, overseen by the MOH, but operationally managed by NGOs. To implement the program, the national partner collaborated with other NGOs who managed the MCH clinics. In terms of the nature of coordination with other actors, national NGO staff mentioned that the MOH approved the program and the importation of the products. They noted that the national NGO had a good relationship with the MOH because they also collaborated on a tuberculosis program in other parts of the country. Although the SQ-LNS program was the organization's only nutrition program, the national NGO was a member of the Health and Nutrition Cluster and received capacity building support from the Cluster, such as integrated management of acute malnutrition training. For the local NGOs, the national NGO provided SQ-LNS, trained staff at the distribution sites, and conducted supervision visits.

Delivery platform: National NGO staff described implementing the SQ-LNS program at 15 MCH clinics. These clinics were located in Kismayo, Wanleweyn, Afgoye, Beletweyne, and Mogadishu. The national NGO directly managed three sites and collaborated with four other NGOs to implement in 12

sites. Because these sites were managed by different NGOs, the services offered by each site varied depending on which programs the NGO was running out of those clinics.

Human resources: In terms of human resources, national NGO staff reported that there were two paid nutrition staff involved at the MCH center along with several unpaid volunteers. The nutrition staff and volunteers were supervised by the nutrition focal person and the M&E officer. There was one M&E officer responsible for overseeing all the national partner's projects in Somalia, which resulted in the M&E officer being overburdened. The organization was also unable to recruit sufficient staff at the MCH clinics on distribution days due to funding constraints. The national NGO staff shared that they trained distribution site staff on what to share with program participants: dosage of SQ-LNS; how to use; proper storage; and return empty sachets before the program starts and every quarter.

Enrollment, duration, and frequency: For child SQ-LNS, the national NGO staff reported that they targeted any child between 6 and 24 months of age. Children received the product for a maximum of six months. For example, if a child enrolled at 20 months then they exited from the program at 24 months, meaning that they received only four months of supplementation. Staff reported that for SQ-LNS for PLW, they targeted women at any stage of pregnancy. PLW received the product for a maximum of 12 months and exited the program after their child was six months of age.

The frequency of distribution was every two weeks. The program selected this distribution frequency to prevent the sale of the product along with requiring participants to return empty sachets. Our consultants saw that program participants in only one clinic returned the empty SQ-LNS sachets. They also observed that at the distribution site, there was no designated waiting area. (See summary of findings in Annex II.) Caregivers and PLW simply chatted while waiting. This would have been an opportune time to provide instructions on how to use SQ-LNS and other health and nutrition information.

Complementary activities: National NGO staff mentioned that the MCH clinics provided ANC, birth/delivery services, PNC, basic curative services, and immunization services, depending on the availability of funding. At the time of data collection, birth/delivery services were not provided at any of the MCH clinics. National NGO-run clinics also distributed family emergency kits to participants who were internally displaced persons (IDPs) or lived close to a river. A distribution site staff person noted that cholera cases were high in the area served by the MCH clinic where the family emergency kits were distributed. The family emergency kits included one household water purification unit (ceramic filter, bucket with lids, spout, sponge), one hygiene kit (10 bars of soap, 6 toothbrushes, 2 tubes of toothpaste), and one solar light.

National NGO staff also reported that during the distribution of SQ-LNS, the MCH clinic provided health promotion messages and took anthropometric measurements every four weeks. The anthropometric measurements included height, weight, and MUAC for children, and only weight for PLW. Local partner staff shared a few challenges with the equipment for anthropometric measurements. National partner staff noted that they screened children for wasting and referred any child who was severely or moderately wasted to the nearest health facility that provided treatment for wasting.

SQ-LNS SBC: We found variation in what NGO staff at different levels reported about the SQ-LNS-related information that they gave program participants. One noted that they told participants how to use the product, not to sell it, and to return the empty sachets. Another mentioned that they told participants how to use the product, not to share it, and what to do if there were side effects. Distribution site staff shared this information with program participants orally in groups. Local partner staff noted that there was no written tool that they gave staff at the MCH clinic and that this may be something that they should consider going forward.

