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## Health System Performance Assessment for IMAM/NACS in Uganda: Considerations for Delivery of Nutrition Services

September 2014

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## Abbreviations and Acronyms

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ACP	AIDS Control Programme
AIDS	Acquired Immunodeficiency Syndrome
BCC	behaviour change communication
CAO	Chief Administrative Officer
CBO	community-based organization
CDO	community development officer
CMAM	community-based management of acute malnutrition
DHO	District Health Office/District Health Officer
DHS	Demographic and Health Survey
DNCC	District Nutrition Coordination Committee
FANTA	Food and Nutrition Technical Assistance III Project
GAM	global acute malnutrition
GOU	Government of Uganda
HC	health centre
HIV	human immunodeficiency syndrome
HMIS	health management information system
HRH	Human Resources for Health
HSS	health system strengthening
IMAM	integrated management of acute malnutrition
IRB	institutional review board
ITC	inpatient therapeutic care
IYCF	infant and young child feeding
M&E	monitoring and evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAM	moderate acute malnutrition
MDA	ministry, department, and agency
MOES	Ministry of Education and Sports
MOFPED	Ministry of Finance, Planning and Economic Development
MOH	Ministry of Health
MOLG	Ministry of Local Government
n.d.	no date
NACS	nutrition assessment, counselling, and support
NDA	National Drug Authority
NDP	National Development Plan
NGO	non-governmental organization
NMS	National Medical Stores
NPA	National Planning Authority
OPM	Office of the Prime Minister
OTC	outpatient therapeutic care
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHC	primary health care

PLHIV	people living with HIV
RUTF	ready-to-use therapeutic food
SAM	severe acute malnutrition
SBCC	social and behaviour change communication
SFP	supplementary feeding program
SOP	standard operating procedure
SUN	Scaling Up Nutrition
U.N.	United Nations
U.S.	United States
UBOS	Uganda Bureau of Statistics
UGAN	Uganda Action for Nutrition
UNAP	Uganda Nutrition Action Plan 2011–2016
UNBS	Uganda National Bureau of Standards
USAID	U.S. Agency for International Development
VHT	village health team
WFP	World Food Programme
WHO	World Health Organization

# 1 Background

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## 1.1 Nutrition Situation in Uganda

Malnutrition is a major public health problem in Uganda, particularly among children. With an estimated population of 34.1 million people (Uganda Bureau of Statistics [UBOS] 2012), of whom 19 percent are children under 5, it can be estimated that around 97,185 children (1.5 percent) are at increased risk of death due to severe acute malnutrition (SAM), and as many as 304,513 (4.7 percent) suffer from either SAM or moderate acute malnutrition (MAM) (UBOS and ICF International 2012). Although these figures have decreased in recent years, they still represent an alarmingly high number of children at continued risk of becoming acutely malnourished. Among children under 5, stunting is estimated at 33.4 percent for a total of 2,163,986 children at risk (UBOS and ICF International 2012). In addition, 49 percent of children under 5 are anaemic and 38 percent have vitamin A deficiency (UBOS and ICF International 2012).

In Uganda, the burden of malnutrition is complicated by HIV. Despite the fact that fewer than 1 percent of children under 5 are estimated to be HIV positive (Ministry of Health [MOH] 2011), data compiled from National Nutrition Rehabilitation units and U.S. President's Emergency Plan for AIDS Relief (PEPFAR) programs in Uganda indicate that more than 40 percent of children with SAM are HIV infected, indicating a much higher malnutrition prevalence than among children in the general population (Bachou et al. 2006).

There is limited information on malnutrition rates among people living with HIV (PLHIV). It is estimated that between 20 and 25 percent of adult antiretroviral therapy clients were mildly to severely malnourished (FANTA 2010). HIV prevalence is estimated at 7.3 percent among adults in Uganda, and is higher among women (8.2 percent) than men (6.1 percent) (MOH et al. 2012). As with children, HIV prevalence is higher among malnourished adults than among those in the general population.

## 1.2 Addressing Acute Malnutrition in Uganda

The Government of Uganda (GOU) has prioritized nutrition as a key factor in human development and economic productivity. In 1995, the Constitution of the Republic of Uganda included food security and nutrition among the country's national policy objectives. Additionally, the 2003 Uganda Food and Nutrition Policy recognizes food for all as a human right (FANTA 2010). Uganda is also a signatory to the Millennium Declaration, through which it pledges to meet the Millennium Development Goals that seek to alleviate many direct and underlying causes of malnutrition.

More recently, in 2011, Uganda joined the Scaling Up Nutrition (SUN) movement, which promotes a multi-sectoral approach to improving nutritional status, recognizing that nutrition is closely intertwined with health, agriculture, gender, education, and other sectors, and is essential to the country's social and economic development. This national-level commitment, coordinated by the Office of the Prime Minister (OPM) and supported by United Nations (U.N.) agencies, international non-governmental organizations (NGOs), and development partners, has led to an acceleration and prioritization of nutrition programming throughout the country. Closely linked to Uganda's participation in the SUN movement is the roll-out of the Uganda Nutrition Action Plan 2011–2016 (UNAP). This document lays out a multi-sectoral plan involving eight ministries, coordinated by the OPM UNAP secretariat, to scale up interventions to improve nutrition in Uganda.

To provide the nutrition-specific services outlined in the UNAP, a strong health system is needed. Nutrition services need to be integrated into multiple aspects of health service delivery. Strong leadership is needed to ensure that services are provided and financed. Numerous types of professional personnel are required for the provision of nutrition services, ranging from specialists,

such as nutritionists and dieticians, to community health workers. Equipment and products required for nutrition services are complex, with drugs, therapeutic food products, anthropometric equipment, and basic medical equipment all being necessary. Coordination between facilities within the health system, between communities and facilities, and among different services provided by the health system ensure that clients are provided comprehensive care. And information systems need to provide accurate nutrition data to understand the situation. To strengthen nutrition services, it is important to understand how well equipped the health system is to provide these services and to strengthen elements of the system as needed. By considering health system-wide aspects of nutrition service delivery, nutrition programs can not only be brought to scale more efficiently, but nutrition outcomes have the potential to be enhanced by improving the health system in a way that benefits other health initiatives that have positive impacts on nutritional status.

## 2 Rationale and Purpose of Assessment

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An analysis of the health system for the delivery of nutrition services would be a complex and extensive undertaking if all nutrition services were to be considered. This assessment focused on two sets of nutrition services to identify existing strengths and gaps in the delivery of nutrition services at the health system level: integrated management of acute malnutrition (IMAM) and nutrition assessment, counselling, and support (NACS). Both of these interventions seek to detect, treat, and prevent acute malnutrition in children and adults, and utilize similar health service delivery points, health staff, and supplies to do so. In addition, protocols for both of these approaches have been put forth in the 2010 *Integrated Management of Acute Malnutrition Guidelines* (MOH 2010a), which address the management of acute malnutrition among all populations, including adults, children, and PLHIV.

The guidelines have four main program components: inpatient therapeutic care (ITC) and outpatient therapeutic care (OTC) for the treatment of SAM, supplementary feeding programs (SFPs) for the treatment of MAM, and community outreach. The community outreach component involves early detection of SAM clients at the community level to enable early referral and, thereby, increase the number of SAM cases that can access quality treatment. IMAM uses nutritional products to treat clients, including Formula 75 (F-75), Formula 100 (F-100), and ready-to-use therapeutic food (RUTF). In the NACS approach that targets HIV clients as detailed in the *IMAM Guidelines*, HIV clients undergo a nutritional assessment and are provided with nutritional counselling tailored to the outcome of their assessment. If required, clients are also provided with nutritional support, typically in the form of RUTF, to help stabilize and improve their nutritional condition. Further, clients that suffer from or are at risk of food insecurity are linked with food security and livelihoods programs within their communities. See Annexes 1 and 2 for the Uganda IMAM framework and the NACS approach framework.

While neither IMAM nor NACS is currently implemented within all of Uganda's districts, plans are in place to scale up both sets of services. Effective scale-up, however, requires that the health system they integrate with be functional and efficient. Given the limited information on existing strengths and gaps in the health system and evidence from other sources that the capacity of the entire health system may need to be strengthened (including aspects of governance, human resource capacity, financing, and logistics and supply management), it was deemed necessary to carry out an in-depth assessment using IMAM/NACS as a way to identify the strengths and gaps in the health system affecting the successful implementation of nutrition services. While much of the collected data focuses on IMAM/NACS, it was the intention of the assessment to take examples from these approaches and develop recommendations that can benefit not only IMAM/NACS services delivery, but also strengthen the health system and nutrition services more broadly.

## 3 Methods

### 3.1 Assessment Design

The IMAM/NACS health system strengthening (HSS) assessment was designed by customizing FHI 360's Health System Rapid Diagnostic Tool (Wendt 2012) to the programmatic aspects of IMAM/NACS and, in some cases, nutrition more broadly. The World Health Organisation's (WHO) (2007) Health System Approach identifies six 'building blocks' along which health system functions are organized: leadership and governance, workforce, financing, information systems, supplies and equipment<sup>1</sup>, and service delivery. The desirable attributes, or core functions, of each health system building block as defined in the WHO Framework for Action are detailed in Box 1.

#### Box 1. Health System Building Blocks

**Leadership and governance** should ensure that strategic policy frameworks exist and are combined with effective oversight, regulations, system design, and accountability.

**Workforce** should be responsive, fair, and efficient given available resources and circumstances. There should be sufficient numbers of staff that are fairly distributed, competent, responsive, and productive.

**Financing** should raise adequate funds for health in ways that ensure people can use needed services and are protected from financial catastrophe or impoverishment from needing to use/pay for them.

**Information systems** should ensure the production, analysis, dissemination, and use of reliable and timely information on health system performance, health determinants, and health status.

**Supplies and equipment** should ensure equitable access to essential products of assured quality, safety, efficacy, and cost-effectiveness and ensure sound and cost-effective use.

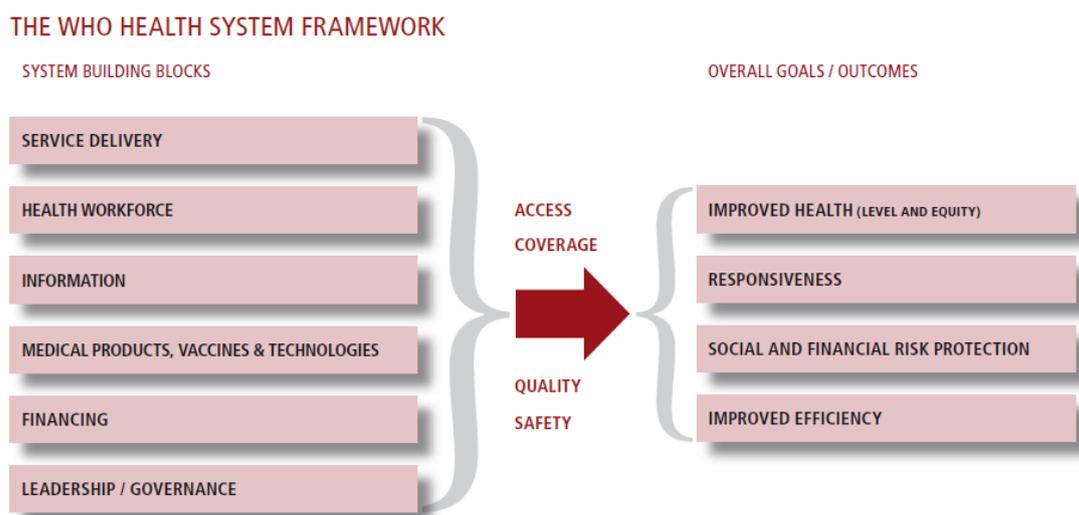
**Service delivery** should deliver effective, safe, quality health interventions to those who need them, when and where needed, with minimum waste of resources.

