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Strengthening Wasting Management in Nigeria

Findings from Consultations with Wasting Stakeholders

SEPTEMBER 2022

About USAID Advancing Nutrition

USAID Advancing Nutrition is the Agency's flagship multi-sectoral nutrition project, led by JSI Research & Training Institute, Inc. (JSI), and a diverse group of experienced partners. Launched in September 2018, USAID Advancing Nutrition implements nutrition interventions across sectors and disciplines for USAID and its partners. The project's multi-sectoral approach draws together global nutrition experience to design, implement, and evaluate programs that address the root causes of malnutrition. Committed to using a systems approach, USAID Advancing Nutrition strives to sustain positive outcomes by building local capacity, supporting behavior change, and strengthening the enabling environment to save lives, improve health, build resilience, increase economic productivity, and advance development.

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Acronyms

AAH	Action Against Hunger
CHIPS	Community Health Influencers, Promoters and Services
CMAM	community-based management of acute malnutrition
CRS	Catholic Relief Services
CSR	Corporate Social Responsibility
DHS	Demographic and Health Survey
F-75	formula 75 (therapeutic milk)
F-100	formula 100 (therapeutic milk)
FAO	Food and Agriculture Organization
FMOH	Federal Ministry of Health
FMFBNP	Federal Ministry of Finance, Budget, and National Planning
FMARD	Federal Ministry of Agriculture and Rural Development
GAM	global acute malnutrition
GAP	Global Action Plan on Child Wasting
GMP	growth monitoring and promotion
HNO	Humanitarian Needs Overview
IHP	Integrated Health Program
IYCF	infant and young child feeding
LGA	local government area
LGCFN	local government committee for food and nutrition
MAM	moderate acute malnutrition
MDA	ministries, departments and agencies
MNP	multiple micronutrient powder
MSF	Médecins Sans Frontières
MIYCN	maternal infant and young child nutrition
MUAC	mid-upper arm circumference
NAFDAC	National Agency for Food and Drug Administration Control
NCFN	National Committee for Food and Nutrition
NGO	nongovernmental organization
NIFST	Nigerian Institute of Food Science and Technology
OTP	outpatient therapeutic program
PHC	primary health care
PUI	Première Urgence Internationale

RUF	ready-to-use food
RUTF	ready-to-use therapeutic food
SAM	severe acute malnutrition
SC	stabilization center
SCFN	State Committee for Food and Nutrition
SFP	supplementary feeding program
SMOH	State Ministry of Health
SPHCDA	State Primary Health Care and Development Agency
SURE-P	Subsidy Reinvestment and Empowerment Program
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WASH	water, sanitation, and hygiene
WDC	Ward Development Committee
WFP	World Food Programme
WHO	World Health Organization
WIA	Women in Agriculture

Background

In Nigeria, malnutrition remains a problem of public health significance across all age groups and geographies. The causes and risk factors of malnutrition are multifaceted; thus a multi-sectoral approach is needed to address them. The National Policy on Food and Nutrition in Nigeria was revised in 2016; it provides the overarching policy framework for multi-sectoral action to reduce malnutrition in the country. The policy recognizes the "multi-sectoral and cross-cutting nature of food and nutrition," thereby setting the tone for a multi-sectoral response to reducing malnutrition (Ministry of Budget and Planning 2016). The National Multi-Sectoral Plan of Action for Food and Nutrition 2021–2025 (NMPFAN) builds from the policy and guides the implementation of nutrition-specific and nutrition-sensitive interventions across sectors to address the challenges of hunger and malnutrition (FMFBNP 2021). Reducing wasting is a priority in both policy documents with a target to reduce childhood wasting, including severe acute malnutrition (SAM), from 18 percent in 2013 to 10 percent in 2025.

Due to the ongoing conflict in the northeastern states of Borno, Adamawa, and Yobe, the United Nations Cluster System has been activated, thereby facilitating the flow of humanitarian funding for nutrition to support the estimated 1.3 million wasted children living in these states (Nutrition Cluster 2022b). However, data indicates that needs are equally great in other northern states that are not benefitting from this humanitarian support. The North East (9.7 percent) and North West (9 percent) have nearly double the proportion of wasted children compared to other zones (4.3-5.6 percent) (NPC and ICF 2019). However, it is important to note that in the North East, prevalence remains high despite the significant humanitarian resources dedicated to both treat and prevent wasting. The 2022 Nigeria Humanitarian Needs Overview (HNO) notes that the North East Nutrition and Food Security Surveillance Round 10, completed in September 2021, estimates that despite ongoing support global acute malnutrition (GAM) rates in Borno and Yobe have increased to 11.8 percent and 14.1 percent respectively. These are the highest GAM rates in these states since surveillance began in 2016. In inaccessible areas, GAM rates may be as high as 28 percent (OCHA 2021). The HNO predicted that the situation would continue to deteriorate throughout 2022, which local partners have confirmed has happened. In addition, drivers of wasting, including early and frequent pregnancy and food insecurity, exceed the national average across much of the North East and North West (table 1).

Table 1. Indicators for the Northeast and Northwest Regions

Indicator	National Average	North East Region	North West Region
Prevalence of wasting among children under 5 years (0–59 months) WFH <-2 SD	6.8%	9.7%	9%
Minimum acceptable diet, all children aged 6–23 months (percent)	10.6%	9%	9.9%
Prevalence of thinness among women of reproductive age (15–49 years) (BMI less than 18.5 kg/m2)	12.1%	23.3%	16.9%
Total fertility rate	5.3	6.1	6.6
Median age at first birth, women aged 25–49	20.4	18.6	18.1
Access to improved drinking water	65.3%	60.1%	60.7%

Access to improved sanitation facility	53.4%	51.2%	42.5%
Prevalence of diarrhea in children under 5	12.8%	24.6%	13.8%

Source: (NPC and ICF 2019)

While acknowledging the complexity of the humanitarian needs in Cluster-supported states in the North East is important, it is necessary to ensure that all children in need of wasting treatment can receive it regardless of where they live. Furthermore, to reduce the overall burden of wasting and the additional stress it puts on the health system, a holistic plan is needed to prevent children from becoming wasted in the first place.

The Global Action Plan on Child Wasting (GAP) proposes that nutrition actors shift their focus to the strengthening of systems that can be leveraged for both the prevention and treatment of wasting. The GAP was jointly developed by five United Nations (UN) agencies—the Food and Agriculture Organization (FAO), the United Nations Children's Fund (UNICEF), the United Nations High Commissioner for Refugees, the World Food Programme (WFP), and the World Health Organization (WHO), in consultation with a wide range of nutrition actors, including donors and implementing partners. It recognizes the currently fragmented approach to wasting management—largely emergency-centered approaches—must shift to a systems-based approach that strengthens health; food; water, sanitation, and hygiene (WASH); and social protection systems in order to achieve the GAP's goal of reduce wasting prevalence to less than 5 percent by the year 2025 and to less than 3 percent by 2030 (WHO 2020). This does not mean, however, that short-term emergency support to enable immediate life-saving assistance will no longer be required, but rather that it should be delivered in coordination with ongoing systems strengthening and development approaches, and targeted where shocks have caused significant stress on the routine services that should be available within the health system.

Purpose and Objective of the Consultations

To achieve the goal set out in the GAP, UN agencies supported 23 frontrunner country governments to identify a "core set of ambitious yet feasibly priority actions" to address wasting (United Nations 2020). Nigeria was one of these frontrunner countries. The Nigeria GAP Country Roadmap has set the following targets that it hopes to achieve by 2025 by implementing a priority set of interventions through the health, food, WASH, and social protection systems: reduce low birth weight to 4.9 percent; increase the rate of exclusive breastfeeding to 65 percent, increase the coverage of treatment services to 50 percent for children with wasting; and improve child health by achieving universal health coverage, including access to quality essential health care services for a select percentage of the population (UNICEF, FAO, UNHCR, WFP, and WHO 2021).