Disability inclusion: Both participants and staff recalled barriers to disabled individuals' access to SQ-LNS distribution, including mountains, long queues, a flooding river, and sandy roads. One staff member

commented that if a PLW had a disabled child at home (of any age), it could make it difficult for her to come to the center to receive SQ-LNS. Staff members described various efforts and accommodations for disabled individuals, emphasizing that disabled people were not expected to wait in line, and could appoint a family member to collect the SQ-LNS. Although one staff member noted that the project did not provide transport to community health workers or disabled participants, another staff member said that volunteers, like community health workers, brought sachets to some homes.

Monitoring and evaluation: National NGO staff shared that they reported the number of people reached with SQ-LNS to the IFRP. To be able to do this, they described a register at the clinic where nutrition staff entered participant information and transferred the information from the register to an Excel sheet provided by the national partner. The nutrition staff emailed the Excel sheet to the national partner's nutrition officer (project focal person) who then passed it on to the M&E officer. One local NGO staff person shared that it was challenging for him to enter the information in Excel because this staff person was the only one who knew how to use a computer, but he was busy with other responsibilities at the clinic. National NGO staff reported that although not required by the award, they also looked at the impact of the product (how many children remained well-nourished after consuming SQ-LNS using MUAC, for example) and shared these data with the head office.

Logistics: The national NGO staff noted that Edesia's SQ-LNS production delays due to COVID-19 resulted in program implementation delays of six months. They described that typically, IFRP announced the award in October and the products arrived in Somalia six months later (April). However, due to production delays, the program in Somalia could not begin until September 2021. Although importation was not noted as a challenge, the national partner staff did share that customs clearance took several weeks. The consultants who visited the warehouse in Mogadishu and Kismayo noted a couple of areas for improvement on how the SQ-LNS was stored, such as placing some SQ-LNS boxes directly on the floor rather than on wooden planks. (See summary of findings in **Annex III**.)

Recommendations from partners: To improve the program, partner staff noted what they needed in terms of human resources, complementary activities, and logistics (box 13).

Box 13. Recommendations from Partner Staff in Somalia

Human Resources

 Hire additional distribution site staff because two staff per clinic is insufficient to screen, verify cards, take anthropometric measurements of children and PLW, distribute SQ-LNS, and manage the crowd. An additional 2–10 staff should be recruited per clinic.

Logistics

Provide each MCH clinic with stock cards to track SQ-LNS supply and prevent stockouts.

SBC Materials

 Provide a written tool for distribution site staff on what to communicate to caregivers about SQ-LNS.

Complementary Activities

Program a preventive product like SQ-LNS with a treatment product (offered at the same site, but to different children based on need) to adequately address malnutrition.

Product Use

Consumption Practices: Most caregivers reported feeding their child one sachet per day, and in some cases, they reported giving two or three sachets daily because their children asked for them. Virtually all caregivers reported giving the SQ-LNS sachet without mixing it with another food or drink, whereas a few said they had mixed it with water or milk. Responses varied about the time of day when children were fed SQ-LNS, and several caretakers reported avoiding the hottest time of day, when they believed that children could experience diarrhea or excessive thirst. SQ-LNS was mostly fed before or after meals, not with a meal. Several mothers mentioned giving their child SQ-LNS when other children would not be present. Caregivers reported employing various strategies to safely store sachets in their homes, such as hiding them and locking them up with only the mother having access. Only some caregivers reported being asked to return empty sachets to the distribution site. The other caretakers said that they threw away the sachets because they were not asked to save them. All mothers agreed that it was challenging for caregivers to retrieve the sachets after the child had consumed the product because they would need to run after the child.

PLW shared similar consumption practices. Their consumption of sachets ranged from one to three per day, with the majority stating that they ate at least two sachets per day and found it hard to resist eating even more. One woman who ate at least three sachets a day offered the rationale that she was not told how many to eat. Nearly all PLW participants reported consuming SQ-LNS sachets alone, whereas one woman mentioned mixing it with water and another said that she mixed it with water or juice. A few women reported being instructed not to mix the SQ-LNS with any other food. Another woman said that although women were told to continue normal consumption of other foods, in addition to SQ-LNS, she said that this was challenging because they were displaced from a drought-hit areas.