Source: WHO 2007.

Figure 1 shows how building blocks that successfully perform their core functions can lead to improved access, coverage, quality, and safety of health services that in turn contribute to positive health goals and outcomes.

<sup>1</sup> WHO refers to this block as 'medical products, vaccines, and technologies'. For the purposes of this assessment, this block is referred to as 'supplies and equipment'.

**Figure 1. WHO Health System Framework**



Source: WHO 2007.

For the purpose of this assessment, a health system is defined as all organizations, people, and actions whose primary intent is to promote, restore, or maintain health (WHO 2007). In keeping with the plan outlined in the UNAP, this includes both nutrition-specific and nutrition-sensitive interventions within and outside of the health sector. The health system also encompasses aspects that influence effectiveness, such as financial and human resource allocation and supply and information systems.

### 3.2 Assessment Process

This assessment was collaboratively designed by the MOH and other key nutrition stakeholders, with funding and technical support from the U.S. Agency for International Development’s (USAID) Food and Nutrition Technical Assistance III Project (FANTA). Figure 2 provides an overview of the assessment process.

**Figure 2. Health System Performance Assessment Timeline**



As a first step, a mapping and a situation analysis of IMAM/NACS were conducted through a stakeholder survey and a review of key documents. The survey requested information about implementation of IMAM/NACS activities, including what kinds of activities are being undertaken,

by whom, where (in which regions and districts), and at what level (national, health centre [HC], or community). Stakeholders contacted for the survey included academic institutions and implementing partners involved in the nutrition sector, particularly those who were also involved in IMAM/NACS. These results informed the early planning of the assessment and the selection of regions/districts targeted for data collection (see Section 3.3, Sampling).

Following the mapping and document review, a national-level stakeholder consultation was held to gain buy-in to the proposed assessment process and to provide stakeholders with information about the recommended steps, timeline, and process of the health system assessment.

A six-member in-country technical team was recruited to conduct the assessment. All technical team members participated in the stakeholder consultation meeting and had experience with IMAM/NACS approaches through their work with academic institutions, government ministries or agencies, or service delivery. Technical team members received training on the assessment approach and assisted with the facilitation of the design workshop.

The design workshop was organized with nutrition stakeholders from both the national and district levels, including representatives from the MOH, U.N. agencies, implementing partners (donors, NGOs, and projects), local governments, and academic institutions. The participants were guided through a facilitated process of identifying IMAM- and NACS-related health system functions on which to focus the assessment. At the end of the workshop, a set of performance metrics was developed on which the data collection tools were based. See Box 2 for a more detailed description of the design workshop process.

### **Box 2. Design Workshop Process**

The FHI 360 Rapid Diagnostic Tool was used to develop the design workshop.

Stakeholders were first asked to identify gaps in IMAM/NACS service provision and categorized these gaps by health system building block. Stakeholders then listed constraints that may be contributing to the identified gaps using fishbone diagrams and categorized the constraints by health system building block.

Identified constraints were then prioritized by stakeholders and linked to health system functions that are required for the successful provision of IMAM/NACS services.

Determinants and results of health system function performance were then ascertained. Determinants were defined as conditions, inputs, and processes that the function depends on in order to perform well. A result was the output or outcome a particular function is supposed to achieve.

Stakeholders then developed performance questions for each determinant using a performance mapping process. Performance questions sought to determine if conditions, inputs, and processes were in place to support the performance of the health system functions, determine if the health system function was being performed, and determine if the function was achieving appropriate results. Finally, indicators were identified that can be used to measure the performance questions.

Functions, determinants, performance questions, and indicators were combined into a matrix to create the draft set of assessment performance metrics.

The performance metrics for the reported assessment data are presented in Annex 5.

After the design workshop, the performance metrics indicators were transformed into a list of questions that were used to develop data collection tools. Two main methods of data collection were used: interviews with personnel at various levels of the health system and group discussions with community members. Interviews were composed of primarily descriptive quantitative questions, some

of which included qualitative follow-up to further inform the interpretation of quantitative data. Interviews were held with all assessment participants except for community members. Individual interviews were conducted to determine how many people within an organization or facility were knowledgeable about or implementing nutrition-related health system functions. Group discussions were held with community members and consisted of open-ended qualitative questions. Group discussions were selected as the method best suited for communities because a facilitated discussion would be the most informative about knowledge and attitudes of community members.

Following the data collection and initial analysis of data, draft results were presented to nutrition stakeholders at a results sharing workshop. Stakeholders were divided into groups to work through a series of discussion questions about the results and to create proposed recommendations for the assessment. These proposed recommendations were then agreed upon by stakeholders and incorporated into the final assessment report.

### **3.3 Sampling**

Data collection aimed to provide an illustrative assessment of achievements, strengths, and gaps in the health system in regard to the delivery of IMAM/NACS approaches. Sampling was not meant to be representative and did not make use of probability sampling methods, but used a purposive approach for the selection of key informants.

The assessment gathered non-representative data at the national, regional, and district levels of the health system and included both facility- and non-facility-based individuals.

#### **3.3.1 Selection Criteria**

Participants were selected in two stages at both the national and sub-national levels. First, entities such as facilities, ministries, or partner organizations were identified. Then, key individuals within the selected entities were targeted for interviews. All assessment participants were selected by the technical team based on one or more of the following eligibility criteria:

- Participants are decision makers in the nutrition field and/or in the health system.
- Participants are decision makers in any domain or sector identified in the list of functions to be assessed as a determinant for strengthening nutrition activities.
- Participants are directly involved or would be directly involved in nutrition and/or IMAM/NACS activities and scale-up.

The objective was to speak to, at a minimum, a nutrition expert or focal person at every visited site. In the case of ministries, departments, agencies, and facilities, the targeted sample was expanded to include administrators and those in both clinical and non-clinical roles related to the delivery of nutrition services when available. Box 3 provides details on the Uganda health system structure that informed the facility sampling process.

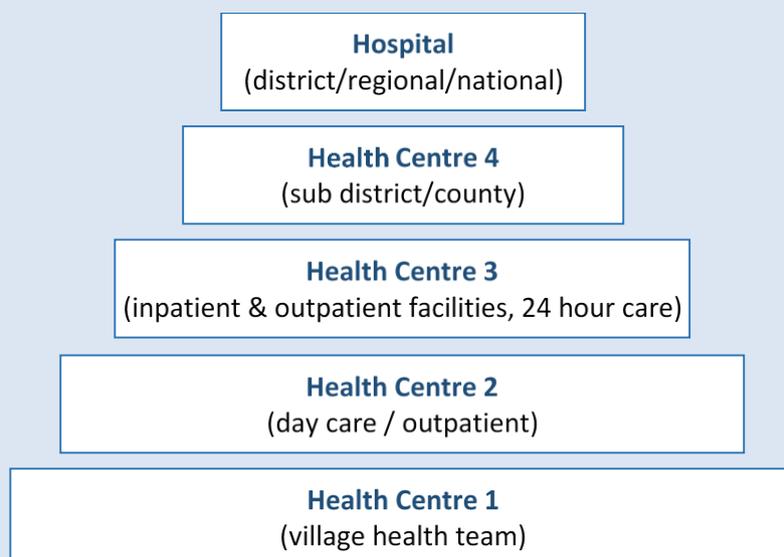
### Box 3. Uganda Health System Structure

The Uganda health structure can be broken down into seven facility levels: national hospitals, regional hospitals, district hospitals, HC IVs, HC IIIs, HC IIs, and HC Is/village health teams (VHTs).

The National Hospital Policy, adopted in 2005, details the services that should be provided by the three levels of hospitals in the Uganda health system. Hospitals are to provide support and referral functions to district-level health services with more specialized health services. National hospitals are meant to provide services to the entire population, regional hospitals to approximately 2 million people, and district hospitals to approximately 500,000 people (MOH 2010b).

The 1995 Constitution and the 1997 Local Government Act provide the legal framework for the setup of the district-level health system. District local governments manage district hospitals and HCs. Depending on the district, district hospital functions (described above) are fulfilled by either a district hospital or an HC IV. HC IIIs are meant to provide basic preventative, promotive, and curative services and also provide support supervision of HC IIs. HC IIs provide only outpatient care and community outreach services. The HC I, or VHT level, is based in the community and is meant to facilitate health promotion, service delivery, and community empowerment (MOH 2010b).

Public, private, and private not-for-profit facilities also exist within the Uganda health system.



Adapted from: MOH 2010a.

### 3.3.2 National-Level Sampling

At the national level, actors included the MOH, other key line ministries and agencies directly involved in nutrition programming, implementing partners supporting IMAM/NACS programs, and academic institutions and professional bodies involved in the education of the nutrition workforce. A list of national-level government entities, implementing partners, academic institutions, and professional bodies included in the sample is included in Annex 4.

Two national-level hospitals, both located in Kampala<sup>2</sup>, were selected based on their IMAM/NACS implementation experience. Mulago Hospital, a government facility, was selected because of its IMAM implementation history. St Francis Nsambya Hospital, a faith-based non-government facility,

<sup>2</sup> All national hospitals are located in Kampala with the exception of Mbarara National Referral Hospital. National hospitals in Kampala were selected for logistical convenience during national-level data collection.

was selected for its previous experience implementing NACS through the NuLife project. Table 1 details the number of interviews for each category of national-level sampling.

**Table 1. Number of National-Level Interviews by Category**

Level	Number of interviews
Ministries, Departments, and Agencies	17
Implementing Partners	19
Academic Institutions	4
Professional Bodies	2
National Hospital Personnel	13

### 3.3.3 Regional and District-Level Sampling

Four of the 10 regions, as defined in the 2011 Uganda Demographic and Health Survey (DHS), were purposively selected for inclusion in the assessment based on meeting at least one of the following criteria: history of implementation of IMAM/NACS, high levels of SAM, designation as a SUN movement ‘Early Riser’ district, or implementing partner presence in the district. These regions were Eastern, Karamoja, West Nile, and Western. Karamoja and West Nile regions have been implementing IMAM longer than other regions as a result of a history of high levels of malnutrition, chronic food insecurity, and resident refugee camps. Eastern Region has the longest NACS implementation history of the selected regions. Western Region has a mix of NACS implementation experience, with some areas that have longer NACS implementation history than others. In contrast, IMAM is relatively new in Western and Eastern regions and NACS is newer in Karamoja. More details about the selected regions are provided in Section 3.8.

Personnel from the District Health Offices (DHOs) and district-level actors from related sectors were targeted for interviews at the district level. These included non-health-related district offices, such as agriculture, gender and labour, planning, and education. In the communities, interviews were conducted with extension workers, community-based organizations (CBOs), and community development officers (CDOs). The total number of non-facility district-level interviews is summarized in Table 2.

**Table 2. District-Level Non-Facility Sampling**

Level	Number of interviews
District-Level Offices/Actors	36
Community-Level Actors, VHT volunteers	16

One group discussion was also held with community members in the communities visited. The size of the groups ranged from 10 to 18 participants, with a total of 50 beneficiaries across the four communities. Both male and female beneficiaries were targeted for the group discussions. A community mobilizer, usually the nutrition focal person from the HC III, informed the community of the group discussion and assisted with the recruitment of participants. Group discussions sought to include both beneficiaries and potential beneficiaries, such as mothers, and community opinion leaders.