USAID Advancing Nutrition is the U.S. Agency for International Development's (USAID) flagship multi-sectoral nutrition project. The project strengthens USAID's global nutrition investments by providing assistance to USAID Missions and local partners working at local, regional, and national levels to improve nutritional status and health outcomes where the burden of malnutrition is highest. The project began working in Nigeria in September 2021. One objective of our work is to support the Government of Nigeria to strengthen wasting prevention and treatment services. However, when USAID Advancing Nutrition was initially exploring which activities in the Nigeria GAP Country Roadmap it could support, we uncovered significant gaps in the availability of wasting treatment services in our three implementation states of Bauchi, Kebbi, and Sokoto. This raised questions as to how some of the roadmap's prioritized approaches could be successfully implemented given the gaps in access to wasting treatment. For example, one of the prioritized activities in the Nigeria GAP Country Roadmap is scaling-up the family mid-upper arm circumference (MUAC) approach. This approach enables early detection and self-referral of wasting cases at the community level by teaching caregivers how to screen children

at home using a MUAC tape. However, this approach, if not accompanied by a full suite of community-based management of acute malnutrition (CMAM) activities, may cause more harm than good in places where wasted children are referred to but cannot access reliable, quality treatment. Additionally, the states prioritized in the roadmap[1] are not those that currently have the highest burdens of wasting, as per the data available in the 2018 DHS. The rationale behind this geographic prioritization is not provided in the document.

When USAID Advancing Nutrition was designing our first work plan in Nigeria, we were unable to reach consensus with stakeholders on how best to support the strengthening of wasting prevention and treatment approaches. This was particularly true when questions around access to treatment were raised. Many stakeholders advocated for treatment approaches that use locally available foods instead of relying on ready-to-use therapeutic food (RUTF), which is often not available in sufficient quantities and felt by stakeholders to be unsustainable due to high costs. However, these types of approaches can only address some needs, as there is no evidence-base for using locally available foods to treat SAM cases in the Nigeria context. At present, local food approaches have only been used to treat moderate wasting cases to prevent their deterioration into SAM, reducing caseloads. Support from the government for using locally produced RUTF was mixed, whereas some nongovernmental organization (NGO) partners felt it should be prioritized.

It was clear that more consultation among stakeholders was required to further prioritize and put into action the activities set out in the GAP Country Roadmap and to ensure that these can be effectively implemented by all states with a high burden of wasting and not just those benefiting from humanitarian support or prioritization in the roadmap. USAID Advancing Nutrition agreed to support stakeholders by holding a series of wasting consultations to begin this process.

Objective of the Consultations

The main objective of the wasting consultations was to define priorities and strategies for the Government of Nigeria, implementing partners, and donors to strengthen the quality of and access to wasting management services and activities, inclusive of both prevention and treatment.

Findings from these consultations and a desk review conducted by the USAID Advancing Nutrition team are summarized in this report, which is a guide for the Government of Nigeria, implementing partners, and donors to develop and implement strategic initiatives to address the identified challenges.

Approach

The USAID Advancing Nutrition team consulted with stakeholders within the project's three focus states of Bauchi, Kebbi, and Sokoto, and national-level stakeholders. Additionally, because the availability of RUTF is so critical to ensuring that a holistic continuum of care for wasted children can be implemented, we also conducted one-on-one consultations with local producers of RUTF to understand factors affecting the availability and scale-up of local production of RUTF and other ready-to-use food products.

We held consultations with local producers and state-level stakeholders first to inform the content and agenda for the national-level consultation. These activities were followed by a one-day national-level consultation workshop and a one-day workshop in each of the three states. Details of the approaches used for each of these activities are provided below.

Consultations with Local Producers of RUTF

The USAID Advancing Nutrition team held virtual consultations with three local producers of RUTF: Ariel Foods, DABS Nutritional Products Limited, and Nutri K Limited. We identified these local

[1] Prioritized states are: Jigawa (North West), Gombe (North East), Niger (North Central), Oyo (South West), Enugu (South East), and Bayelsa (South South).

producers through consultations with UNICEF, all of which are UNICEF certified or in the process of finalizing recertification. The consultations sought to understand the history of the companies, from where and how raw materials are sourced, production capacity, key challenges facing them, and opportunities to increase local production of RUTF in Nigeria. Virtual consultations were followed up by visits to the three producers by the USAID Advancing Nutrition team, along with the Mission and other implementing partners.

State-level Consultations

One-day state-level consultations were held in each of USAID Advancing Nutrition's focus states in coordination with the state committees for food and nutrition (SCFNs). Participants were representatives from the government ministries, departments, and agencies (MDAs); implementing partners (international and local NGOs and community-based organizations); community health workers; and community representatives. A total of 150 (female 50, male 100) stakeholders attended across the three state-level events. In line with the objective to define priorities and strategies to strengthen the quality of and access to wasting management services and activities, discussions were held on the following themes:

1. Implementing harmonized multi-sectoral prevention approaches for wasting management
2. Early detection in areas without treatment services
3. Improved and sustainable coverage of treatment services for wasted children in the state
4. State-level actions to support children and households in the absence of a functioning CMAM program.

National-level Consultation

The one-day national-level consultation was facilitated by the USAID Advancing Nutrition, in collaboration with the Federal Ministry of Health (FMOH). Participants in the national-level consultation included stakeholders from the government MDAs, local and international NGOs and civil society organizations, donors, and private organizations; 75 people attended (female 39, male 36), including virtual participation.

Participants were divided into groups and asked to critically analyze the challenges facing wasting management in Nigeria. They identified opportunities, prioritized strategies, and identified strategic actors to support these actions. Discussion topics for the national consultation included—

1. Implementing multi-sectoral wasting prevention approaches: health systems and food systems
2. Implementing multi-sectoral wasting prevention approaches: WASH and social protection systems
3. Sustainable local production of ready-to-use food products
4. Actions to support children and households in the absence of wasting treatment services
5. Sustainable financing for wasting treatment services.

Consultations with Humanitarian Actors in the North East

To round out our learning, we also held one-on-one consultations with four humanitarian actors supporting wasting treatment and prevention in the North East: Action Against Hunger (AAH), Catholic Relief Services (CRS), Prèmiere Urgence Internationale (PUI), and Save the Children. This enabled us to also document implementation approaches, challenges, mitigation efforts, and innovations happening in the humanitarian context that could help inform decision-making about scale up of prevention and treatment services in other parts of the country.

Summary of Consultation Discussions

In the following sections, we present a synthesis of the outputs from consultations with both state- and national-level stakeholders, supplemented by desk review findings. We organized the outputs under the following themes: wasting treatment services, local production of RUTF, and wasting prevention services. We also included cross-cutting sections to highlight challenges and opportunities that cut across these three topic areas and impact multi-sectoral nutrition efforts more broadly. We present these themes under two topics: current interventions and challenges, and opportunities and actions to address wasting management.

Current Interventions and Challenges

This section of the report presents the current state of implementation of wasting prevention and treatment activities and implementation challenges.

Wasting treatment services

CMAM services were first introduced in Nigeria through a pilot program in 2009. The first national CMAM guidelines were developed in 2010 (FMOH 2010), with the latest guidance update focusing on integrated management of acute malnutrition currently underway. As per the 2010 guidelines, CMAM services in Nigeria consist of all standard treatment components, targeting children under five: an outpatient therapeutic program (OTP) for the treatment of SAM without medical complications, stabilization centers (SC) for the inpatient treatment of SAM with medical complications, a targeted supplementary feeding program (TSFP) to manage MAM, and community mobilization to raise awareness of services and support early detection, treatment, and prevention. Several different products are used to treat wasting through CMAM: formula 75 and formula 100 therapeutic milks (F-75, F-100) and RUTF in SCs, RUTF in OTP, and ready-to-use supplementary food (RUSF) in TSFP.

Coverage of treatment services

As part of the state-level consultations, state nutrition officers, who are members of the SCFNs, presented information about the history of CMAM services and the challenges facing treatment service provision in their states (table 2).

Table 2. Summary of CMAM Services in Bauchi, Kebbi, and Sokoto States

State	Year CMAM Introduced	Geographic Coverage	Service Delivery Challenges
Bauchi	2011	Total local government area (LGAs): 20 Target OTP Coverage: 100 Active OTP Coverage: 0	Although service sites exist, they have experienced stockouts of RUTF, F-75, F-100 for more than one year. SAM treatment is not currently available.
Kebbi	2009	Total LGAs: 21 Target OTP Coverage: 105 Active OTP Coverage: 10	Coverage has reduced due to stockouts of RUTF, F-75, and F-100. Only ten OTPs and five SCs are currently active. Other challenges include poor access to OTPs for distant communities and inadequate human resources.

State	Year CMAM Introduced	Geographic Coverage	Service Delivery Challenges
Sokoto	2010	Total LGAs: 23 Target OTP Coverage: 115 Active OTP Coverage: 51	Insecurity in some locations has limited the scale up of treatment services. Other challenges include inadequate human resources and training.