Perceived benefits: Overwhelmingly, caretakers expressed strong beliefs in the benefits that SQ-LNS brought to their children, especially to prevent malnutrition; increased weight gain, appetite, and activity; and caused them to drink more water (considered a positive, according to interviewers) (**box 14**). Caretakers unanimously agreed that they and their children liked the product for its taste, smell, and soft texture, and several said that their children liked it so much, they cried for more. Management staff concurred that program participants were enthusiastic about the product and enjoyed it so much that they were asking for more. One caretaker heard that SQ-LNS for children tasted saltier than SQ-LNS

Box 14. Quotes about SQ-LNS from Somalia

Benefits

I can feel it from my child that he is doing well, and his weight and his overall energy are better and even his appetite is better now.

- Caregiver, Mogadishu

Once you start eating this product, you won't be able to stop since it tastes so good and has so much nourishment that your body will feel energized.

- PLW, Mogadishu

Feedback

The [SQ-LNS] can't fill the empty stomach.

- PLW, Mogadishu

I would suggest adding extra sachets because there are other children at home who will fight to get the sachet so it's good to have extra sachets, we can't hide all the time.

- Caregiver, Kismayo

for PLW, although she did not convey whether a saltier taste was a positive or negative. Caregivers recounted that family and neighbors saw SQ-LNS as a positive and wanted to participate, and even looked for the product in the market for purchase but could not find it.

PLW mentioned multiple reasons why they consumed SQ-LNS, with the frequent responses related to preventing malnutrition in themselves and their children. Many women described specific benefits that they had observed, such as weight gain, increased energy, more appetite, and more thirst (considered a positive). PLW repeatedly mentioned that they liked the smell and taste of SQ-LNS, and a few said that they appreciated the soft texture and the fact that SQ-LNS caused them to drink more water. Overwhelmingly, women reported that their neighbors and family members considered SQ-LNS to be beneficial and would like to enroll in the program. However, they were unable to do so because registration was full.

Complementary activities: In terms of complementary activities, caregivers mentioned weight/height/MUAC measurement of children and weight measurement of PLW; health promotion messages like breastfeeding and how to use SQ-LNS; and water filter distribution to a limited population of IDP families. One distribution site staff member confirmed that messaging was limited to how to use the product due to insufficient staff. The most common messages reported by caregivers were guidance not to mix SQ-LNS or share it, and to return to the clinic in case of side effects or questions. A few caretakers said there was scant opportunity to receive guidance and ask questions due to insufficient staff because the center was "overpopulated" on distribution days. Distribution site staff described program participants as having many questions about what the product was and why it was different from other products, including questions about the child's age (for eligibility).

Overwhelmingly, caregivers, PLW, and staff noted that essential complementary services and supplies were not available at MCH clinics where SQ-LNS were distributed, especially vaccination, antenatal and delivery care, medicines, porridge, and mosquito nets. One mother noted her worry about a recent measles outbreak in her area because her youngest child was unvaccinated. Both distribution site staff and mothers expressed the need for treatment of acute malnutrition to be available at distribution sites.

Recommendations: Caretakers of children who received SQ-LNS and PLW echoed similar recommendations concerning the SQ-LNS product, distribution, and complementary services provided during distribution (**box 15**).

Box 15. Recommendations from Caregivers and PLW in Somalia

Product

• Increase the size of the SQ-LNS sachet or provide additional sachets to program participants.

Distribution

- Construct waiting areas or bring chairs so that mothers are able to wait without sitting on the floor.
- Change the distribution schedule from bimonthly to monthly for those who live at a distance from distribution sites.
- Distribute SQ-LNS to PLW on the same day that children receive SQ-LNS.

Complementary activities

- Offer basic MCH services and supplies at the MCH sites where SQ-LNS is distributed.
- Provide porridge to children and PLW at SQ-LNS distribution points, similar to the corn-soy blend that some other MCH sites offer.
- Improve child weighing scales for safety and accuracy.

Considerations for Scale-Up

Scope of scale-up: International and national NGO staff reported that the current IFRP grant in Somalia used the maximum funding and quantity of SQ-LNS available through IFRP, emphasizing that the need for SQ-LNS in Somalia far exceeded the available funds and product. Staff estimates for potential expansion ranged from an additional 2,600 people to several suggestions to double the existing participant population of 14,400 by including additional geographic regions (e.g., Central Somalia, Mogadishu corridor) and expanding coverage of populations who are vulnerable (e.g., IDP).