Facility-based sampling within the selected districts was purposive and based on two factors: IMAM/NACS implementation history and facility location.

All regional hospitals within the sampled regions were included in the analysis. Different districts from those that host the regional hospital were selected for a more detailed district-level analysis, which included DHOs, district-level actors and district hospitals, HCs, and community-level actors.

This was done to avoid bias among interviewees located in a district that hosted a large regional hospital; it was thought that actors in these districts may have more knowledge of nutrition services than those in districts without a regional hospital.

Districts were selected primarily based on their experience implementing IMAM/NACS approaches, and in part on their proximity to the regional hospitals for logistical convenience during data collection. All district hospitals in the selected districts were included in the sample. It should be noted that there is no district hospital in Namutumba.

Within the sampled districts, one HC IV, one HC III, and one HC II were visited. One community was also visited in each of these same districts, as community VHTs represent the most decentralized link to the health facilities providing IMAM and NACS services. Selection of HCs and communities was done using convenience sampling based on location. The DHO within the selected districts guided the teams to the closest HCs and communities.

Table 3 provides a list of facilities sampled at the regional and district levels.

**Table 3. Regional and District-Level Facility and Community Sampling**

DHS Region	Regional Hospitals	Districts/ District Hospitals	HC IVs	HC IIIs	HC IIs	Communities
Eastern	Mbale	Namutumba <sup>3</sup>	Nsinze	Magada	Bukonte, Buyoboaya	Magada
Karamoja	Moroto	Kaabong	Karenga	Lokolia	Narengepak	Nakore
West Nile	Arua	Nebbi	Pakwach	Panyigoro	Mukale	Masaka
Western	Hoima	Masindi	Bwijanga	Ikoba	Mihembero	Mihembero

Within the selected health facilities, administrative, nutrition, and non-nutrition personnel were targeted for interviews. This included hospital administrators, in-charges, nutrition and HIV focal persons, nurses, midwives, and VHT in-charges. The number of interviews that took place at each site depended in part on the existence of certain positions at the facility as well as the availability of the targeted individuals. Table 4 summarizes the total number of interviews that took place at each type of facility.

**Table 4. Number of Facility-Level Interviews**

Facility type	Number of interviews
Regional Hospital Personnel	39
District Hospital Personnel	27
HC IV Personnel	29
HC III Personnel	23
HC II Personnel	7

### 3.4 Data Collection and Management

The technical team reviewed each questionnaire in detail, tested them all through role plays prior to the start of data collection, and made improvements and corrections as necessary. Research assistants were trained on the use of the assessment tools.

<sup>3</sup> Namutumba does not have a district-level hospital. Namutumba is located within the DHS East Central sub-region, on the border with Eastern region, and is within Uganda's nationally defined Eastern region. However, Namutumba was included as part of the assessment due to recent seasonal spikes of malnutrition (see Section 3.8.3 for more details).

A field test was conducted in April 2013 in Wakiso district, which neighbours Kampala City. The location was chosen because it had the same health system structures that were to be visited during the assessment and because of its proximity to the field team's base in Kampala. During the field test, data collection was conducted in facilities, communities, and the DHO as planned for the assessment. Based on the field test, further improvements were made to the questionnaires and the tools were finalized for data collection.

Data collection took place between June and July 2013, with teams composed of one technical team member and one research assistant. The recruited research assistants had the necessary language skills for the districts that were selected to be part of the assessment.

Quantitative data from interviews was compiled into an MS Excel spreadsheet to aid analysis, with data entered into tabs organized by health system level and by district. Qualitative responses were transcribed into MS Word documents for each of the interviews and group discussions. Initial data entry was completed by the data collection teams and cleaned and compiled by FANTA.

### **3.5 Analysis**

Data were examined to determine the knowledge and practices relevant to IMAM and NACS services, and the existence of coordination systems among and between facilities and non-facility interviewees. Comparisons were drawn between national and sub-national levels. Data were primarily analysed according to health system building blocks, but linkages across building blocks were also made when appropriate. Quantitative data were tallied using Excel. Qualitative data were manually reviewed to inform patterns identified in the quantitative data.

Information from additional documents and reports was used to triangulate findings from the assessment and to help inform the interpretation of the results. The group discussions from the results sharing workshop generated additional data about the health system for nutrition, which has been incorporated into the results presented in this report.

Since data collection, several new tools and initiatives have been undertaken within the Uganda health system that affect the results and recommendations presented in this report. Where appropriate, these new tools and initiatives have been referenced as part of the results analysis.

### **3.6 Limitations**

The assessment is not meant to be representative of the provision of IMAM/NACS services in all of Uganda, but to provide examples of strengths and gaps in the health system that have affected IMAM/NACS implementation in various locations. The gathered information is useful and likely applicable in other districts, even though the sampling methods are not meant to yield representative results.

Similar challenges emerged across the sites that were included in the assessment, and common themes emerged in the stakeholders' workshop. Differences across sites can help inform dialogue to understand successes and challenges. In addition, similar issues with health system functions were found across sites in diverse parts of the country. Therefore, many of the suggested system improvements will likely be applicable to sites beyond those included in the assessment.

The assessment also faced challenges with non-response. This happened mostly among national-level ministries, agencies, and departments and in lower-level health facilities. At the national level, challenges arose mostly as a result of the lack of availability of high-level personnel. At the lower-level health facilities, some positions that were sought for interviews were not filled due to personnel challenges. These challenges led to fewer observations than were originally planned for in the protocol.

Data collection errors required that some results not be reported as part of the analysis. If responses to a question varied greatly within a site and if qualitative data were not available to help with the interpretation of the inconsistencies, these results were not reported.

### 3.7 Human Subject Protection and Ethical Considerations

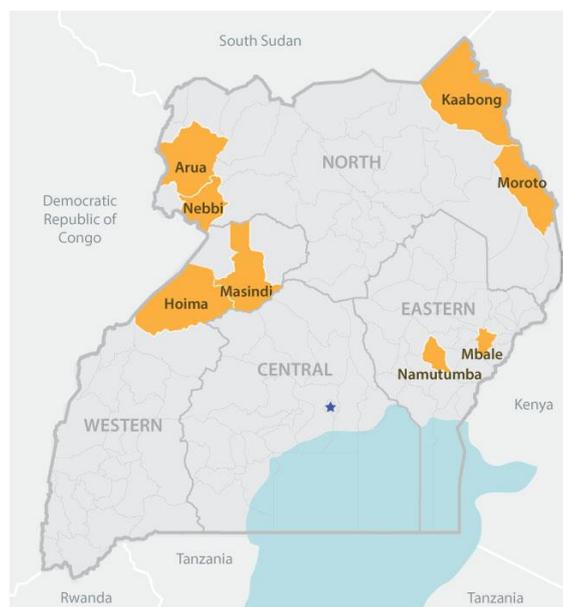
Prior to the start of data collection and tool testing, the assessment protocol was reviewed and approved by the FHI 360 institutional review board (IRB) and the IRB of Makerere University. An approval letter was also issued by the Uganda National Council for Science and Technology. All assessment participants gave oral and written consent prior to being interviewed, and consent forms were translated into local languages. No names were recorded on the completed questionnaires.

All hard copies of questionnaires and consent forms are stored in a locked cabinet at the FHI 360/ Uganda office. Soft copy databases are on a secure server at FHI 360/Washington. There is no identifiable information included in the soft copy databases.

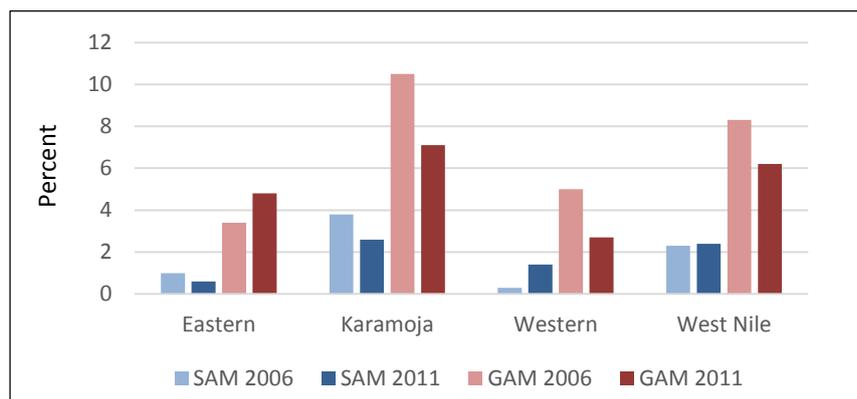
### 3.8 Study Area – Regional Profiles

Figure 3 shows the locations of the districts included as part of the assessment. The selected districts are geographically diverse and, therefore, face different health and nutrition challenges. In addition, each district has a different implementation history of IMAM/NACS, depending in part on its geographic location, specific regional context, and unique health and nutrition challenges. IMAM programming began in Uganda in the early 2000s, with UNICEF providing support to the first version of the *IMAM Guidelines* in 2006 (MOH 2010a). Shortly thereafter, NACS was introduced to Uganda through USAID partners. Support to NACS implementation in the selected districts has been provided by several USAID-funded projects, with NACS being introduced in the various districts between 2008 and 2013.

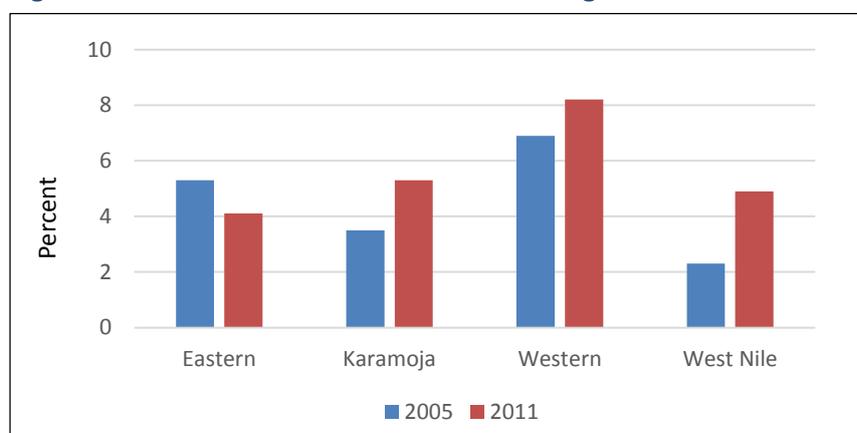
**Figure 3. Map of Assessment Districts**



Figures 4 and 5 highlight that SAM and global acute malnutrition (GAM) (GAM = SAM + MAM) are highest in the two selected northern regions, Karamoja and West Nile, and that HIV prevalence is highest in Western Region. The sections that follow provide brief profiles of the selected regions and districts to give a brief background on the regional context that may be contributing to these health and nutrition challenges.

**Figure 4. SAM and GAM Trends in Assessed Regions**

Sources: UBOS and Macro International Inc. 2007; UBOS and ICF International Inc. 2012.

**Figure 5. HIV Prevalence Trends in Assessed Regions**

Sources: MOH and ORC Macro 2006; MOH 2011.