A main takeaway from state presentations is the low coverage of OTP sites, based on an ideal standard of at least five OTPs per LGA. When we looked for additional information about geographic coverage data in other states, we found that very little recent CMAM coverage data for the country as a whole is available. Data from a 2015 evaluation of CMAM services in 11 states in Northern Nigeria estimated that only one in three children were accessing available CMAM services, reaching an estimated 36.6 percent of children (ACF 2015). Given that many of the states included in these coverage assessments no longer receive the same level of support for wasting treatment services as they did during the initial scale up process, it can be assumed that current coverage is now even lower than when this information was last collected.

It is also important to acknowledge that even though geographic coverage is better in the humanitarian intervention areas, partners still face challenges and recent coverage data is still not readily available. The most recent available geographic coverage data from the Nigeria Nutrition Cluster website is from 2017 with CMAM coverage levels of 50 percent in Adamawa, 40 percent in Borno, and 83 percent in Yobe (NiESWG 2017). More recent data shared by the Nutrition Cluster in September 2022 indicates that all LGAs across these three states have OTP services, 57 percent have SC services, and 62 percent have TSFP services. However, the total number of sites, and therefore coverage and reach, is unclear. Even in these states where more partner implementation and financial support is available through humanitarian sources, are still sometimes unable to deliver services in some areas due to insecurity. In these instances, humanitarian actors mentioned working in close coordination with LGAs, State Primary Health Care and Development Agencies (SPHCDAs), community health workers, and volunteers who have better accessibility to these areas or are already living in the communities. In our consultations with humanitarian actors, it was also mentioned that SAM caseloads were on the rise, particularly cases with medical complications requiring inpatient treatment at SCs. Many have been increasing their SC bed capacity and are still reporting full capacity.

Humanitarian actors noted that the pressure on SCs and SAM treatment in general was partially to blame on the lack of treatment services for moderate wasting, or moderate acute malnutrition (MAM). Data on the geographic coverage of MAM treatment services through TSFP is even more limited than SAM treatment geographic coverage data. Based on the most recent mapping from the Nutrition Cluster, only 30 out of 60 LGAs where Cluster partners are currently active across Adamawa, Borno, and Yobe states currently have MAM services available, despite these being prioritized humanitarian contexts (Nutrition Cluster 2022a). WFP is currently in the process of scaling up MAM treatment services, which should hopefully help to improve coverage levels in the North East in the coming months. However, when we spoke to humanitarian actors about this planned scale-up, they remained skeptical stating that WFP has planned for scale-up for a several years and still lacks the necessary funds to do so. They also raised concerns about outstanding issues with geographic targeting and the potential overlap of WFP TSFP services with areas where partners are implementing locally-based food approaches for MAM treatment, such as Porridge Mums and Tom Brown (see section on "Availability of nutrition commodities" for further discussion of this topic).

Funding and implementation support

Loss of support to CMAM programming in non-humanitarian settings has been driven by a combination of factors. In Kebbi, for example, closure and non-renewal of projects that had been supporting CMAM sites, as well as changeover in state government, contributed to the drop in active sites. Stakeholders said that previously there was more political support, particularly from the governor, for procuring RUTF. However, new leadership in the state has meant new priorities and funding for RUTF has been reduced. Now only ten active sites remain. Although these sites do receive support from UNICEF, including the provision of nutrition commodities like RUTF, F-75, and F-100, the available UNICEF funding is not enough to ensure adequate supply availability. UNICEF implements a wide range of nutrition interventions and is therefore present in all states in Nigeria. However, the extent of the support package is based on available funding. UNICEF also explained that in non-humanitarian settings a greater emphasis is placed on state-support for commodities with the aim of making the services more sustainable. However, as the Kebbi example illustrates, this does not always work successfully and can mean reduced service availability even when the need for services is not reduced.

Humanitarian actors also reported an increased burden on remaining partners as others pull out and cease support to wasting treatment and prevention activities. The response is currently severely underfunded with only $19.2 of the $144.3 million funding request received, amounting to only 13 percent of required funds. Of the 320,000 children under five in need of and targeted for SAM treatment services, the Cluster has only reached 150,000. For MAM children, only 640,000 children of the 850,000 in need have been targeted and only 80,000 have been reached (Global Nutrition Cluster 2022).

Despite shared challenges with financing and coverage, stakeholders perceive that donors and implementing partners prioritize support to humanitarian contexts over other areas of the country. Stakeholders were also interested in introducing performance- or results-based financing approaches for nutrition to service delivery. An approach like this has been used as part of the Nigeria State Health Investment Project through which health centers receive funds based on the quality of essential services that are delivered. Stakeholders felt that this could be a way to improve the quality and financing of nutrition commodities and treatment services by using performance indicators, such as cured, died, and defaulted.

Availability of nutrition commodities

Availability of therapeutic products—including RUTF, F-75, and F-100—were also reported as inadequate during the consultations in Bauchi, Kebbi, and Sokoto states. In contrast, humanitarian actors reported acceptable levels of RUTF, although with occasional challenges, but cited significant problems with the availability of therapeutic milks. One partner reported a six month break in these two supplies and multiple micronutrient powder (MNP), all of which are supplied by UNICEF. To manage these breaks, partners reported borrowing stock from other organizations who are able to procure directly from suppliers and are not reliant on the UNICEF supply chain.

Across our consultations, stakeholders raised issues around the available state and federal level financing for the purchase of RUTF, which is of particular importance in areas that do not receive high levels of humanitarian support for nutrition treatment services. Stakeholders cited issues with the release of committed funds that are meant to be dedicated for RUTF procurement and a lack of political will to ensure more resources are earmarked for and spent on these products.

The availability of RUSF for treatment of MAM was not raised by stakeholders during the national- or state-level consultations, but many stakeholders expressed an interest in implementing alternative treatment approaches that use locally available foods. Stakeholders specifically mentioned the Tom Brown approach, which was developed by CRS in North East Nigeria, although Porridge Mums is another local-food based approach also being implemented in the region by AAH. Given the low coverage of TSFP services for MAM, it is understandable that stakeholders would have an interest in identifying alternative treatment options. Three of the humanitarian actors (CRS, PUI, and Save the

Children) are currently implementing Tom Brown in the North East and all recommended it as an important approach to not only treat MAM children but to prevent an increase in SAM cases putting additional stress on the system. However, partners mentioned that WFP had reservations about the approach, calling it substandard to TSFP. Partners mentioned some of the concerns were due to the lower levels of micronutrients in the Tom Brown recipe and were working to address this by putting in place standard operating procedures for Tom Brown implementing partners to gain access to MNPs for distribution to households enrolled in the program. Furthermore, as WFP is working on its geographic targeting for the planned TSFP scale-up, partners reported that WFP prefers to target LGAs where their partners are already present. This means that WFP wants to target areas with active Tom Brown programs rather than prioritizing areas where there are no MAM treatment services at all. Partners are still advocating with WFP on the targeting issue and report that as of September 2022 there has been no conclusion.

Tom Brown implementers and AAH also mentioned adapting their local-food based MAM treatment approaches to better engage men. Save the Children mentioned piloting a father-to-father support group model, with links to Tom Brown, and AAH is piloting a Porridge Dads approach.

Capacity strengthening for CMAM

Last, challenges with capacity of both health workers and nutrition focal persons to use digital health information management systems (e.g. District Health Information Software 2) were also cited. Some stakeholders also identified a need to strengthen general CMAM service delivery capacity. Strengthening capacities is a critical part of re-scaling wasting treatment services across states where coverage has remained low or has eroded, but it should be doing alongside efforts to ensure the availability of therapeutic and supplementary products at the service delivery sites, as the lack of these inputs has rendered many service delivery sites non-functional.

Local production of RUTF

Local production of ready-to-use therapeutic food (RUTF) has many potential benefits: creating a more reliable product supply that is not subject to import-related delays, supporting the local economy, and reducing the carbon footprint by using locally available materials. Depending on the particular market, it may also result in a cheaper product, thereby reducing the overall cost of treating severe wasting in children under five. The desire to produce both RUTF and other supplementary products locally in Nigeria has been around for many years. A RUTF feasibility study was undertaken in 2015 that found there was potential to create a profitable, sustainable, and globally competitive RUTF production business in the country (Van Pelt, Newton, and Twiss 2015). Shortly after this study was completed several firms started equipping and building factories and seeking the necessary certifications to begin production of these products. USAID Advancing Nutrition sought to understand how local production was progressing since these earlier efforts were initiated and therefore spoke with three local producers: Ariel Foods, DABS Nutrition Products Limited, and Nutri K Limited. Table 3 summarizes the operations of the three firms interviewed by the USAID Advancing Nutrition team.