Considerations for scale-up: Overall, international and national NGO staff expressed that the current SQ-LNS program model and protocol would be acceptable and workable for scale-up, although they proposed areas of improvement.

- Staff: Staff unanimously agreed that staffing limitations posed the greatest challenge to current programming and to the aspirations for scale-up. Along with hiring additional staff for distribution, stock management, and M&E, recommendations included enhancing staff capacity to carry out their roles and providing "moral support" and salary for volunteers, who were unpaid at the time of data collection.
- **Distribution frequency**: One staff person suggested that for scale-up, it would be optimal to provide monthly SQ-LNS distribution rather than bimonthly distribution, a suggestion also voiced frequently by program participants. A distribution site manager suggested that community health workers conduct household screening to recruit eligible program participants.
- Complementary activities: Several staff emphasized the need for treatment of malnutrition alongside prevention through SQ-LNS, given that when a child was found to be acutely malnourished, they must refer the family for treatment, which may be far away. Another staff member suggested expanded medical services at distribution sites and improved waiting areas, which were also frequently mentioned as priority needs by participant women (e.g., maternity care).
- **SBC materials:** Staff pointed out the need for printed SBC resources to "help our staff and participants understand about the LNS and how to use it."
- Coordination: In terms of the stakeholder coordination needed for scale-up, the MOH was highlighted in most comments, especially for its role in the validation and approval of SQ-LNS distribution protocols. Staff also noted that it was critical to have overarching financial support and coordination with the international NGO, USAID, and IFRP. Coordination with communities was also noted by one staff member.
- Monitoring and evaluation: Related to M&E concerns for scale-up, staff considered the
 overall system to be sufficient, but stressed that staffing was inadequate to meet even the
 current program needs. They emphasized that additional distribution goals must come with
 more M&E capacity, such as data clerks with computers at the distribution sites. Existing
 program indicators were considered adequate for scale-up, but if additional measurements were
 included (such as child development indicators), additional staff and M&E training would be
 needed.
- Quality: National NGO staff discussed different measures that could be taken to ensure
 program quality during scale-up, including using written protocols to conduct staff training and
 guide processes, and producing printed SBC materials in local languages to help staff
 communicate standardized messages about SQ-LNS to participants. They also mentioned
 maintaining supervision visits to distribution sites and measures to prevent participants from

- selling SQ-LNS packets. They included requiring participants to return empty sachets, conducting frequent SQ-LNS distribution, and visiting local markets to verify that SQ-LNS sachets were not available for sale.
- Logistics: Staff reiterated several challenges affecting current distribution, such as the production and shipping delays described above. Moreover, given that the warehouses were at capacity, staff suggested that scale-up plans must address expansion of warehouse needs in Mogadishu and Kismayo. Due to road security risks between Mogadishu and Kismayo, SQ-LNS must be shipped by sea from Mogadishu (where it arrives in the country) to Kismayo. Although shipping directly from Edesia to Kismayo could be an option, this might increase the transportation budget. They also mentioned the provision of stock cards to optimally manage supplies and avoid product stockouts.
- **Supply chain:** Staff were not aware of feasible options for national or local production of SQ-LNS, although one noted that raw materials are available in Somalia and regional production might be a possibility.

Discussion and Recommendations

This learning activity conducted among partners implementing IFRP-funded SQ-LNS programs for children ages 6–24 months and PLW in Honduras, Niger, and Somalia provided several insights on implementation and considerations for scale-up of SQ-LNS. One theme that was common across the partners was their strong relationship and coordination with national and/or local NGOs. Partners were committed to optimizing the resources that they had to serve their communities, where they felt that SQ-LNS filled a critical need. We discuss the similarities and differences among the implementation learnings and considerations for scale-up below.