### 3.8.1 Karamoja

Karamoja is the poorest region of Uganda, with 79.2 percent of its population in the lowest income quintile. It also has the lowest level of education attainment for women; the median number of years of schooling for women is 0 (UBOS and ICF International 2012). Though rates of SAM and GAM have declined in Karamoja (see Figure 4), the region still has the highest rates of SAM (2.6 percent) and GAM (7.1 percent) in the country (UBOS and ICF International 2012).

This part of the country faces the highest levels of food insecurity due in part to low levels of household income; low agricultural production, despite access to land; and unique climate challenges. Low agricultural activity is due to a lack of access to agricultural inputs, such as seeds, tools, and fertilizer. In Karamoja, only 52 percent of households have an acceptable diet, with 24 percent having a poor diet. The climate in Karamoja differs from the rest of Uganda, because it experiences 6 months of rain, followed by a 6-month dry season. As a result, the effects of a poor agricultural season are more acute (UBOS and World Food Programme [WFP] 2013). Due to the high levels of food insecurity, up to 95 percent of Karamoja's population is reliant on WFP food aid (UBOS and WFP 2013).

The food security situation has been exacerbated by decades of civil unrest. More recently, problems such as cattle raiding have contributed to continued instability in the region. Due to these difficulties, Karamoja has been receiving U.N., donor, and NGO support through nutrition and food security interventions for decades. Additionally, the HIV prevalence in Karamoja among men and women is 5.3 percent (MOH et al. 2012) and has been increasing.

### 3.8.2 Western Region

Western Region faces a greater challenge when it comes to HIV than other assessed regions. Total HIV prevalence is 8.2 percent, with prevalence among women at 9.1 percent compared to 7.1 percent among men (MOH et al. 2012).

Western Region is also facing an increase in SAM prevalence, though the rate is still lower than other areas (1.4 percent). GAM prevalence is also relatively low at 2.4 percent (UBOS and ICF International 2012).

Unlike the food security issues faced in the northern regions of Uganda, Western Region districts face dietary diversity problems. Households in this region are more reliant on cereals and pulses and consume less fruit, meat, fish, milk, and oil than households in other parts of the country. In addition, less than half of households in Western Region consume three meals a day.

Western Region is home to the highest number of subsistence farmers. These households are typically able to produce enough for their own consumption, but still lack overall diversity in their diets (UBOS and WFP 2013). Despite this, only 14.1 percent of the population is in the lowest income quintile, which is below the national average of 20 percent (UBOS and ICF International 2012).

### 3.8.3 Eastern Region

While averages of SAM (0.6 percent) and GAM (4.8 percent) are lower for Eastern Region than in the northern regions of Uganda, Namutumba district has been suffering recently from annual spikes in cases of acute malnutrition that occur between July and August between the two rainy seasons. In addition, unlike other assessed regions, GAM has actually increased since 2006 (UBOS and ICF International 2012).

In addition to having the lowest SAM and GAM rates of the assessed regions, Eastern Region also has the lowest HIV prevalence. Among men and women, the prevalence is 4.1 percent (MOH et al. 2012). The region also has a fairly poor population: 32.8 percent are in the lowest income quintile (UBOS and ICF International 2012).

### 3.8.4 West Nile Region

While the characteristic problems of poor food consumption and food security are present in the West Nile Region, they are not as severe as in Karamoja. SAM prevalence has increased slightly and is estimated at 2.4 percent. GAM, however, has been declining and is estimated at 6.4 percent (UBOS and ICF 2012). West Nile has the second lowest prevalence of HIV in the country, with an incidence of 4.9 percent among men and women (MOH et al. 2012).

West Nile Region is also quite poor, with 41.2 percent of the population in the lowest income quintile (UBOS and ICF 2012). Households in the northern regions of Uganda are poorer than households elsewhere in the country and spend a higher proportion of their overall incomes on food. Up to 45 percent of these households spend more than 65 percent of overall income on food (UBOS and WFP 2013).

In Nebbi district, 90 percent of the population is rural and relies on farming as one of the only livelihood opportunities. Most households engage in subsistence farming using traditional methods and do not produce enough excess food to increase incomes. In addition, the poorest households grow the fewest types of crops and have the least livestock, reducing household diet diversity. Despite the high level of farming in Nebbi, agricultural extension services are limited. The risk of food insecurity is also increased by a high number of children orphaned due to HIV and child-headed households (Community Connector 2012).

## 4 Results

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Results are presented by health system building blocks and are typically divided between results at the facility and non-facility levels. Recommendations for each building block are summarized at the end of each building block section.

### 4.1 Leadership and Governance

Strong leadership and governance is especially important in the health system because it sets the context in which services operate. In Uganda, because decision making and implementation is decentralized and responsibilities are shared between the MOH and the DHOs, the leadership and governance functions were assessed at both national and district levels. This assessment focused on four main functions of the leadership and governance block: knowledge, advocacy, strategy and work planning, and coordination.

Because knowledge among leadership is important to processes like setting priorities and allocating resources, which can have repercussions in all other health system building blocks, the assessment asked health system leaders about their knowledge of IMAM/NACS approaches. Advocacy is a method that can be used to influence health system leadership's knowledge, thereby affecting strategic and resource decisions. For this reason, the assessment asked about the existence of advocacy strategies and materials to see if the proper tools were available to increase knowledge among leadership about nutrition services.

Finally, strategy, work planning, and coordination have become increasingly important to make the most of limited resources. Because nutrition services share many programmatic elements and seek similar public health outcomes, leadership can play an important role in ensuring that services are synergistic, leverage resources, and avoid unnecessary duplication of efforts.

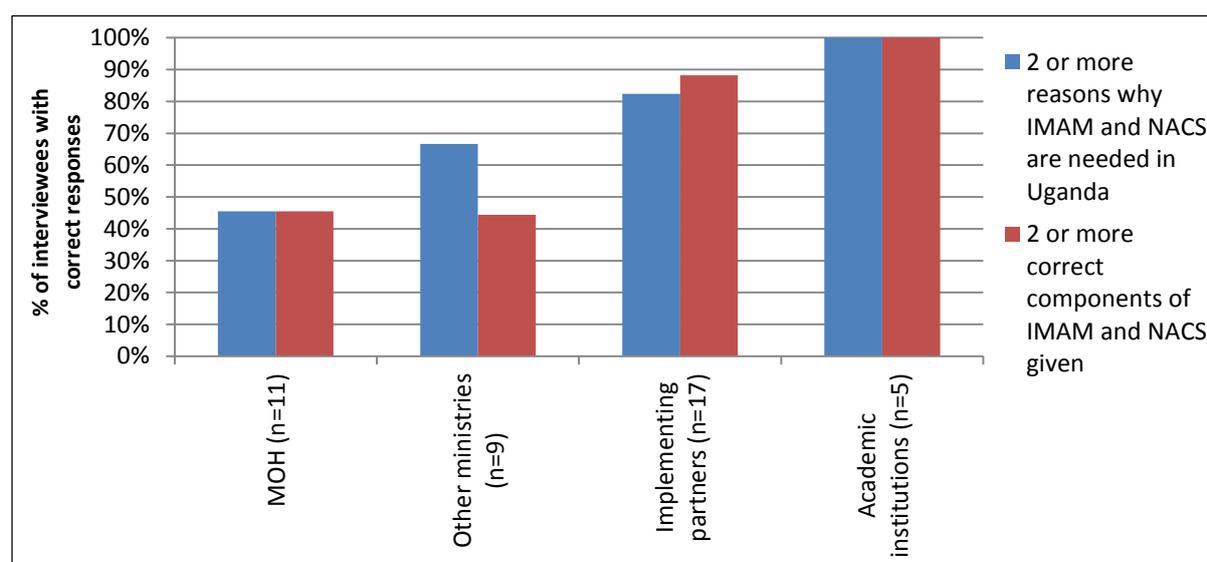
#### 4.1.1 Knowledge

##### *Non-facility-based personnel – national level*

Non-facility-based respondents, such as personnel at ministries, implementing partners, and DHOs, were asked to describe why IMAM/NACS are needed in Uganda. Respondents were then asked to name two or more components of IMAM/NACS. If respondents could list two or more correct responses to the individual knowledge questions, then the answer was counted as a positive result in the assessment. It was also not required that the acronyms for IMAM/NACS be used in the responses for them to be considered correct.

At the national level, 5 of 11 respondents from the MOH were able to provide correct answers to both knowledge questions. It should be noted that this figure includes both nutrition and non-nutrition personnel. When results from MOH respondents were divided between nutrition and non-nutrition personnel, all nutrition personnel were able to correctly answer both knowledge questions. Among non-nutrition MOH personnel, only two of eight were able to give two reasons why IMAM/NACS are needed in Uganda. Results were similar when interviewees were asked to name two components of IMAM/NACS: Among non-nutrition personnel, only two of eight were able to answer the question correctly.

Figure 6 summarizes the knowledge results for national-level non-facility-based personnel. See Box 4 for examples of correct responses to the knowledge questions.

**Figure 6. Knowledge on IMAM/NACS among National-Level Non-Facility-Based Interviewees**

These distinct differences in knowledge among nutrition and non-nutrition MOH personnel suggest that IMAM/NACS may not be well known outside of the nutrition departments or among personnel who are not designated nutrition focal persons in their departments. This could be due in part to lack of participation in events during which IMAM/NACS were discussed, such as trainings, workshops, or meetings (two of eight interviewed non-nutrition personnel had reported attending such events, lasting at least 1 day in total). While leadership does not necessarily need detailed training on IMAM/NACS, they should be aware of the basic requirements and benefits of the approaches.

#### Box 4. Examples of Correct Knowledge Question Answers for Non-Facility Personnel

Reasons why IMAM/NACS is needed in Uganda:

- Rates of malnutrition and HIV represent a significant burden to health status of population in many regions
- HIV increases the risk of becoming undernourished
- Malnutrition increases mortality of children
- NACS and IMAM can be integrated in the health system and provide cost-effective prevention and treatment of malnutrition

Components of IMAM/NACS programs:

- Inpatient care
- Outpatient care
- Community referral
- Use of therapeutic foods (RUTF, F-75, F-100)
- Nutritional assessment of HIV patients
- Nutrition counselling of HIV patients
- Outpatient food support/treatment of adolescents and adults

As Uganda has embarked on its UNAP, it is important that knowledge of nutrition programs and activities extend to all sectors, not just the MOH. For this reason, the assessment also asked personnel in other key line ministries about their knowledge of IMAM/NACS approaches. At least one person from the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF); the Ministry of Education and Sports (MOES); and the Ministry of Gender, Labour and Social Development was able to answer both knowledge questions correctly. However, interviewees from these line ministries admitted to having limited knowledge about the details of IMAM/NACS services and acknowledged the need for much more to be done to increase nutrition awareness among other line ministry decision makers.

Personnel from the above-mentioned line ministries were also asked about their participation in a meeting, training, or workshop focusing on IMAM/NACS that lasted at least 1 day in total. Among nutrition focal persons at the ministries, two had attended IMAM events and one had attended both IMAM and NACS events. An HIV focal person from one of the ministries also attended a NACS event. Other personnel that were interviewed at these ministries had not attended any meetings, workshops, or trainings on IMAM/NACS.