Table 3. Overview of Interviewed Local Producers

Producer	Start of Operations	Location	Products Produced	Production Capacity	Clients
Ariel Foods	Broke ground on facility in 2018, started production in December 2021	Alaro City in Lekki Free Trade Zone, Lagos	RUTF—but facility has capacity to also produce RUSF and MQ-LNS	60,000 MT per year—currently at 25% capacity	UNICEF, NGOs

DABS Nutritional Products Limited	Started production in 2019	Lagos	RUTF, RUSF	4,500 MT per year[2] Not currently producing at capacity to avoid stock expiry	UNICEF, NGOs, one state government (Nasarawa State)
Nutri K Limited	Established in 2018, started production in 2021	Kano	RUTF Planned: RUSF, Plumpy'doz (prevention of MAM), PlumpyMum for pregnant and lactating women, LNS-SQ	10,000 MT per year	UNICEF, NGOs, state governments, exporting to Chad and Niger

Production capacity

Despite the positive feasibility study and the expansion of local producers in Nigeria in recent years, challenges to the scale of local production remain. UNICEF procures 75–80 percent of the global demand of RUTF and is continually reviewing and expanding its supplier base to include more local producers. However, the UNICEF Supply Division estimates that only approximately 56 percent of global production capacity is being utilized, with cost being a main limiting factor to increasing demand for more products. Furthermore, the reliance on donor—particularly humanitarian—funding to procure RUTF and the limitations of this funding are closely linked to this underutilization of production capacity (UNICEF Supply Division 2021). All the local producers we spoke with mentioned that they were not currently producing at their full capacity, in terms of both the amount of RUTF produced but also the types of products their factories are capable of producing. During site visits, we also identified EmZor as another potential manufacturer that has the necessary equipment to begin ready-to-use food (RUF) production but has not started due to a lack of demand. Most local producers are able to make any type of supplementary or therapeutic product that comes in paste form, which include products that can be used for treating MAM and preventing wasting in both children and pregnant and lactating women. Many of them are also already equipped or considering expanding production capacity to also produce their own peanut paste, which is a key input that is currently lacking in the local market (see section on "Sourcing of raw materials" for more information).

Cost competitiveness

When we spoke with local producers about what was limiting the expansion of their customer base, they also raised cost competitiveness challenges, primarily the cost of importing raw materials that are not currently available in sufficient quantities—or at all—locally. Related to this issue, producers cited difficulties competing with duty-exempt imported RUTF (as UNICEF has exemptions) at the current scale of production, as well as different producers also having duty waivers on some imported inputs based either on individually negotiated conditions or the location of the company within a tax-free zone. The UNICEF Supply Division also notes this cost difference and estimates that locally produced RUTF

[2] The interviewee stated an estimated monthly production capacity of approximately 27,000 cartons. For ease of comparison across producers, this figure was derived using standard UNICEF conversions (1 MT = 72 cartons) (UNICEF Supply Division 2021).

costs 12 to 14 percent more than imported RUTF on average (UNICEF Supply Division 2021). All producers have sold their RUTF to UNICEF and other NGOs. However, only one cited having a few state government clients. Challenges with selling to governments included reliability of payment on orders and also cost hesitation. Given that imported RUTF from UNICEF is cheaper, questions are raised as to why state governments should buy more expensive, locally produced products. We were told that many make cost inquiries but do not then place orders. Government stakeholders view the purchase of RUTF as cost intensive and unsustainable and therefore prefer to invest in alternative treatment approaches. However, there are currently no evidence-based local-food based treatment approaches for SAM. This needs to be further clarified with stakeholders as it seems there is a misunderstanding about the appropriate use of alternative approaches, which are only suitable for MAM treatment. However, there may be opportunities to explore simplified treatment approaches that use common products for both MAM and SAM treatment, reduced and simplified dosages, and MUAC-only admission and discharge criteria. However, stakeholders did not mention any of these simplified options during the consultative process.

Regulatory and enabling environment

Regulatory requirements, including the need for specific waivers to import certain inputs like milk powders, were also noted to be labor-intensive and cumbersome rather than supportive of local producers. There was a general sentiment that given the importance of RUTF in reducing wasting there should be a more supportive environment for producers trying to meet these needs. Companies also cited significant RUTF cost increases due to the COVID-19 pandemic and the war in Ukraine, which is driving up the costs of inputs, including fuel to run generators at the local production facilities, as well as the cost of imported raw materials. UNICEF has also noted that it will realign its RUTF prices due to these factors and anticipates up to a 16 percent increase in RUTF prices (UNICEF Supply Division 2022).

During a visit to the National Agency for Food and Drug Administration Control (NAFDAC), it was mentioned that NAFDAC is only responsible for the regulation of packaged products. Although they have a role when it comes to the final RUF products, there seems to be a disconnect in ensuring the testing of raw materials, like peanut pastes. Local producers confirmed during site visits that many product samples are still sent abroad for testing. More needs to be done to streamline these processes and clarify regulatory roles and responsibilities when it comes to ensuring the quality of locally produced RUFs.

Sourcing of raw materials

USAID Advancing Nutrition asked local producers specifically about which inputs are imported versus procured locally, as well as plans for increased local procurement. Table 4 summarizes the responses from the three producers. In general, most locally procured inputs are for packaging and not for the RUTF product itself. Producers cited procurement issues with peanuts and oils, given availability and quality issues. For peanuts, as in many other countries, ensuring an adequate supply of quality, aflatoxin-free peanuts is the main challenge. Several producers have been working with agriculture-focused NGOs to support local farmers to produce higher quantities of aflatoxin-free peanuts and other RUTF local producers were interested in supporting similar initiatives. However, there does not seem to be any coordination between the local RUTF producers, NGOs, and farmers in these efforts to date. Additionally, one producer mentioned that although farmers have been able to increase their output of acceptable peanuts, they often sell them (up to 70 percent of yield) to other buyers before the local producer can procure them for RUTF production. Local producers explained that this occurs because they do not provide loans to cover the farmers' upfront costs for peanut production or do not prepay for the harvest. Many farmers instead take loans that automatically take a portion of the harvest or prefer to sell to buyers that prepay, even though they may have agreements with local producers as well.

Table 4. Summary of Inputs and Sources for Producing RUTF

Input Type	Locally Procured	Imported	Working on Local Procurement
Food product input	Peanuts—but limited supply, vegetable oil	Canola oil, peanuts, milk powder, vitamin premix	Palm oil, peanuts (increasing current levels availability and quality)
Packaging input	Cartons/corrugated sheets, poly-liner bags, tape, pallets, film for wrapping pallets	None mentioned	None mentioned

Wasting prevention approaches

Wasting prevention can encompass a broad range of approaches and interventions. In many ways, discussions around ways to prevent wasting become synonymous with implementing multi-sectoral nutrition interventions that seek to improve the nutrition status of the population as a whole. To help bring structure to the discussions on wasting prevention in the consultations, we asked stakeholders to discuss ongoing activities and challenges that fit under the health, food, WASH, and social protection systems outlined in the GAP. We noted that stakeholders' inputs were skewed more toward prevention interventions within the health and food systems and there was less confidence when speaking to WASH or social protection system contributions to wasting prevention.

Policy environment for multi-sectoral nutrition activities

The NMPFAN places a strong emphasis on preventing malnutrition. There are 15 MDAs identified within the plan as key contributors to achieve the multi-sectoral nutrition objectives set out in this plan. These same MDAs, with representatives from academic institutions and other nutrition-focused organizations, make up the membership of the National Committee for Food and Nutrition (NCFNs); state-level MDAs and SCFNs mirror this structure.

The NMPFAN has been costed in an effort to guide MDAs, donors, and partners in its implementation. Almost 90 percent of the costed activities are prevention related (FMFBNP 2021). However, upon closer examination of the budget breakdown of federal government contributions to the financing of the plan over its 5-year implementation period, the costs are significantly skewed toward the health sector. Table 5 summarizes the sectors to which the largest share of the federal government contribution to the NMPFAN are allocated. Approximately 84 percent of the projected costs fall within the health sector. Agriculture is a distant second at just under 11 percent and the Federal Ministry of Finance, Budget and National Planning (FMFBNP), which is the organizational home of multi-sectoral nutrition coordination, has less than 3 percent of the total budget at its disposal. The remaining 11 sectors'[3] total budget allocations make up the remaining 5.6 percent of the federal government contribution; most additional sectors have budgets of well under 1 percent of the total. To put these sectoral contributions into context: federal government financing of the plan only accounts for 11.8 percent of the estimated total cost over the five years, with the remainder of the financing proposed coming from states and

[3] Federal Ministry of Women Affairs and Social Development; Federal Ministry of Information and Culture; Federal Ministry of Water Resources; National Emergency Management Agency; Federal Ministry of Science & Technology; National Agency for Food and Drug Administration and Control; Federal Ministry of Education; Federal Ministry of Industry, Trade and Investment; Federal Ministry of Works and Housing; Ministry of Internal Affairs; Standard Organization of Nigeria

LGAs (51.3 percent), development partners (29.3 percent), and the organized private sector (7.5 percent).