- Acceptability: There was high acceptability⁵ of SQ-LNS among program participants in all three countries, but dissatisfaction with the size of the product in Niger and Somalia where participants cited high food insecurity and a dislike of the aftertaste in Honduras. Partners in Honduras also noted that in highly food insecure areas, SQ-LNS alone was not sufficient and that families needed food.
- Complementary activities: Partners in all three countries added the distribution of SQ-LNS to an existing program or platform. In Honduras, SQ-LNS complemented the AIN-C or AIN-C inspired program, which operated through volunteers. Partners in Honduras also provided food rations to households and pregnant women received food from the health center. In Niger, SQ-LNS was part of the organization's 1,000 days program delivered through health facilities; and in Somalia, SQ-LNS was provided at health facilities along with routine health services. All three partners noted that funding in addition to that of IFRP's was essential to making complementary activities (e.g., food rations, vaccines) available.
- Enrollment, duration, frequency: There was variation in how partners designed their SQ-LNS programs, with differences in eligibility criteria, supplementation duration, distribution location, and distribution frequency. Many of these distribution model elements were dependent on the program context. For example, partner staff noted that they distributed SQ-LNS at health facilities in Somalia every two weeks because of concerns about the sale of the product. In Niger, the partners distributed SQ-LNS at health facilities every four weeks, and in Honduras, the partner distributed the product at multiple community sites, including volunteer and participant homes, every three months. Although the distribution frequency was lower in Honduras, partner staff prepared individual rations of 90 sachets in advance of distribution day, which took up a lot of program staff time and was thus an inconvenience.
- **SBC:** We observed that there was a higher staff to participant ratio in Honduras (1:5 to 1:7) compared with Niger (1:13 to 1:18), and Somalia (1:13 to 1:25) at the distribution sites. This meant that staff (primarily volunteers who lived in the same communities) in Honduras were able to spend more time giving participants information about SQ-LNS and, in some cases, problem-solving. Despite this, all three partners noted that human resources were a significant constraint to their programming. For example, in Somalia local NGO staff noted that 10 instead of 2 staff at the distribution site would be ideal.
- Monitoring and evaluation: Although IFRP did not require partners to report on anthropometric measurements, partners in all three countries tracked weight, height, and MUAC of children at varying frequencies. Partners in Honduras and Somalia also reported challenges with data entry: entering data from paper forms to Excel or an electronic platform on time every month. However, partners anecdotally shared that program data showed

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⁵ Acceptability is defined as favorable attitude towards a product, which predisposes the individual to use the product per instructions (Tolley et al. 2013). Sensory attributes, food practices, need perceptions, and the social environment influence acceptability (Klevor et al. 2016).

improvements due to SQ-LNS, including lower cases of child malnutrition in all three countries (underweight in Honduras and wasting in Niger and Somalia) in all three countries by, for example, comparing the prevalence of malnutrition at the program site before and after implementation of SQ-LNS. They also described higher vaccination rates in Niger; and greater birth weight, breast milk supply, and child consultation visits at the health center in Honduras.

• Scale-up: Partners recommended expanding the program through the health system in Niger and Somalia, and through the health system's community-based AIN-C program in Honduras. Despite their willingness to expand, they noted several existing funding constraints that would need to be addressed, such as insufficient human resources; challenges with data entry; and inadequate funding for SBC materials (e.g., job aids to use while interacting with program participants).

Based on what we learned from this activity, we recommend the following actions for program implementation and scale-up relevant to the global nutrition community (**box 16**), IFRP-funded SQ-LNS program implementers (**box 17**), and management of the IFRP award (**box 18**)

Global Nutrition Community

Box 16. Recommendations for the Global Nutrition Community

Program Guidance

- Develop program guidance to enables partners to determine how to program SQ-LNS in their contexts.
- Ensure that the program guidance provides the evidence-based rationale for elements of the distribution model.

SBC

Mandatory inclusion of SBC in the program guidance for SQ-LNS programming.

Scale-Up

• Conduct operational research to understand how to scale-up SQ-LNS programs in areas with high levels of undernutrition.