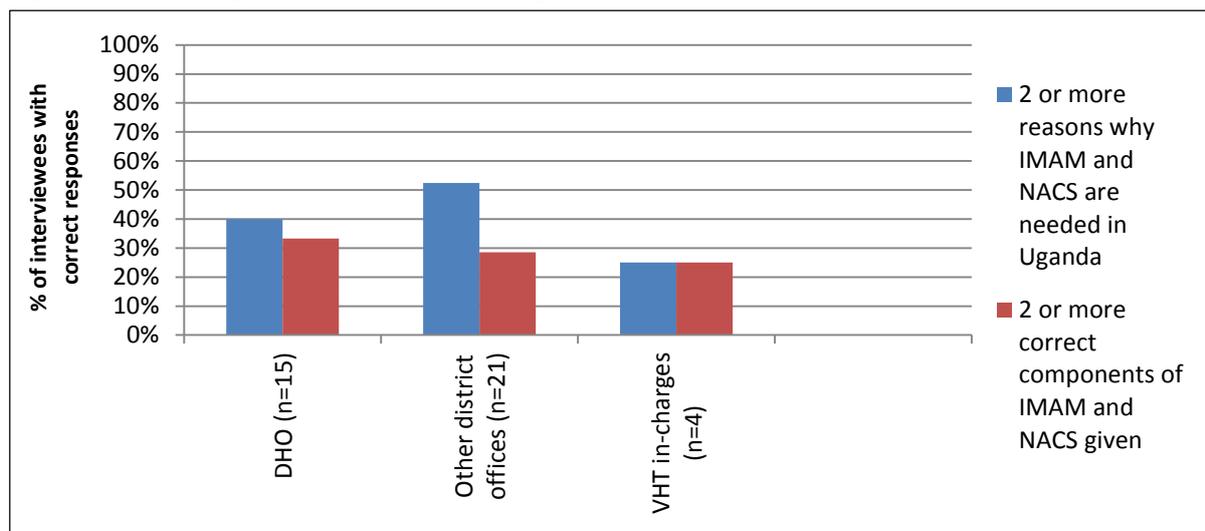
Depending on their role, extensive technical and clinical training on IMAM/NACS for personnel from these national-level ministries may not be appropriate. However, more communication about the importance of IMAM/NACS through more concise events focused on information and advocacy may help better inform ministries that are working on nutrition-sensitive interventions about ongoing nutrition-specific interventions that complement their activities. This is especially true when such interventions are meant to link with IMAM/NACS approaches through referral systems.

Interviewees from non-government actors (implementing partners and academic institutions) were the most well informed about IMAM/NACS, with 14 of 17 respondents (82 percent) able to give satisfactory answers to both knowledge questions. Part of this may be due to the fact that interviewees from these groups typically specialized in nutrition.

It is particularly important that academic institutions are aware of new nutrition approaches so that they are able to integrate them into the existing nutrition and health care pre-service curriculums. See Section 4.2 for more discussion on academic institutions and pre-service curriculum.

#### ***Non-facility-based personnel – district level***

It is important that knowledge about IMAM, NACS, and other nutrition interventions is present at the district level, particularly at the DHOs. Once budget allocations are made at the district level for health services, DHOs must prioritize and distribute funding among services (see Section 4.3 for further discussion of this process). Knowledge also affects the DHOs' ability to plan adequately for the supplies and human resources that are needed to implement nutrition services, causing repercussions throughout the health system. The DHO is also tasked with providing oversight to the health facilities within the district, hence DHO personnel must be knowledgeable about approaches to provide proper mentoring and supervision. Figure 7 depicts a summary of knowledge at the district level.

**Figure 7. Knowledge of IMAM/NACS among Non-Facility District-Level Personnel**

Among district-level administrative personnel, including DHOs and Chief Administrative Officers (CAOs), 7 of 15 total respondents across all districts were able to state two reasons why IMAM/NACS are needed in Uganda. Additionally, 5 of 15 were able to name at least two components of IMAM/NACS.

Kaabong and Nebbi districts had the best results, with all interviewed respondents in both DHOs able to provide two reasons why IMAM/NACS were needed in Uganda. In contrast, only one of five respondents could provide answers in Namutumba, and zero of four could provide answers in Masindi. Results for components of IMAM/NACS were slightly different across districts. Three of four respondents answered correctly in Nebbi, one of the two respondents in Kaabong, and one of four in Masindi answered correctly. There was no knowledge of IMAM/NACS components in Namutumba among interviewed district-level administrative personnel.

Results were similar by district in non-health-related district-level offices. Participants in Nebbi and Kaabong had the strongest results for both knowledge questions among non-health district personnel, whereas Namutumba participants showed no knowledge of these programs in the non-health district offices. Masindi showed some variation in knowledge among non-health district-level personnel, with three of five respondents able to give reasons why IMAM/NACS are needed in Uganda.

When asked about participation in IMAM/NACS trainings, meetings, and workshops that lasted at least 1 day, only the CAO in Kaabong reported attending such an event for IMAM. Among DHO personnel, only personnel in Namutumba reported attending these events, which were primarily for NACS (one person reported attending both IMAM and NACS events). When personnel from other sectors were asked about attending these events, all personnel in Namutumba stated that they were present at events for IMAM, and one person in Kaabong reported attending these events for both IMAM and NACS.

VHTs play a key role in the Ugandan health system, acting as the first point of contact between communities and health facilities. VHT in-charges in the communities visited were asked about why nutrition services are needed in the community and what nutrition services could be provided in the community. This was done with the assumption that the acronyms themselves may not be known, while key elements of the services should be. Only one of four VHT in-charges was able to correctly answer both knowledge questions, and none of the VHTs had attended trainings, meetings, or workshops on IMAM/NACS.

If this pattern is consistent throughout Uganda, the lack of knowledge among VHTs in districts other than Kaabong is a serious problem. When VHTs are unaware of nutrition services and the reasons they are needed in communities, it is less likely that they will refer community members to these services. While it is important to note that the availability of services may also have an impact on VHT knowledge of services and their ability to refer, the assessment data implies that VHTs interviewed were not aware of nutrition services at all and therefore would not be able to refer even if the services were available.

### ***Community level***

While not asked specific knowledge questions, community members were asked about nutrition problems facing their community, as well as about nutrition services that were available to them. Community members in Kaabong were by far the most knowledgeable about nutrition, and were able to cite poor feeding and lack of a balanced diet as nutrition issues facing their community.

In Namutumba, beneficiaries stated that malnutrition is present in the community due to regular consumption of cassava flour, which lacks the required vitamins. In Masindi and Nebbi, the responses focused primarily on lack of income to purchase adequate food and agricultural difficulties rather than on specifics of why these issues or others may be contributing to nutrition problems. In addition, respondents showed no knowledge of IMAM/NACS.

Community-level interviewees, including VHTs, CDOs, CBOs, and extension workers, were asked about information sharing and learning events held in their communities within the past 12 months. Only respondents in Kaabong stated that these events had taken place.

The lack of knowledge sharing events is problematic as it affects overall knowledge of these services in the communities. Approaches such as IMAM/NACS need to have a strong presence at the community level to reach their maximum level of effectiveness, as early referral is key to the successful prevention and treatment of acute malnutrition. As a result, gaps in awareness at the community level are worrying and can negatively influence the effectiveness of the services. Based on community member group discussions, the higher level of knowledge on nutrition in Kaabong corresponds with it being the only district reporting information sharing and learning events in the communities.

### ***Facility-based personnel***

At the facility level, a knowledge question was asked about the types of IMAM/NACS services that could be provided at the facility. Knowledge questions were asked only to personnel in administrative roles, such as hospital directors, administrators, and in-charges, as these are the individuals that make decisions about hospital priorities and resource allocation.

The *IMAM Guidelines* provide some guidance on the types of services that should be provided at each facility level. Services include: ITC, OTC, and theatre facilities at the hospital and HC IV levels; ITC and OTC at HC IIIs; day care and OTC at HC IIs; and referrals at the VHT/community level. Responses from interviewees in line with this structure were counted as correct responses. See Box 5 for a sample of correct responses to facility-level knowledge questions.

### Box 5. Sample of Correct Knowledge Question Answers for Facility-Level Personnel

IMAM/NACS services that can be provided:

- Inpatient therapeutic care
- Outpatient therapeutic care
- Systematic screening and referral
- Nutrition prevention (IYCF, education, counselling)
- Use of therapeutic foods
- Counselling
- Assessment
- Referrals

In the two national hospitals included in the assessment, the number of interviewed administrative personnel with knowledge about IMAM/NACS services was two of five, with one correct response at each national hospital.

At the regional hospitals, only two of seven administrative respondents were able to list IMAM/NACS services that could be provided at the facility, and the only positive responses came from Arua (adjacent to Nebbi District) and Hoima (adjacent to Masindi District) regional hospitals.

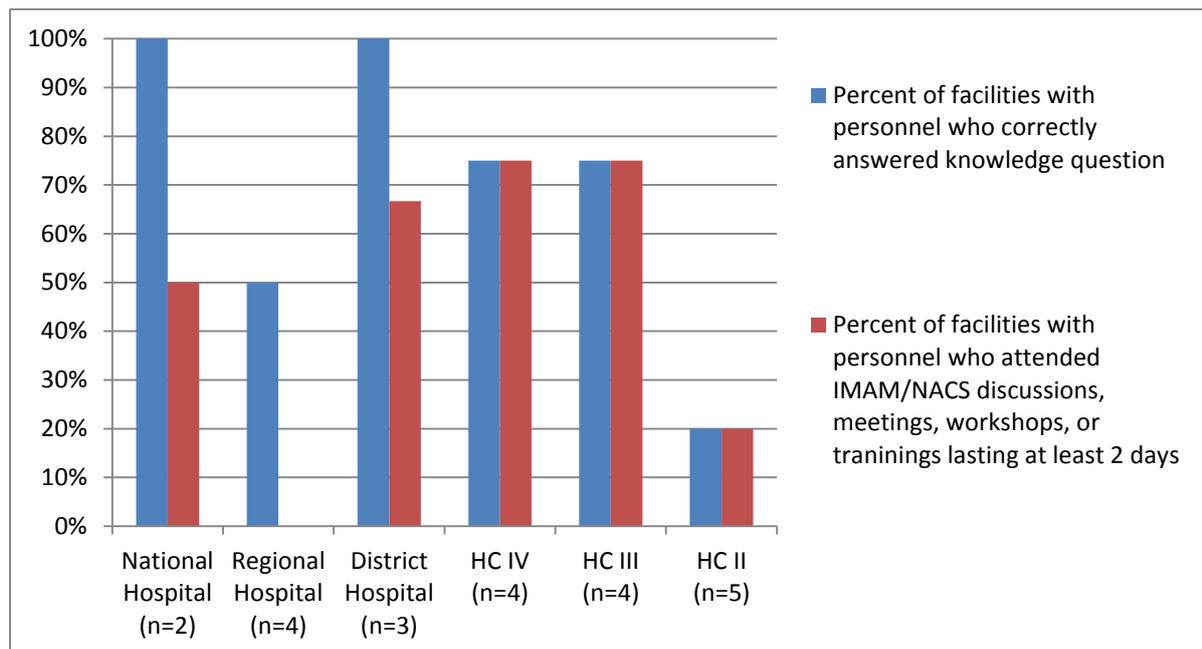
All interviewees at the district hospital level were able to list at least two IMAM/NACS services that could be provided at the district level; however, this rate began to decline at the lower HC levels. HC IVs and HC IIIs were well informed about the types of services the two programs encompass. Three of four HC IVs and HC IIIs have personnel who have knowledge about the services, but that dropped at the HC II level, with only one person at one of the HC IIs able to name at least two IMAM/NACS services.