Table 5. Estimated Percentage Share of Federal Government Investment Cost to the NMPFAN—Largest Contributing Sectors

Sector	Estimated Investment Cost
Federal Ministry of Health	42%
National Primary Health Care Development Agency	42%
Federal Ministry of Agriculture & Rural Development	11%
Ministry of Finance, Budget and National Planning	3%

The Nigeria GAP Country Roadmap includes many prioritized activities focused on prevention. Activities under outcomes 1-3, which focus on drivers of wasting, are summarized in Table 6. However, stakeholders did not refer to the Country Roadmap during the consultations nor does there seem to be a great deal of momentum behind the plan. When we enquired, UNICEF stated there were no immediate follow-up actions planned to facilitate the roll out of the GAP.

Table 6. Summary of the Nigeria GAP Country Roadmap Prevention Priorities

Outcome	Activities
1. Reduce low birth weight by improving maternal nutrition	Health System: scale up of supplementation programs (iron-folic acid and MNP); promote nutrition education and campaigns on dietary diversity and consumption of locally available foods; improve access to reproductive health services; community sensitization on teen marriage and promotion of access to schooling for all adolescents. Food System: encourage home gardening and small animal husbandry; enhance the value chain for food with high economic and nutrition value; promote fortification (including bio-fortification); generate evidence and data (e.g. price monitoring, food security, cost of health diets). Social Protection System: revise pre-service teachers' curriculum and conduct in-service training on food and nutrition; promote home grown school feeding/school meals; incorporate nutrition considerations into social protection programs.
2. Improved child health by improving access to primary health care,	Health System: improve growth monitoring for children under five, using MUAC; expand deworming program; increase vitamin A supplementation for children 6-59

WASH services, and enhanced food safety	months; improve MICYN counseling; conduct operational research, health worker capacity building, and advocacy. Food System: build capacity on good agricultural practices, innovative storage methods, and food safety along the agricultural value chain; incorporate food safety information during ante-natal classes, community women group's forums and infant and young child feeding (IYCF) materials. WASH System: increase implementation of joint nutrition and WASH programs; increase coverage of handwashing facilities and WASH services; promote provision of soap and WASH services through all food assistance platforms.
3. Improved IYCF by improving breastfeeding practices and children's diets in the first years of life	Health system: intensify "Zero Water Campaign"; monitor regulations and international code on breastmilk substitutes; advocate for maternity leave extension; support implementation of nutrition assessment, counseling, and support for pregnant and lactating women; scale up GMP as an entry point for dietary assessment and counseling; scale up IYCF support groups linked with family-led MUAC; integrate complementary feeding bowl into IYCF programming. Food system: integrate homestead food production into nutrition programs; develop and promote nutrition adequate and affordable recipes using locally available foods; promote locally produced complementary foods, including private sector partnerships; generate evidence/data on cost of diets, nutrient gap analysis, and National Food Consumption and Micronutrient Survey and other routine surveys; advocate to invest in research, monitoring and evaluation, and learning. Social protection system: provide specialized nutritious food, cash/voucher, and behavior change communication campaigns for pregnant women and women with children up to age two.

Health System

The National CMAM Operational Guidelines cite several prevention intervention areas that should be linked to wasting treatment services. Examples from the guidelines include growth monitoring; infant and young child feeding (IYCF) and Essential Nutrition Actions (ENA); HIV, tuberculosis, and Expanded Programme on Immunizations services; WASH; agriculture; microfinance; among others (FMOH 2010).

Based on feedback gathered during the consultative process, much work still needs to be done to better coordinate and integrate prevention services so they will have a meaningful impact on wasting prevalence. States cited the poor integration of nutrition-sensitive programs in the communities to aid the prevention of wasting, specifically noting that poor maternal, infant, and young child nutrition (MIYCN) practices and food insecurity as key drivers of wasting that need to be both prevented and addressed. Stakeholders also noted that although community members may have knowledge on improved practices, more needs to be done to reduce barriers to putting this knowledge into practice.

Stakeholders also mentioned broader health systems strengthening needs, such as increased numbers of skilled human resources, improved health information management, use of data for decision-making and planning, and solving the issue of inadequate supplies and equipment at the health facilities.

Food System

Within the food system thematic area, workshop participants largely discussed two priority areas that, if addressed, could support the prevention of wasting, including poor availability of nutritious foods, including biofortified and fortified foods; and less than optimal food safety and hygiene within the food system.

Regarding food availability, stakeholder participants focused primarily on food production within the food system. Stakeholders mentioned that productivity is hindered by many factors, including low adoption of good agricultural practices, access to inputs and services, access to necessary information and resources to invest in agriculture, and safety and security in parts of Nigeria. Many farmers in the north of the country practice subsistence farming and do not have access to new technologies. Stakeholders have cited a lack of access to improved seeds and seedlings as a key barrier to improved agricultural output. Banditry, kidnapping, and insecurity create situations in which farmers may have to pay fees to access their farms and suffer from looting and robberies, leading to productivity and financial losses. Additionally, the prices of both food and agricultural inputs continue to increase due to compounding factors caused by COVID-19, the war in Ukraine, and the depreciation of the Nigerian Naira (FEWS NET 2022).

Farmers often lack the necessary capital to invest in their agricultural activities. Stakeholders noted that farmers are often promised support from the government to help mitigate some of these challenges, but funds are reportedly not released or released too late in the season to have the intended impact on production. On the post-production side of the food system, stakeholders highlighted challenges related to post-harvest handling practices leading to loss. These challenges included both staple crops that are consumed at home and sold in the market, as well as vegetables that are highly perishable. In some instances, farmers apply agro-chemicals, such as pesticide, directly to the harvested produce to reduce post-harvest losses, rather than adopting improved storage practices. Stakeholders also noted that farmers do not know how to properly harvest, store, or process foods in order to preserve them for later consumption, especially during lean season. Household overcooking of foods, particularly fruits and vegetables, was also mentioned as an important gap in food preparation-related skills and practices that may be contributing to poor dietary intake.

Biofortification and the fortification of foods provides a unique opportunity to increase the nutrient content of food items and, therefore, nutrient intake by consumers. Stakeholders cited challenges with biofortification and fortification that ranged from input issues, technical capacities of food systems actors, awareness by consumers, and the enabling environment. Quality protein maize and orange flesh sweet potatoes are two biofortified foods in the three states that have production potential. However, inadequate input supply networks, farmer awareness of biofortified varieties, as well as farmers' agricultural practices, do not support the increased production of these food items. Nigeria mandated the fortification of five staples in 2002, which can support the increased dietary of critical micronutrients (Sight and Life n.d.). Stakeholders cited issues related to poor compliance by processors, coupled by inadequate monitoring by enforcement departments, poor quality of the micronutrient premix, cost of importing premix, and shelf-life issues with premix. Related to these challenges, stakeholders also mentioned inadequate funding and inadequate structures with the MDAs with clear roles and responsibilities to support fortification efforts.

Proper food safety and hygiene practices are critical to reduce the risk of foodborne illnesses, which can lead to recurring or prolonged illness that can cause children to become wasted. Stakeholders discussed challenges with food safety related to agricultural production, as well as consumers' practices related to food preparation and storage. Specifically, stakeholders noted that farmers do not apply proper

production, post-harvest handling, and storage practices, which results in growth of aflatoxin in groundnuts, potential food safety risks related to livestock products, and overuse of agro-chemicals. Additionally, stakeholders noted that households do not apply food hygiene best practices, such as proper handwashing, cooking, and storage, which can contribute to the risk of foodborne illnesses. Priority areas of action for improved food safety and hygiene included integrated messages for improving food safety in agriculture as part of agricultural extension training and sensitization campaigns to farmers and households on the safe production, handling, and preparation of foods. Further, stakeholders noted the necessity to understand food safety across other parts of the food system, such as in retailing and processing.