Develop program guidance to enable partners to determine how to program SQ-LNS in their contexts. The program guidance document should articulate how to program SQ-LNS in a highly food insecure setting. To date, evidence for the effectiveness of SQ-LNS programs has come from studies conducted primarily in development contexts. Several of these studies documented household food insecurity, which was not found to modify the impact of SQ-LNS on child growth (Dewey et al. 2021b). However, the level of food insecurity in Somalia is much more dire (crisis levels) than the settings in which the studies were conducted. Partners could use such metrics as the FEWS NET IPC classification to determine whether to program SQ-LNS alone or in combination with household-level food assistance. A study conducted in Maradi Region of Niger found that an approach that provided LNS or a fortified blended flour (FBF) to children and cash or family food rations over five months led to greater improvements in the incidence of moderate and severe wasting than the provision of LNS/ FBF or cash alone (Langendorf et al. 2014). Such an approach would have cost implications for the program; however, partners could consider collaborating with others operating in their areas such that SQ-LNS will have the greatest impact on nutrition outcomes. However, it is important to note that SO-LNS is not recommended to be programmed with other specialized nutritious foods given the risk of toxicity resulting from consuming higher than safe levels of micronutrients from SQ-LNS and the specialized nutritious food (Chaparro and Dewey 2010).

Ensure that the guidance provides the evidence-based rationale for the elements of the distribution model. Evidence shows that children who start to receive SQ-LNS at close to six months of age are more likely to benefit from the product (Galasso et al. 2019). This is because 20 grams of SQ-LNS meet half the non-milk caloric requirements of a child 6-8 months (Dewey and Brown 2003). The partner in Niger was the only one to attempt to enroll children as close to six months of age as possible. Similarly, recent evidence shows that receiving the product for at least 12 months is as beneficial as receiving it for more than 12 months (Dewey et al. 2021b). However, it is unclear whether SQ-LNS supplementation for six months, as was done in Somalia, will confer the same benefit. There is also limited evidence on when in pregnancy to begin supplementation and for how long to provide the supplementation to PLW. As with all supplements for PLW, starting sooner is likely to confer the greatest benefit. SQ-LNS program design should be evidence-based with the intended outcomes of the distribution model in mind at the outset. Usually, organizations implement SQ-LNS with the aim to improve nutrition outcomes for PLW and children under 24 months of age. Partners may integrate the distribution of SQ-LNS within a broader program that has other intended outcomes such as increasing child vaccination rates and ANC visits for pregnant women. However, it is critical for the distribution of SQ-LNS to be evidence-based when determining eligibility, the duration of supplementation, and which anthropometric measurements to take, if any, and how frequently.

Mandatory inclusion of SBC in the program guidance for SQ-LNS programming. To support this, develop SBC materials that partners can adapt to their contexts to appropriately equip distribution site staff with the information they need to provide participants. This includes illustrations of the key information that staff must share with caregivers, which organizations may be source and adapt from the Infant and Young Child Feeding Image Bank (iycf.advancingnutrition.org). Due to the volume of program participants at each site and the time spent taking anthropometric measurements, staff in Niger and Somalia did not always have time to give caregivers all the information that they needed to give. Staff also did not have any written document to guide them. Moreover, there was variation in what staff shared with program participants. Rarely did staff mention that SQ-LNS was to be given in addition to the child's/PLW's regular meal, which is a critical piece of information because SQ-LNS is a top-up that enhances the quality of a child and/or PLW's diet. SQ-LNS alone is not sufficient. By contrast, volunteers in Honduras interacted with a small group of participants on a regular basis and were trained on how to counsel, including problem-solving. In Somalia, there was also confusion among caregivers about SQ-LNS and other lipid-based products, such as ready-to-use therapeutic food. It is therefore important for programs to correctly introduce SQ-LNS to the community, and clearly explain why it is smaller in size compared with other LNS products and how it will benefit the child despite being smaller in size. Partners who program different LNS products should pay particular attention to this issue.

Conduct operational research to understand how to scale-up SQ-LNS programs in areas with high levels of undernutrition. The addition of any new product comes with the need to orient, train, supervise, and remunerate staff. It also comes with the added responsibility of tracking program participants, and if anthropometric measurements are taken, also accurately taking those measurements and tracking them. Funds will likewise be required to procure the products. At this time, organizations source SQ-LNS from the United States or Europe, but supporting regional/local production would be critical to ensuring the timely delivery in the supply chain and the sustainability of the program. Adding the product to the WHO EML and national medicine lists would enable country governments to procure the products through their medical commodities budgets. This would require positioning SQ-LNS similar to other supplements, such as multiple micronutrient powders for children and IFA, and multiple micronutrient supplements for PLW, which are included in the WHO EML (WHO 2021). Scaling up SQ-LNS will require disposing of a large volume of empty sachets in an environmentally sustainable way. Although partners make the effort to collect empty sachets and dispose of them correctly, program participants do not always return them. It would be helpful to explore options to develop biodegradable sachets and strategies to collect and use empty sachets at home.