Figure 8 shows a comparison of the percent of assessed facilities with knowledgeable administrative personnel<sup>4</sup> and the number of facilities with administrative personnel who have attended an IMAM/NACS discussion, meeting, workshop, or training that lasted at least 2 days.

Because large facilities like national and regional hospitals tend to have personnel with highly specialized functions, it may be unrealistic to expect a wide range of personnel to have in-depth knowledge on IMAM/NACS. However, it is important that key decision makers, such as department heads overseeing IMAM/NACS human resources and funding, have an understanding of the importance and impact of these programs to ensure that they are prioritized and that they receive the required resources.

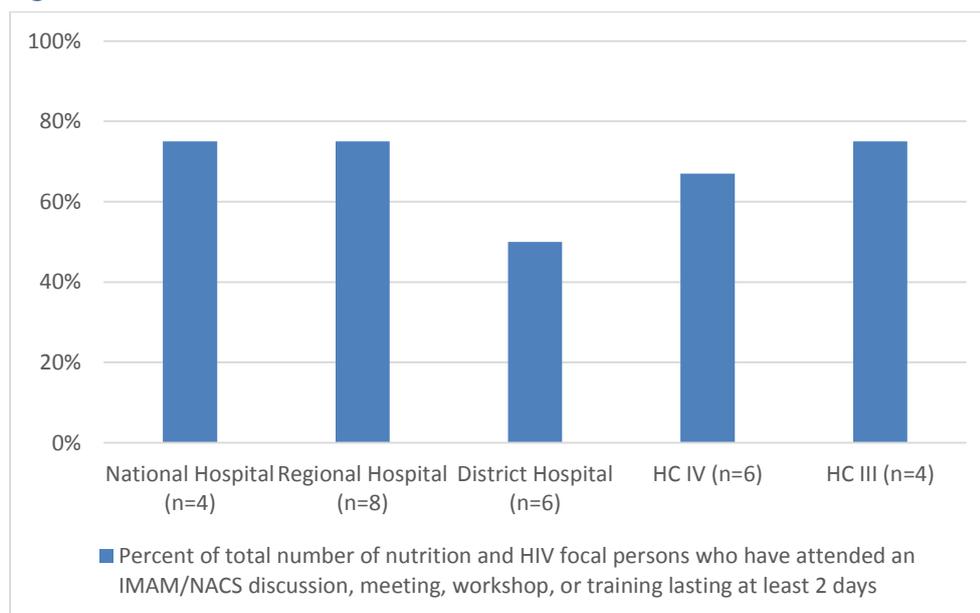
<sup>4</sup> 'Knowledgeable' is defined as facilities with at least one personnel member who could correctly answer the IMAM/NACS knowledge questions.

**Figure 8. Comparison of Facility Knowledge and IMAM/NACS Event Attendance**



In contrast, attendance of nutrition and HIV focal persons at IMAM and/or NACS discussions, meetings, workshops, and trainings was more or less uniform across facility levels, with at least half of the focal persons from each level attending events (see Figure 9). While it is useful that focal persons attend IMAM/NACS events, it is important that the appropriate people are attending the correct events. General information sharing events, such as the ones measured here, are geared more toward decision makers who require less detailed knowledge of technical programs, such as IMAM/NACS, whereas nutrition and HIV focal persons would be expected to attend longer, more technical events. If administrative personnel must delegate meeting attendance to a focal person, it is important that the knowledge gained at that meeting is eventually passed on to the intended participants.

**Figure 9. Attendance of Nutrition and HIV Focal Persons of IMAM/NACS Information Events**



### 4.1.2 Advocacy

Advocacy for nutrition ideally reaches national-level decision makers who influence central funding and budgetary decisions, while also overseeing policy and guideline development. It should additionally extend to the district level, where planning and budgeting takes place for local services, and to the community level, where many people have their first contact with health services. It creates awareness of and ways to address nutrition challenges.

While anyone can be an advocate, it helps to have a coordinated strategy to ensure that all key audiences receive accurate information relevant to their role. A clear strategy minimizes confusion among decision makers, and ensures that the most important messages are heard by the right people. Specifically, a national-level advocacy strategy for nutrition ensures consistency in the communication of nutrition messages and national-level nutrition goals. Advocacy materials facilitate the implementation of the advocacy strategy, helping advocates provide consistent and accurate messages to target audiences.

The assessment investigated the existence of advocacy strategies and materials for nutrition, as well as the extent to which district- and facility-level implementers have been oriented on these strategies. This section first looks at the existence of strategies and materials, and then discusses knowledge of and use of these strategies at the district level.

#### *Existing advocacy strategies and materials for nutrition*

While a national-level nutrition advocacy strategy and plan was drafted in 2012–2013 using a consultative approach with government, development partners, and implementing partners, it had not yet been rolled out by OPM at the time of the assessment. This is because it is in the process of being incorporated into a broader National Nutrition Communication and Advocacy Strategy for Uganda that includes advocacy, social mobilization, and behaviour change communication (BCC).

However, two implementing partners reported that they had their own advocacy strategies for nutrition, and seven reported that they have advocacy materials for nutrition. One of the strategies is focused on increasing awareness on nutrition and advocating for funding at the MOH. The other is focused on the community level and is used in communities where the actor is implementing its programs. This strategy deals broadly with child health, but includes aspects of nutrition, such as IMAM programming.

When asked about the details of nutrition advocacy materials, some partners reported using their own materials, whereas others were using materials produced by other partners. Examples of materials produced by other partners include WHO and UNICEF materials; NuLife materials; and the Uganda Nutrition Advocacy Package produced by FANTA, WFP/Uganda, and Uganda Action for Nutrition (UGAN) Society. The remaining four implementing partners have their own sets of materials for nutrition advocacy, some of which target government and implementing partners at the national level. Others focus on the community level, and one was focused on facility-level personnel, managers, and clients. Whether externally or internally produced, all partners cited different strategies and materials.

The assessment team conducted an online search to shed additional light on what advocacy strategies and materials are readily available and accessible, and to see if implementing partners who stated that they had materials also had them available online. Table 5 lists the materials that were accessible.

**Table 5. Uganda Nutrition Advocacy Strategies and Materials by Date of Release**

Year	Document Title	Supporting Organization
2009	The National Communication Strategy on Nutrition and HIV	NuLife
2010	Uganda Nutrition Advocacy Package	FANTA, WFP/Uganda, UGAN Society
2011	Uganda Nutrition Action Plan 2011–2016: Message for District and Lower Level Leaders (2011)	National Planning Authority
2012	Nutrition Advocacy Training: Strengthening Advocacy Capacity to Scale Up Nutrition Investments and Outcomes in Uganda	FANTA
2013	The Cost of Hunger in Uganda: Implications on National Development and Prosperity	U.N. Economic Commission for Africa and WFP
2013	Reducing Malnutrition in Uganda: Estimates to Support Nutrition Advocacy – Uganda PROFILES 2013	FANTA

Many of the cited materials could not be found, suggesting that some of these strategies and materials may be internal to partner organizations or that they have simply not been posted online as a means of dissemination. In some cases, global-level strategies used by partners were found, but documentation specific to Uganda was not available. Documents such as research reports were found on partner websites, but availability of useable materials related to the content of the reports, such as advocacy briefs, that can facilitate the communication of research data to decision makers was limited.

During the time of data collection for this assessment, the National Nutrition Communication and Advocacy Strategy was under development with contributions from multiple stakeholders. It is designed to align with the objectives and support the roll-out of the UNAP, and is scheduled to be launched by OPM in 2014. A package of nutrition advocacy materials will be disseminated to parliament, as well as to the media and government ministries, departments, and agencies (MDAs), as outlined in the strategy. These materials were developed using a consultative approach with key stakeholders during a material development workshop facilitated by OPM, FANTA, and World Vision, and supported by USAID and UCCO-SUN. It is anticipated that OPM will launch these materials by the end of 2014, along with nutrition advocacy materials targeted to development partners; civil society organizations working in family planning, education, and agriculture; and local government (also as outlined in the strategy). The materials include information from existing resources and in-country data, including findings from the Cost of Hunger in Uganda study (2013) and Uganda 2013 PROFILES results, illustrating what the negative consequences would be with no improvement in nutrition problems from 2013 to 2025, as well as the benefits of improved nutrition over the same time period. It is essential that forthcoming nutrition advocacy materials and campaigns be coordinated around the objectives of the national strategy with advocates speaking in ‘one coordinated voice’ on nutrition.

#### ***Knowledge and use of strategies at the district level***

Among facility personnel, 3 of 20 respondents from assessed facilities were aware of a nutrition advocacy strategy. These personnel were at a national hospital, a regional hospital, and an HC IV; the regional hospital was located in Arua and the HC IV in Kaabong.

Only the regional hospitals in Arua and Hoima, the district hospital in Kaabong, and the HC IV in Kaabong reported that there had been an orientation on a nutrition advocacy strategy. A VHT in Kaabong also confirmed that an orientation on the strategy had taken place, but it is possible that this orientation was confused with general IMAM training or orientation on communication materials.

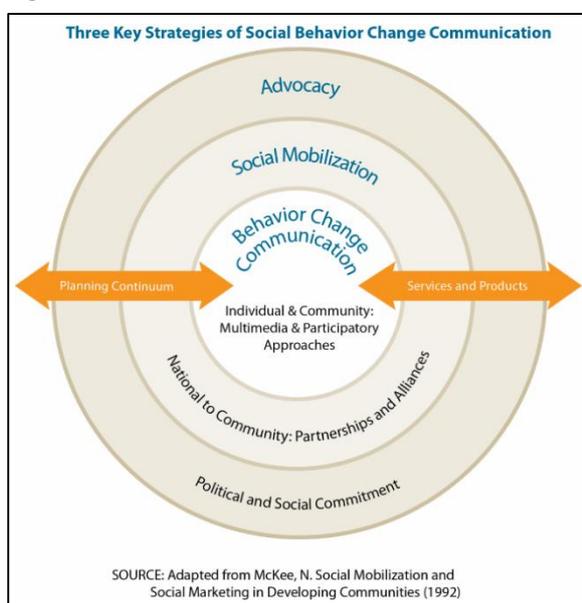
Three regional hospitals (Arua, Hoima, Moroto), two district hospitals (Masindi, Kaabong), and one HC IV (Kaabong) also reported that they had nutrition advocacy materials. The VHT interviewed in

Kaabong reported that advocacy materials had been received. Conversely, no DHO personnel interviewed reported having received an orientation on a nutrition advocacy strategy.

Looking at the responses from interviewees, it seems that most nutrition advocacy is being done in Kaabong, whereas no advocacy materials or activities were reported in Namutumba. In addition, advocacy materials and activities were not reported below the HC IV level, with the exception of the VHT in Kaabong, which is already a high-performing district in terms of advocacy. It is clear that more effort is needed to make sure advocacy reaches all levels of decision makers to effectively prioritize nutrition throughout the health system.

Based on the high level of variation in reporting on advocacy, it seems that there may be some confusion among respondents about the difference between nutrition advocacy and BCC, indicating the need for more training in both at local levels. In many cases, interviewees mentioned advocacy while describing BCC (e.g., counselling materials). This may be due to the fact that both advocacy and BCC are often considered components of the broader concept of social and behaviour change communication (SBCC) national programs. The SBCC model is shown in Figure 10.