WASH and social protection systems

Stakeholders had a more difficult time describing wasting prevention activities and challenges related to the WASH and food systems. For the WASH sector, stakeholders mentioned there was little to no effective collaboration on nutrition or with other nutrition-sensitive sectors. They also cited a need to update WASH policy frameworks to better align with the Sustainable Development Goals and a general lack of access to and coverage of improved infrastructure, including not only access to clean water and sanitation facilities but also irrigation systems to support better production. Knowledge of social protection system interventions was even less. While stakeholders noted a lack of evidence and effective data monitoring systems, poor coverage, and targeting challenges, these assertions should be further validated and discussed with social protection actors as well. Given the limited interaction between nutrition and social protection actors it may be a lack of familiarity with existing systems rather than a lack of these systems that is the actual challenge. Most of the existing interventions that were discussed included the use of cash and vouchers to access food, scholarships for girls' education, and other distributions like mosquito nets.

Upon reviewing stakeholders' lack of knowledge of complementary prevention interventions outside the health and agriculture sectors, we felt it was prudent to highlight that this lack of knowledge may lead to another critical challenge—missed opportunities to make referrals to complementary support services for households with children who may have recently recovered from wasting and therefore need additional support to prevent relapse, or for households deemed to be at a higher risk of having children who may develop wasting. Stakeholders mentioned the need to disseminate and domesticate social protection policies to help with awareness raising.

Cross-cutting Challenges

Stakeholders also raised challenges that cut across wasting treatment and prevention. These challenges relate to the level of engagement across the sectors in multi-sectoral nutrition activities. These activities are not specific to wasting but still contribute to better overall health and nutrition of women of reproductive age, adolescent girls, and children under five, thereby reducing risk.

Strengthening coordination

State MDAs, through coordination from the SCFNs, are heavily relied on to ensure that nutrition-and-wasting activities take place in a coordinated manner and in alignment with the country's multi-sectoral policies, strategies, and protocols. However, stakeholders cited that nutrition is not yet a high enough priority for some of the SCFN members, thereby creating a barrier to providing coordinated, sustainable wasting prevention and treatment efforts. One problem stakeholders mentioned was the lack of involvement of the MDA nutrition desk officers during essential government planning meetings. Stakeholders explained that nutrition desk officers are typically not the designated individuals who are invited to attend SCFN meetings. These meetings are deemed to be higher-level, with department heads typically being the ones who participate. These individuals may have differing levels of nutrition knowledge and may not always be as well informed on nutrition issues and interventions as the desk officers. Although the federal government has mandated that national and state-level MDAs create

nutrition departments, this has not yet been put into practice. The hope is that by elevating nutrition to the departmental level in the MDAs there could be a director with adequate nutrition knowledge who is then designated to participate in the NCFN and SCFN meetings. For now, however, the lack of nutrition departments in key line MDAs perpetuates the low prioritization of nutrition, despite the favorable policy environment and coordination structures.

Opportunities and Identified Actions

Stakeholders identified a number of opportunities and actions to strengthen wasting management in Nigeria. Many of the items listed below seek to leverage or scale existing programming or hold government and other actors accountable for commitments made. Many of the actions relate to systemic changes in policies or procedures that will require sustained support over the long term. However, whenever possible, we have highlighted immediate actions and opportunities to be leveraged to help achieve improvements in the short-term.

Strengthen Wasting Treatment

Coverage of wasting treatment services through the CMAM program are inadequate and exacerbated by a reliable supply of nutrition products for treatment and supplementation. While increasing the supply of therapeutic and supplementary products is critical, this must be coupled with strong preventative actions and innovative treatment solutions to help lower the treatment burden, while also increasing treatment coverage. Stakeholders identified action areas to address these challenges, including consideration of the scale-up of alternative treatment approaches.

Ensure an adequate and reliable supply of nutrition commodities

The lack of a reliable supply of therapeutic and supplementary food products is the single most critical issue facing states that are unable to rely on humanitarian support for their purchase and distribution. A lack of products contributes to fewer service delivery sites, forcing them to stop offering services if products are not available, and can erode community trust in health services generally. A plan to secure a supply of nutrition products for treatment should be put in place first and foremost before service expansion can responsibly be considered. Supply issues affect all the actors we spoke with, including those in the North East where therapeutic milks were the most often cited product stockouts. This is during a period where the humanitarian partners noted a sharp increase in demand for inpatient care.

Financing for the purchase of nutrition products—both imported and locally produced—needs to be increased. As the stockouts in the North East indicate, UN agencies and external donors cannot support the full supply of nutritional products for the country. The demand is too great. National and state governments must also begin to put resources towards the purchase of therapeutic and supplemental products. Stakeholders reported that, in some instances, federal and state funding has been committed for the purchase of RUTF but is not released. High-level advocacy, at both the national and state levels, is needed to bring more visibility to this critical issue, which will also help hold decision makers accountable when commitments are not met. The NCFN and SCFNs have an important role to play in these efforts, with support from implementing partners and donors.

At the state level, several strategies were suggested to encourage states to dedicate more funds to purchase RUTF. First, states could agree to match the funding provided by donors or implementing partners who support the purchase of RUTF and other nutrition-related commodities and supplies. To aid with budget tracking and transparency, it was also suggested that states create a specific budget line within the federal and state ministry of health budgets to purchase these commodities.

Identified actors: NCFN and SCFN, Technical Advisory Group to the National Council on Nutrition, FMFBNP, Federal and State Ministries of Health (FMOH, SMOH).

Scale-up service delivery to increase coverage of treatment

Despite having equal and sometimes greater needs, many northern states do not benefit from humanitarian support, which often shoulders the majority of the financial burden to support wasting treatment services. Donors and implementing partners, in consultation with the federal and state ministries of health, need to develop a plan to ensure life-saving treatment services are available wherever they are needed. While the recommendations above to encourage more government financial support of these services are important to sustain these services, the government cannot take on this full burden immediately and solutions must be found to help bridge these gaps. Alongside the government taking up a larger share of the financial responsibility for wasting treatment, partners and donors should consider ways to increase their support beyond the humanitarian realm.

While the funding of nutrition commodities can be complicated, depending on the funding source, donors and implementing partners should work together to determine who is best placed to fund nutrition commodity shortages in non-humanitarian areas. Implementing partners with independent funding sources (e.g., general donations made to their organizations) could potentially be leveraged to help if government donors cannot, due to funding restrictions.

Donors who are unable to easily finance the procurement of nutrition commodities can provide complementary support by financing the capacity strengthening efforts required to ensure high quality service delivery once the basic supplies can be secured. Refresher training on CMAM treatment protocols, anthropometric screening, community-based approaches like Family MUAC, can all be supported and scaled-up by these actors. Other health system strengthening efforts that would benefit wasting treatment service delivery include strengthening CMAM program data management within health information systems through training, mentoring, and data quality audits. High quality data is critical to inform decision making, including where to scale up and how many nutrition commodities need to be procured and distributed. Lastly, health and nutrition partners who may be considering work on strengthening nutrition pre-service training should ensure that up-to-date global guidance on wasting detection, treatment, and prevention is integrated into the coursework for key cadres.

Identified Actors: UNICEF, WFP, Médecins Sans Frontières (MSF), AAH, International Red Cross, Save the Children, SPHCDA.

Increase the evidence base for and consider the scale-up of alternative treatment approaches

While supply shortages of RUTF and RUSF persist, it is important to consider ways to maximize the available products and look to evidence-based treatment options that do not rely on these products.

Treatment using locally available foods

As mentioned earlier, stakeholders—particularly from the states—were very interested in scaling up approaches like Tom Brown and Porridge Mums, which both make use of locally available foods. Humanitarian actors in the North East also cited the need to scale up these approaches in the absence of TSFP programs, as the inability to treat MAM children was increasing the demands on outpatient and inpatient SAM treatment services. It is important to continue to gather evidence on the appropriateness of these approaches and to understand contextual factors that may influence their success and scalability. USAID Advancing Nutrition is contributing to this effort by conducting case studies on both Tom Brown and the Porridge Mums (AAH) approach, including gathering costing information to help inform scale-up decisions. However, it is important to continue to educate nutrition actors on the appropriate use of these approaches. In some instances, stakeholders seem to view these approaches as viable alternatives for treating all forms of wasting when, in fact, at present they are meant only to treat moderate forms of wasting. However, stakeholders did suggest exploring more innovations using these approaches to see if they could also be used to effectively treat severe wasting, such as further fortification of the Tom Brown porridge mixture.