IFRP SQ-LNS Program Partners

Box 17. Recommendations for IFRP SQ-LNS Program Implementers Interaction Time

• Consider ways to increase staff interaction time with program participants.

Coordination

 Co-implement, refer or link program participants with existing food security and social protection programs in the area.

Consider ways to increase staff interaction time with program participants. In Niger and Somalia, program participants wanted more interaction time with staff and had several questions about the product. This was primarily due to the low staff to participant ratio at the distribution sites. By contrast, participants in Honduras interacted with volunteers on a regular basis and met as a group once a month and, were able to focus on problem-solving with program participants. Evidence shows that frequency of interaction between program staff and participants is critical to supporting nutrition behaviors. For example, the Alive & Thrive program found that near monthly visits by health or community workers was associated with 2-3 times higher odds of optimal IYCF practices in Bangladesh and Ethiopia (Kim et al. 2020). Thus, SQ-LNS program implementers should consider mobilizing adequate number of staff to provide sufficient interaction time between staff and program participants.

Co-implement, refer or link program participants with existing food security and social protection programs. In highly food insecure areas, SQ-LNS is not sufficient to meet the nutritional needs of program participants and partners recognize this. It is therefore important for programs to co-implement with an organization that can provide food assistance. If this is not possible, partners can refer or link participants with existing food security and social protection programs if they themselves do not implement such a program. This will ensure that participants receive food and other assistance in addition to SQ-LNS. In Honduras, unlike in Niger and Somalia, participants did not comment on the size of SQ-LNS because they were receiving household food rations and pregnant women received food from the health center. In this way, partners will help meet the caloric needs of the participants and members of their households, in addition to the calories and micronutrients that SQ-LNS provides. In highly food insecure areas, if partners are unable to, directly or in collaboration with others, provide food assistance then they should not implement SQ-LNS.

IFRP Award Management

In addition to the recommendations above that are applicable to all partners programming SQ-LNS, this learning activity identified several recommendations specific to the management of the IFRP award (**box 18**).

Box 18. Recommendations for Management of IFRP Awards

Request for application:

• Provide technical reference materials on SQ-LNS communication, distribution frequency, and anthropometric measurements in the RFA.

Award duration:

• Expand the award duration to allow for 24 months of implementation.

Award amount:

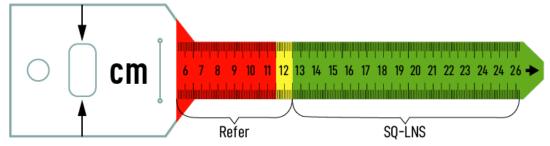
 Increase the award amount to ensure that partners have adequate funds to implement high quality programs.

Community of practice:

• Facilitate a platform for partners to share implementation experiences.

Provide technical reference materials on SQ-LNS communication, distribution frequency, and anthropometric measurements in the RFA. The IFRP Fiscal Year 2022 RFA provides applicants with instructions on what to include in the technical narrative, including: the program goal and objectives; frequency, location, and process of distribution; integration with ongoing programs; coordination with nutrition and/or food security actors; description of complementary activities; and M&E. The RFA also refers applicants to two technical reference materials: one on M&E that clarifies that the number of participants reached is the only required indicator, and the second on programming guidance (e.g., eligibility criteria, duration) and how SQ-LNS can be integrated with other programs (e.g., nutrition, social protection, food assistance). We recommend including three additional materials. The first reference material should provide guidance on what SQ-LNS-related information to share with program participants, including responses to common questions (e.g., how SQ-LNS differs from other LNS treatment products). The second reference material should provide examples of how to adjust the distribution model to ensure that staff have adequate time to interact with program participants (e.g., longer gap between distributions, staggering participants). The third technical reference material should describe which anthropometric measurements to take for children and PLW (Figure 4). For example, the World Food Program (WFP) uses MUAC as an indicator to assess malnutrition (WFP 2012). Additionally, Family MUAC is an approach that empowers caregivers to screen their children for wasting and encourage them to interact with the health system for treatment and care seeking.