**Figure 10. SBCC Model**



Nutrition advocacy materials should affect change at each level of the enabling environment for nutrition, and must be tailored to specific target audiences segmented in the National Nutrition Communication and Advocacy Strategy. The materials should promote the desired change by addressing barriers and benefits (as perceived by the target audience).

It is also essential that materials highlight what role each audience can and should play to improve the nutrition situation in Uganda. For example, current nutrition advocacy materials developed by a core group of nutrition stakeholders include materials targeting various audiences at multiple levels, including parliament, members of government MDAs, the Cabinet, local government, the media, development partners, civil society, and the private sector. Materials targeting national-level decision makers, such as parliamentarians, MDAs and Cabinet members, focus on increased resources for nutrition, as well as ensuring a legal and policy framework that supports improved nutrition. Materials targeting local governments, on the other hand, encourage them to include nutrition in their district-level plans.

Nutrition advocacy activities should be expected to contribute to increased visibility, commitment, action, and resources for nutrition in the health, agricultural, education, and social development sectors, as well as public sector management.

### 4.1.3 Planning for Nutrition

Participants were interviewed about the existence of written plans supporting the provision of IMAM/NACS services at various levels of the health system. Existence of these documents was used as a proxy measure of prioritization of IMAM/NACS programs among health system leadership. If these approaches are captured in concrete plans, they are more likely to receive the required resources for implementation.

Several types of documents were investigated at the national, district, and facility levels: scale-up plans, which focus on specific nutrition services and are usually designed and planned at the national level; implementation plans that touch on the detailed aspects of the roll-out of new services at a decentralized level; and work plans, which detail the steps to be taken to move forward strategy, scale-up, and implementation plans. Plans vary in duration and focus on different segments of the health system. Finally, some plans are often costed, while others inform annual budgets. The inclusion of IMAM/NACS in planning meetings was also examined. See Table 6 for the different types of investigated documents along with their specific duration and health system segmentation.

**Table 6. Types of Investigated Documents**

Type	Duration	Health System Segment	Budgets
Scale-up plans	Multi-year	National, regional, district	Costed
Implementation plans	Multi-year	National, regional, district	Costed
Work plans	Annual	National, regional, district, facility	Inform annual budget

#### *MOH plans*

At the national level, all nutrition plans are organized around the objective laid out in the UNAP. It is necessary, however, that specific components, approaches, and interventions that make up the UNAP are individually planned for through implementation, scale-up, and work plans. If not, it is difficult to move higher-level strategy forward in a meaningful and concrete way.

All of the respondents involved in nutrition activities at the MOH reported that there was a national scale-up strategic plan for IMAM, but no national-level scale-up plan for NACS. The IMAM scale-up plan focuses on the integration of the management of acute malnutrition into maternal and child health services and ongoing routine health services at all levels of the health infrastructure.

For IMAM, the existence of an implementation plan at the MOH is less clear. The Nutrition Unit did not report having its own IMAM implementation plan, but the Reproductive Health Department did report that it had one.

The AIDS Control Programme (ACP) reported that there is a NACS implementation plan, known as the NACS acceleration plan. It was developed to integrate nutrition in prevention of mother-to-child transmission of HIV and other health services delivery points. The vision of the acceleration plan is to achieve an HIV-free generation with healthy and well-nourished mothers and children by 2015 by reducing mother-to-child HIV transmission using NACS interventions. The specific objectives include increasing the proportion of mothers who adopt optimal infant and young child feeding (IYCF) practices and strengthening the health service delivery system to integrate NACS into prevention of mother-to-child transmission of HIV interventions.

IMAM is not included as a specific work plan activity at the MOH, despite the IMAM scale-up strategic plan. Other nutrition activities, including development of monitoring and evaluation (M&E)

tools, food fortification, supplementation, deworming, and IYCF, are included in the MOH work plan. The ACP, which does have an implementation plan for NACS, did report that NACS was included in the department work plan.

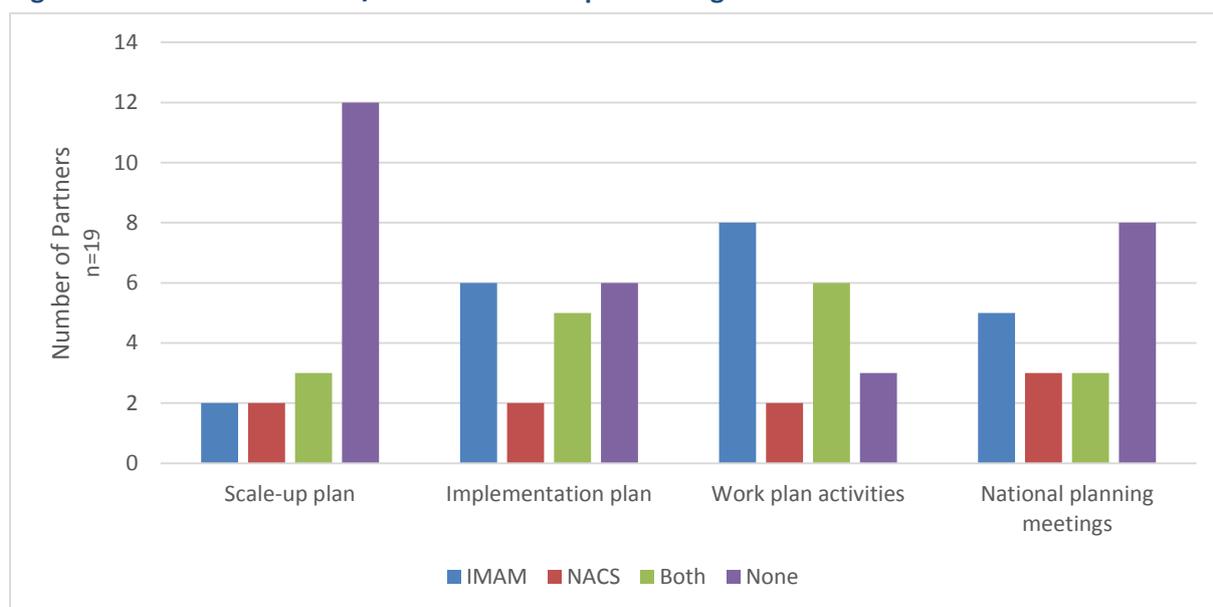
The assessment also asked about national planning meetings for IMAM/NACS. Considering the variation in the existence of national-level scale-up and implementation plans, the results on national planning meetings are less surprising. The Nutrition Unit reported that four IMAM planning meetings had occurred, the ACP reported three NACS meetings had occurred, and the Reproductive Health Department reported that one joint IMAM/NACS meeting had occurred. Neither the Nutrition Unit nor the ACP reported that a joint planning meeting had occurred. This highlights the siloed nature of planning for nutrition activities within the MOH.

Further discussion with stakeholders revealed that a national-level nutrition work plan did not exist, although they felt strongly that one should be developed to help coordinate and streamline work planning between actors and inform the budget process.

### *Implementing partner plans*

Figure 11 summarizes the inclusion of IMAM/NACS in the plans of implementing partners. Very few implementing partners have their own scale-up plan for IMAM/NACS. This should not necessarily be considered a gap in planning; ideally, partners should feed into or support a national-level scale-up plan to ensure coordination.

**Figure 11. Inclusion of IMAM/NACS Plans of Implementing Partners**



The presence of IMAM/NACS in implementation and work plans is somewhat more mixed. In general, it appears that implementation plans for IMAM are more prevalent among implementing partners interviewed than implementation plans for NACS. As there is a higher number of implementation plans for IMAM, it then follows that there is a high prevalence of IMAM in implementing partner work plans.

Implementing partners were also asked how many national planning meetings had taken place over the past year for IMAM/NACS. Here again, knowledge of IMAM planning meetings was higher than knowledge of NACS planning meetings. Eight of the implementing partners did not know about any national planning meetings. Considering that all but three partners included IMAM/NACS in their work plans, it would be important that these same partners are participating in national-level planning

meetings to ensure coordination across partner work plans and harmonization with larger government plans for implementation and scale-up.

### ***District-level plans***

Only two of four DHOs (Nebbi and Kaabong) reported that they had an implementation plan for nutrition, and only one of the four DHOs (Kaabong) reported that its work plan included IMAM. Kaabong was also the only DHO that reported including IMAM in a district health team planning meeting. None of the visited DHOs included NACS in their work plans or in district health team planning meetings. While not asked about as part of the assessment, stakeholders indicated that every district should have a district nutrition action plan around which district-level nutrition activities can be coordinated and budgeted for.

### ***Facility-level plans***

Both national hospitals included IMAM and NACS in their hospital planning meetings. Only Mulago included IMAM activities in its work plan, whereas St Francis Nsambya included both IMAM and NACS activities.

Results at the regional hospitals were mixed. Two regional hospitals did not include IMAM/NACS in their planning meetings or work plans. One regional hospital reported having discussed IMAM in its planning meetings and included both IMAM and NACS activities in the work plan. The remaining regional hospital reported that both IMAM and NACS were discussed at the planning meeting, but all interviewed respondents reported that they were unaware if IMAM/NACS activities were included in the hospital work plan. The same was true at the district hospitals, where only one district reported discussing NACS in a planning meeting, but this facility did not report that NACS was included in the facility work plan.

Only one HC III, located in Kaabong, reported to have included IMAM in both planning meetings and the facility work plan. It was mentioned by one person at an HC IV that IMAM/NACS were considered part of its ‘mandate of activities’, but that these activities were not specifically included in the work plan. This is likely due to the way in which nutrition activities are currently budgeted and planned for; nutrition activities are typically included under primary health care (PHC) activities. In addition, for HCs and even some district hospitals, planning and budgeting is done by the DHO. Some facilities may not have the in-house capacity to develop facility-level work plans. See Section 4.3 for further discussion of the budgeting and planning process for district-level facilities.

Some of the issues around planning for IMAM/NACS activities may be linked to the fact that there are inconsistencies at the national level with the presence of either scale-up or implementation plans. Currently, district-level facilities plan according to district priorities. For instance, in Kaabong, malnutrition is a priority health concern and a great deal of implementing partner funding is channelled through the DHO and facilities to prevent and treat malnutrition. For these reasons, approaches such as IMAM are a higher priority among district-level decision makers, like the CAO, and appear more frequently in DHO and facility work plans and planning meetings. In other districts, malnutrition may be less visible, and, therefore, other programs may receive more attention in meetings and work plans. Without standardized guidance from the national level that can be shared with DHOs, it is not surprising that there is a lack of standardization in planning for IMAM/NACS activities at the facility levels.

Respondents also reported that the high level of dependency on outside resources from implementing partners and donors may be contributing to a lack of consistent planning for IMAM/NACS. These actors make decisions about financing and resources and, therefore, have a direct impact on decisions for implementation. Most of the facilities and district offices mentioned that they do not have funds available to scale up IMAM/NACS on their own, limiting their ability to make independent decisions about implementation. See Section 4.3 for a more detailed discussion of health system financing.

### 4.1.3 Multi-Sectoral Coordination

Nutrition is a cross-cutting issue that extends beyond the health sector. This is reflected in the UNAP, which seeks to consolidate and coordinate efforts to improve nutrition across ministries and sectors. The assessment investigated the current level of multi-sectoral coordination for nutrition by asking interviewees about their participation in multi-sectoral meetings and the topics these meetings covered.

#### *National-level coordination*

Multi-sectoral coordination meetings were reported in high numbers by the MOH implementing partners. One implementing partner reported that up to 15 meetings had taken place over the past 12 months. While details on the specific meetings attended were not reported, respondents were asked to list the topics that were covered. Many referred to meetings related to UNAP and global costing.