Identified Actors: CRS, AAH, UNICEF, WFP, SMOH, SPHCDA, NAFDAC

Simplified treatment approaches

There are several simplifications to treat wasting that are being trialed globally in an effort to improve the efficiency, effectiveness, coverage, and quality of wasting treatment (State of Acute Malnutrition n.d.). Often these approaches use a single product and/or a reduced dosage of the product to treat wasted children. MSF piloted one such approach in North East Nigeria. This approach involved using RUTF for all children with a MUAC <125 mm and reduced and simplified dosing. In this modified treatment approach, RUTF is used to treat both moderately and severely wasted children, with severely wasted children receiving two sachets of RUTF per day and moderately wasted children receiving one sachet per day in lieu of more complex weight-based dosing where the number of sachets varies throughout the treatment period (Hanson 2019). Although the data from the Nigeria pilot have not yet been analyzed, they are based on the Combined Protocol for Acute Malnutrition Study (ComPAS) protocol where randomized controlled trials completed in other countries have produced promising results (ENN 2020; Hanson 2019). Given the limited supplies of available RUTF, these approaches that reduce the dosage requirements could be worth considering.

Identified Actors: MSF, UNICEF, SPHCDA, and existing wasting implementing partners

Promote the Scale-up of Locally Produced RUTF

When considering the earlier recommendations to increase the availability of and financing for ready-to-use therapeutic and supplementary food products, procuring these products locally should also be encouraged. For local producers to achieve the benefits of economies of scale and bring down the cost of locally produced products, support must be provided to ensure that more of the raw materials can be sourced locally in the right quantities and at the required quality. In addition, given the importance of these products in saving the lives of wasted children, the enabling environment for local production should be strengthened. The following opportunities to promote the production of locally produced ready-to-use foods may be considered:

Streamline administrative processes for local producers to import raw materials that are not available locally in adequate quantities or of adequate quality

Local producers highlighted the challenging restrictions around importing some of the key ingredients for RUTF, particularly milk powders. In addition, different local producers and RUTF importers benefit from different import and tax waivers that can have an influence on the price of the goods once they reach the Nigerian market. Because of the critical importance of products like RUTF, nutrition stakeholders should advocate to the Government of Nigeria, including NAFDAC, to streamline administrative processes and level the playing field for local producers to encourage not only increased production but also higher demand for locally produced nutrition commodities at a competitive price.

Identified Actors: NCFN, Nigerian Economic Summit Group, Nigerian Investment Promotion Commission, NAFDAC

Strengthen and expand local industries to produce an adequate quantity of quality, locally available raw materials

The local producers we spoke with all expressed a desire to use more locally procured raw materials for their products. However, the main challenge was the lack of adequate supply and—for some products such as peanuts—inadequate quality.

Some of the local producers are already working directly with NGO partners and local partners to improve the quantity and quality of locally grown peanuts. Much of the work focuses on growing improved varieties of peanuts and reducing aflatoxins. However, ongoing work does not seem to be coordinated, with different local producers backing different efforts. The Government of Nigeria,

particularly the FMOH and Federal Ministry of Agriculture and Rural Development (FMARD), along with support from implementing partners and university food technology departments and the Nigerian Institute of Food Science and Technology (NIFST), could help drive these efforts. Additionally, the administrative incentives described above could be linked to investments in these local supply chains.

Identified Actors: FMOH, FMARD, NIFST, implementing partners, university food technology departments

Commit to buying locally produced products first and importing only when there is a gap in local supply

To further encourage Nigeria's nascent ready-to-use food industry, nutrition partners and government should commit to buying locally produced products whenever possible. Advocacy work could be done to gather public commitments to do so and could be particularly useful in helping to hold state-level governments accountable not only to procure RUTF but to procure it locally.

Stakeholders also mentioned involving the private sector by encouraging them to channel some of their corporate social responsibility funding to support treatment of wasting, which could potentially include the purchase of locally produced RUTF.

Identified Actors: Federal and state governments, FMOH, SMOH, State Ministries of Budget and Economic Planning, private sector organizations

Strengthen Wasting Prevention

Stakeholders identified a range of opportunities and actions to strengthen wasting prevention. We present these by the health, food, WASH, and social protection systems in alignment with the systems strengthening approach presented in the GAP.

Health System

There is a strong policy environment in Nigeria for nutrition interventions including, but not limited to, policies and guidelines on micronutrient deficiency control, MIYCN, and baby-friendly initiatives. However, more support is needed to put these policies into practice and bring them to scale. Identified opportunities for the health system are outlined below.

Leverage existing community-based nutrition services for early detection and support for preventive action

Not only is early detection of wasting important for ensuring better treatment outcomes for children who do become wasted, early detection and correction of growth faltering and less severe forms of malnutrition are important ways to prevent children from needing treatment in the first place.

Nigeria is reinvigorating its growth monitoring and promotion (GMP) activities, with support from partners like the Integrated Health Program (IHP). There is a need to support the scale-up of GMP, with a strong emphasis to build service provider capacity on the "P" of promoting good practices and corrective action. This would provide an important platform to identify children whose growth is faltering but before they become severely wasted. At present, GMP services are primarily based in health facilities. Therefore, the anthropometric data collected through GMP should also be integrated into the National Health Management Information System registers to help ensure that all children seen at primary health care (PHC) visits are screened for malnutrition. Plans to scale GMP to the communities should be prioritized, with strong supervision, mentoring, and data quality monitoring systems in place. Mentoring will be of particular importance to ensure that caregivers of children who have growth faltering are supported to identify actions to improve growth or referred to other services for additional support before children become wasted. It was suggested that GMP could also be

integrated with activities, such as routine immunizations, to begin taking these services closer to the communities.

Caregivers can also be supported to practice preventative behaviors through existing community platforms, such as care groups/mother-to-mother support groups, IYCF support groups for men and women, Ward Development Committees, and Village Savings and Loan Association groups. Stakeholders also felt that these various groups should be scaled up. Community volunteers, health workers, traditional birth attendants, and Community Health Influencers, Promoters and Services (CHIPS) should also have the necessary knowledge to identify wasted children and those who might be faltering, and support caregivers to take corrective action. The introduction of family or mother led MUAC through these groups can also be a useful way to enable caregivers to monitor the nutritional status of their children themselves. However, to make this a viable approach for prevention, an emphasis needs to be placed not only on when a child is "yellow" or "red," and therefore already wasted, but also if they are moving closer to these ranges so that caregivers can seek out support and advice rather than only be referred for treatment.

Identified Actors: Federal and state ministries of health, existing implementing partners, civil society organizations, SPHCDA, Aliko Dangote Foundation, Aisha Buhari Foundation, and private sector CSR, NCFN, and SCFN

Improve access to health and nutrition services

Prevention and timely treatment of childhood diseases and good maternal health are both important ways to prevent wasting. Access to health services is required to make this a viable part of the prevention strategy. As states adopt and adapt the steps associated with the Primary Health Care Under One Roof programme, which aims to bring decentralized health services under the management of a single entity—Primary Health Care Board—they should ensure that nutrition services are included in the state's minimum service package. States may also consider leveraging the Basic Health Care Provision Fund, ward health system, and community outreach services, depending on which system is the most viable.

To support these actions, general health systems strengthening—including adequate numbers of skilled human resources—is required. Nutrition and health partners can join their advocacy efforts to ensure more health workers are recruited and that updated, quality in-service and pre-service training are available to them. Integration of nutrition competencies and skills into routine supportive supervision is also important to ensure skills learned through training are continuously strengthened and maintained. Last, having a nutrition focal point at the PHC level will play an essential role in early detection and prevention of malnutrition.

Identified Actors: SPHCDA, State Ministry of Health, UNICEF, WHO, with the support of NCFN and SCFN

Food System

The food system presents many opportunities to prevent wasting by increasing the availability of nutrient-rich foods to meet the nutritional needs of vulnerable households, and by providing livelihood opportunities to support households to overcome persistent poverty, which is linked to an increased risk of developing wasting. Specifically, opportunities discussed in the workshops related to food systems focused on agricultural production, the enabling environment, and linking food systems activities to other nutrition-sensitive sectors. These opportunities do not include all potential food systems opportunities, but rather are the ones discussed during the workshops.