Figure 4. Using MUAC to Screen Children for Eligibility into the SQ-LNS Program



Source: Weigh and Measure LLC. (n.d.) "Shorr Child MUAC Tapes." https://weighandmeasure.com/product/shorr-child-muac-measuring-tape/

Expand award duration to allow for 24 months of implementation. At present, SQ-LNS does not arrive in the country until at least six months after the award has been signed with USAID. This leaves I2 months for implementation, including programming, reporting, and close-out. With this limitation, some partners provide SQ-LNS to children for six months, but there is currently limited evidence on the effectiveness of SQ-LNS given to children for less than I2 months (Dewey et al. 2021b). Similarly, the recommended duration of supplementation with SQ-LNS for PLW is I2 months; however, partners found it challenging to provide the product for this duration when they only had I2 months to implement and close-out their program. Because enrollment in the program occurs on a rolling basis, partners seldom had the target number of program participants at day one, thus making it impossible to provide SQ-LNS to program participants for I2 months. After experiencing this challenge once, the partner in Somalia was no longer planning to apply to program SQ-LNS for PLW in the next fiscal year. The award duration likely limits the number of partners who apply to program SQ-LNS for PLW.

Increase the award amount to ensure that partners have adequate funds to implement high quality SQ-LNS programs. Partners were pleased with SQ-LNS, but consistently shared that the award amount was insufficient to implement the program. They mentioned that the cost of the program was more than what the award covered and described subsidizing the award by cost sharing certain aspects. For example, in Honduras, the national NGO covered per diem for program staff and volunteers on the SQ-LNS distribution day. The program in Honduras also operated through a large number of volunteers who were unpaid, other than for transportation of SQ-LNS from IFRP and per diem from the national NGO. However, these volunteers were expected to interact with program participants about the product outside of distribution day, which they described doing. The unpaid services provided by the volunteers have largely been unaccounted for in the cost of the program. Partners in Niger and Somalia also voiced that the award did not meet the staffing needs of the program. Additional resources would also allow partners to do quality SBC, monitoring and evaluation, and supervision.

Facilitate a platform for partners to share implementation experiences to strengthen SQ-LNS programming. From USAID Advancing Nutrition's Program Mapping and Gap Analysis conducted in 2020, we learned that experienced partners who had programmed an IFRP-funded program for at least one award cycle had several recommendations (USAID Advancing Nutrition 2021). Similarly, new partners who had received the award for the first time had several questions about the program model. To support partners in implementing high quality SQ-LNS programs, a community of practice would serve as an ideal platform for partners to share experiences and resources, and to solicit feedback on specific implementation-related questions. Similarly, this learning activity found that the partners in Honduras, Nigeria, and Somalia would benefit from learning from each other. For example, the partner in Niger had stock cards at each distribution site, whereas the partner in Somalia did not and their distribution site staff were requesting stock cards to help minimize stockouts and facilitate projecting SQ-LNS needs more accurately. It is important to note that other challenges (e.g., transportation delays in areas with extremist activity) contributed to stockouts in Somalia. Moreover, the partner in Honduras could share their flipchart with partners in Niger and Somalia to better equip distribution site staff with information about SQ-LNS.

Conclusions

In summary, this learning activity documented the implementation experiences and considerations for scale-up from partners implementing IFRP-funded SQ-LNS for children 6–24 months and PLW in Honduras, Niger, and Somalia. We identified several areas that the global nutrition community can support in the implementation of SQ-LNS and specific recommendations for IFRP SQ-LNS program partners and to management of the IFRP award. SQ-LNS is a highly accepted product among caregivers, children 6–24 months and PLW, but several operational considerations need to be factored in during implementation, including developing program guidance, standardized SBC materials, and sufficient resources to recruit, train, and supervise distribution site staff in efforts to scale up SQ-LNS programs through the health system and associated community platforms.

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Annexes

Annex I. Data Collection Plan and Tools

Annex II. Summary of Findings from Distribution Site Visit

Annex III. Summary of Findings from Warehouse Visit



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