Support farmers to increase their agricultural productivity

Increasing agricultural productivity, particularly for nutrient-rich foods, provides an opportunity to improve local diets. It can also provide income-generating opportunities through the sale of excess produce, thereby helping to address underlying economic factors that can put children at a higher risk of wasting. Nutrition-sensitive agriculture stakeholders should promote activities that enable farmers to adopt the necessary technologies and practices to produce the commodities that fill nutrient gaps, support food security, and/or provide income generating opportunities. Specific areas of attention include increasing access to and funding for improved seed varieties, including those that are bio-fortified; other agricultural inputs; farmers' adoption of good agricultural practices via improved extension services; and improved harvesting and post-harvesting practices. Importantly, stakeholders should consider activities that increase farmers' access to finance, which was cited as a significant barrier for farmers to invest in improved production efforts. Last, coordination on promoting crop and livestock preservation and processing methods should be considered to increase the shelf-life of nutrient-rich foods and other foods that support improved food security. Farmers' groups can be leveraged and scaled to promote these activities and also present an opportunity to disseminate positive nutrition and health messages—particularly to men who often are not present in many of the typical community-based health and nutrition platforms.

Identified Actors: Federal and State Ministries of Agriculture and Rural Development, States Agricultural Development Programs, Nigerian Institute of Food and Science Technology (NIFST), FAO, Ministry of Finance, Ministry of Information, private sector organizations, and implementing partners

Support farmers and households to apply improved food safety and food preparation practices

To help reduce spoilage of foods during peak seasons and extend its availability into the lean season, stakeholders pointed out a need for more skills on food processing and preservation. Stakeholders emphasized that ongoing work through the Women in Agriculture (WIA) extension program, housed during the state Agriculture Development Program provides an opportunity to build this capacity at the household level. WIA promotes the production of nutritious foods at home, including cooking demonstrations to help minimize the loss of nutritional value of foods through cooking practices. This platform could integrate more skills on processing and preservation, which women can share and promote with other women in their communities. Cooking demonstrations, specifically, should feature nutritious, locally available foods. Additionally, stakeholders should consider approaches to improve food safety during the production and post-harvest of crops and livestock products. Specifically, agriculture extension agents, private sector end buyers, input suppliers, and other relevant private sector actors can target farmers' groups to train them on methods to reduce aflatoxin during production and post-harvest, and the safe use of agro-chemicals.

Identified Actors: Federal and State Ministries of Agriculture and Rural Development, Federal and State Ministries of Trade and Industry, NAFDAC, States Agricultural Development Programs, Federal and State Ministry of Environment, FAO, WFP, private sector organizations, and implementing partners

WASH System

In our discussions with stakeholders, the WASH sector was felt to be performing well due to the additional attention and resources generated by the ongoing COVID-19 pandemic. It was generally felt that the sector could continue to scale up access to water and sanitation facilities alongside other key initiatives like the Community Led Total Sanitation Approach, hygiene promotion in schools, health care facilities and communities, existing hand washing promotion campaigns, and continued support for the national Partnership for Expanded Water Supply, Sanitation, Hygiene.

However, not all states have the same level of support for WASH activities. In states where the national WASH policy has not yet been domesticated, additional support should be provided. In addition,

promotion of key WASH behaviors like food hygiene practices and keeping water clean and safe should be jointly promoted by the WASH, health, and food systems. Community water safety planning is one strategy that can be leveraged to support these efforts.

Last, stakeholders proposed the innovative use of corporate social responsibility to support expanded access to handwashing facilities and public toilets within and around their places of business.

Identified Actors: Federal and State Ministries of Water Resources, LGA WASH Units, Rural Water Supply and Sanitation Agency, private sector organizations, IOM, UNICEF, and implementing partners

Social Protection System

Stakeholders identified several social protection interventions that if brought to scale and appropriately targeted could help to address some of the underlying social and economic drivers of wasting. Examples include conditional cash transfers and scholarship programs to keep girls in school and reduce early marriage, the provision of free health care services for pregnant women and children, national and state health insurance schemes, and school feeding programs for children and adolescents. Additionally, for cash transfer programs, stakeholders suggested setting up a national database to facilitate more effective management of funds. However, it is also important to further investigate what systems social protection actors have in place already.

Stakeholders also specifically mentioned the continuation of programs like the Subsidy Reinvestment and Empowerment Program (SURE-P) and N-Power. SURE-P and N-Power both seek to address unemployment, with N-Power having a specific focus on youth unemployment by equipping them with skills in key sectors such as education, agriculture, and health. There may be opportunities to leverage these programs for nutrition-sensitive skill building across sectors or to advocate for vocations that would contribute to positive nutrition outcomes. Last, stakeholders felt that traditional and religious leaders needed additional capacity strengthening on social protection to increase their knowledge about what services are available and to be able to ensure households in need are able to access them.

Identified Actors: Federal and State Ministries of Health, Federal and State Ministries of Agriculture and Rural Development, National Social Safety-nets Coordinating Office, National Information Technology Development Agency, Federal and State Ministries of Budget and Finance, World Bank, and WHO

Cross-Cutting Opportunities

Through their discussions, stakeholders identified several opportunities that cut across aspects of treatment and prevention and that would benefit the strengthening of multi-sectoral nutrition actions more broadly.

Continue to support SCFNs and establish more local government committees for food and nutrition (LGCFNs).

The NMPFAN establishes the coordination structure through which its objectives will be implemented and monitored. The performance and capacities of SCFNs continues to vary but nutrition actors are working well with these entities to support them. To continue the strengthening, more engagement is needed from partners from other sectors to ensure their work flows through and aligns with these important coordination structures.

Furthermore, to realize the community-based opportunities identified in the sections above, local government committees for food and nutrition (LGCFNs) must be established and supported as well. At present, very few LGCFNs exist and their capacities also require strengthening. As partners work with SCFNs, SCFN capacity should be built to mentor and support the LGCFNs.

Identified Actors: UNICEF, State MDAs, IHP, Breakthrough Action - Nigeria, USAID Advancing Nutrition, and implementing partners

Advocate for the create nutrition departments within all MDAs, as per approved policy

Although mandated on paper, many MDAs at the national and state level have yet to create nutrition departments. Having nutrition at the departmental level raises its profile within the MDA, ensures that its department head would be designated to attend NCFN or SCFN meetings, and enables the creation of a budget line for nutrition within the MDA budget. Nutrition actors must continue to advocate for these measures to be put in place, as many other important actions, such as improved planning and coordination and budget transparency and accountability, could follow from this first step.

Identified Actors: National Council on Nutrition—Technical Advisory Group, NCFN, Civil Society – Scaling Up Nutrition in Nigeria, Nutrition Society of Nigeria, SCFN, UNICEF, and implementing partners

Develop accountability mechanisms to ensure committed nutrition funds are released on time and in the correct amounts

As noted above, creating nutrition departments within MDAs would also lead to the creation of a budget line for that department. In addition to this, stakeholders suggested that budget tracking methods be put in place to ensure that funds allocated to support nutrition activities are released and used for the appropriate activities. The Scaling-Up Nutrition Movement and the SPRING project have developed several nutrition resource tracking tools that could be used to support these efforts (SPRING 2018; SUN 2020). The Follow the Money Initiative has also been active in Nigeria at the state level, but it is unclear if the initiative is still active. This could be reinvigorated and leveraged to track nutrition funds.

Identified Actors: Federal and State Ministries of Finance, National Information Technology Development Agency, National Health Insurance Scheme, Federal and State Ministries of Health, NCFN, and SCFN

Way Forward

The development of the Nigeria GAP Country Roadmap was an important first step toward developing a holistic plan to reduce the burden of wasting in the country. However, more work needs to be done to operationalize this vision and ensure that the favorable policy environment is leveraged to support the implementation of these actions. This series of consultations has highlighted some of the key challenges that need to be addressed even before some of the actions in the GAP Country Roadmap can be scaled up. USAID Advancing Nutrition will continue to support the Government of Nigeria and its implementing partners in these efforts. While all the actions and identified opportunities in this report should be considered, the following are considered to be priority actions for stakeholders to take in the short term:

- Continue dialogue among multi-sectoral nutrition actors on how to coordinate on the prevention and treatment of wasting, including broader dissemination of the findings contained in this report. This topic should be part of routine NCFN and SCFN meetings but additional, dedicated consultations may also be required.
- Further prioritize and operationalize the actions presented in this report and harmonize them with the Nigeria GAP Country Roadmap.
- Advocate for the creation of nutrition departments in national and state-level MDAs. Achieving this will open the door for follow-on actions, such as improved planning, budget allocation, and accountability for fulfilling policy commitments.
- Take steps to strengthen the enabling environment for local production. Of the actions listed, a review of the administrative processes and a coordinated approach to improving the availability of locally sourced raw materials are priorities. This should also include facilitating further discussions between local producers and state governments as potential consumers.

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