Multi-sectoral coordination on nutrition was also reported by other key line ministries, and all reported discussions were focused on the UNAP. The need for increased coordination was strongly expressed by all non-health ministries. Respondents indicated that they understand the need for more inclusion of nutrition issues in their agendas and they requested an increase in technical support to do so. Coordination may be the first step toward identifying the needs of each ministry in order to design an appropriate package of nutrition support.

IMAM/NACS was not specifically cited by any of the ministries, including the MOH, as being included in multi-sectoral meeting agendas. While the objectives of the UNAP do cover IMAM/NACS elements in its objectives, including the integration of management of SAM and MAM into routine health services, the lack of reported discussion of these specific topics in multi-sectoral coordination meetings suggests that there may be a potential gap in linking the high-level UNAP objectives to coordinated actions across sectors.

#### *District-level coordination*

Two of the four DHOs, Nebbi and Kaabong, reported having multi-sectoral coordination meetings for nutrition. In Nebbi, multi-sectoral coordination meetings were not reported by the DHO, but instead by district-level officers in other key line ministries. These meetings did not specifically include IMAM/NACS approaches, but were focused on integration of agriculture and food security initiatives.

However, in Kaabong, multi-sectoral coordination around IMAM/NACS was very strong, with monthly coordination meetings reported by the DHO. These meetings have a fixed date, the last Wednesday of each month, and it was stated that nutrition is always included to avoid duplication of work among partners. The DHO also noted that IMAM/NACS are major topics in the district, as this is where the majority of resources are placed.

Meeting topics focused on the improvement of activities through M&E, supervision, and the management of food supplies. However, while the DHO reported strong coordination with partners, responses from district-level officers in other key line ministries were less strong. Generally, it seemed that coordination meetings, from their perspectives, were focused more on partner work and that broader coordination happened only if malnutrition rates reached emergency levels.

Some form of coordination was also seen between nutrition and food security approaches. Three of four DHOs reported that they had multi-sectoral nutrition and food security committees in place, though the frequency of their meetings was inconsistent. One committee meets once a year, another quarterly, and another district plans to meet monthly, but is yet to have its first meeting.

As this assessment was being conducted, District Nutrition Coordination Committees (DNCCs) were being rolled out at the district level. OPM directed districts to form these committees after the development and launch of the UNAP to ensure coordination of nutrition activities. These committees

are an excellent mechanism that can be used to increase multi-sectoral coordination, as they are chaired by the district CAO who oversees activities in all sectors.

#### 4.1.4 Conclusions

Knowledge about IMAM/NACS at the national level is strong among actors specifically engaged in nutrition activities, such as MOH nutrition personnel and focal persons and nutrition-specific implementing partners and academics. However, more remains to be done to increase knowledge of nutrition programs among non-nutrition personnel at the MOH and other key line ministries engaging in nutrition-sensitive interventions. The roll-out of the National Nutrition Communication and Advocacy Strategy for Uganda in 2014 is expected to narrow these knowledge gaps. The existing confusion between BCC and advocacy highlights the need for enhanced guidance and training at sub-national levels, specifically on the identification of target groups for BCC and advocacy and what messages are appropriate. It is important that nutrition advocacy materials that have recently been developed be rolled out at the sub-national level where key decision makers in local government, the DHOs, and facilities can be targeted.

District-level leadership and governance for nutrition are by far the strongest in Kaabong, where high prevalence of acute malnutrition has made nutrition interventions a main priority among district-level leadership and implementing partners. More needs to be done to ensure that nutrition is also prioritized in districts where nutrition problems may not be as visible. This is especially true when it comes to community outreach with VHTs and beneficiaries.

While the UNAP has generated a great deal of multi-sectoral coordination for nutrition, it is important that discussions on specific interventions are also included and are not limited to broad UNAP objectives. Ensuring that coordination translates into action can be facilitated by the development of scale-up, implementation, and work plans for nutrition. The inconsistency of these plans among ministries, implementing partners, DHOs, and facilities highlights the gap between national-level coordination efforts and actual coordinated implementation at the district and facility levels.

#### 4.1.5 Leadership and Governance Recommendations

- **Elevate the Nutrition Unit to division level to increase visibility of nutrition within the MOH.** This will also facilitate better internal coordination of nutrition activities, including IMAM/NACS, in the MOH and multi-sectoral coordination in alignment with the UNAP. OPM should be brought in to assist with this process as it would directly support UNAP objectives.
- **Create more opportunities for information sharing platforms that include key decision makers at both the national and district levels.** Information sharing should be multi-sectoral through strengthened joint planning of nutrition activities and sharing of reports and outcomes. Opportunities for ministries and districts to share best practices and lessons learnt should also be provided. At the national level, line ministries can be organized through OPM. At the district level, this can be coordinated by the DNCCs.
- **Support roll-out of the National Nutrition Advocacy and Communication Strategy and accompanying advocacy and communication materials so that advocates are speaking in one coordinated voice on nutrition.** These tools can then be used to bridge identified gaps within and across sectors and audiences, particularly at the district level, to promote change and improve nutrition. Key nutrition advocates should also be trained on effective advocacy approaches.
- **Develop a national-level nutrition work plan coordinated by the MOH Nutrition Unit.** This work plan should capture nutrition activities that are being implemented/supported by the government and those that are implemented/supported by partners, including IMAM/NACS. A national nutrition work plan will assist with the coordination of MOH, key sector, and partner

support to specific sections of the work plans. Key stakeholders from all sectors should be involved in the work planning process to encourage multi-sectoral coordination.

- **Support districts to develop nutrition action plans.** Support should be provided to the DNCCs to identify nutrition problems in their region or district, prioritize interventions to improve nutrition, discuss how nutrition services should be delivered, and begin the process of costing the implementation of prioritized interventions to improve nutrition at the district level for budgeting and advocacy purposes. The DNCCs should also play a coordination role to encourage increased multi-sectoral coordination and planning for nutrition at the district level.

## 4.2 Workforce

From the initial planning of personnel levels, through their recruitment, training, performance, and retention, the workforce building block captures all health system functions related to human resources for health. It feeds into the finance building block, as personnel levels affect budgets and directly affect the service delivery block. If there are too few personnel, services may not be able to be delivered to all those who need them; if available personnel are not adequately trained, the quality of services will be affected. More subtle impacts can be seen in the other building blocks, as the same issues of number and quality of personnel come into play in almost every health system function.

When examining the workforce for IMAM/NACS, the assessment focused on three broad areas: nutrition personnel, workforce satisfaction, and capacity development.

Nutrition personnel was examined from the perspective of the numbers of available health system personnel who provide nutrition services, including nutritionists, nurses, and midwives. The inclusion of nutrition in the job posting instructions of clinical personnel was also investigated. The assessment looked at numbers of health system personnel that support health system functions, such as information systems and supplies and equipment.

Workforce satisfaction can have a direct impact on service quality. To examine this, levels of absenteeism, requests for transfers, and on-time salary payments were investigated to gain insight into factors that can affect personnel performance.

Finally, workforce competencies were investigated. Workforce competencies can be developed through various approaches, including pre-service training, in-service training and mentoring, and access to technical resources.

### 4.2.1 Nutrition Personnel

#### *National-level personnel*

At the MOH, nutrition positions have been defined and integrated into the organogram at the national level, but several of the defined positions are yet to be filled. While all MOH interviewees reported that there were currently nutritionists employed within their sector, department, or unit, additional personnel may still be necessary to prepare for the increase in workload once IMAM and NACS are fully scaled up. In addition, MAAIF reported that there are nutritionists included among their personnel. Other non-health ministries reported that they did not have nutritionists among their personnel at the time of data collection.

#### *District-level personnel*

Current DHO staffing norms do not include a designated nutrition position at the DHO level; despite this, the Kaabong DHO stated that they have defined positions for a nutritionist and a nutrition focal person at the DHO because malnutrition is such a large issue in the district. However, these positions have not been filled and requests have been made to partners to recruit for them.

Since they do not have specific nutrition positions (other than Kaabong), DHOs typically make use of nutrition focal persons who take on the responsibility for nutrition activities within the DHO. The role of nutrition focal person was found to be taken on by a variety of different DHO personnel, depending on the district. The role of nutrition focal person is covered by the Senior Nursing Officer in Kaabong, the Nutritionist and Senior Clinical Officer in Namutumba, the District Health Educator in Nebbi, and as part of maternal and child health in Masindi. Some of these DHO nutrition focal persons, such as the Senior Clinical Officer and Senior Nursing Officer, are actually positions within the health facility and not within the DHO. Table 7 shows DHO staffing levels in the assessed districts as reported in the 2012 Human Resources for Health (HRH) Audit Report. Staffing is below 50 percent in all districts except Masindi. The use of facility personnel to support the nutrition focal person role in Kaabong and Namutumba may be because DHO staffing levels are very low and the few people that are available are not able to cover all tasks. Hence, they look to the facilities for assistance.

**Table 7. DHO Staffing Levels**

District	Total Norms	Filled	Vacant	Excess	% Filled	% Vacant	% Excess
Kaabong	11	5	6	0	45.45%	54.55%	0.00%
Masindi	11	8	3	0	72.73%	27.27%	0.00%
Namutumba	11	3	8	0	27.27%	72.73%	0.00%
Nebbi	11	3	8	0	27.27%	72.73%	0.00%

Source: Ogullei 2012.

The lack of standardization among DHOs as to who should take on responsibility for nutrition activities as the nutrition focal person can lead to challenges when it comes to coordination around nutrition and nutrition training. It also makes it difficult to advocate for filling positions to support nutrition, as different roles are being used in different districts. Stakeholders expressed the need for the creation of a nutrition technical position, such as a Nutrition Officer, at the DHO level as part of the district health team. This position could then oversee and coordinate nutrition activities within the health sector and interact with DNCC members or work as the nutrition focal person to coordinate nutrition activities across sectors within the district.

### Nutritionists

Current staffing norms, as per the 2012 HRH Audit Report, include nutritionist positions at the national, regional, and district hospital levels. Staffing norms for nutritionists at each facility level are detailed in Table 8.

**Table 8. Facility-Level Nutritionist Staffing Norms**

Facility	Position	Staffing Norm
National Hospital	Consultant (Nutrition)	2
	Medical Officer Special Grade (Nutrition)	1
	Senior Nutritionist	1
	Nutritionist	3
	<b>Total Positions</b>	<b>7</b>
Regional Hospital	Principal Nutritionist	1
	Senior Nutritionist	1
	Nutritionist	1
	<b>Total Positions</b>	<b>3</b>
District Hospital	Nutritionist	1
	<b>Total Positions</b>	<b>1</b>

Source: Ogullei 2012.

Table 9 shows the reported staffing levels for nutritionists at each hospital level in the assessment. All facilities are below the suggested staffing norms for nutritionists. In addition, one HC III in Namutumba reported that there is a nutritionist on staff, which is outside of the current staffing norms.

These staffing levels are consistent with other recent HRH reporting, indicating an ongoing challenge with nutrition staffing.

**Table 9. Reported Staffing Levels for Nutritionists\***

Facility	Staffing Norm	Number of Reported Nutritionists
<b>National Hospitals</b>		
Mulago	7	2
St Francis Nsambya <sup>5</sup>	–	1
<b>Regional Hospitals</b>		
Arua	3	1
Hoima	3	1
Mbale	3	1
Moroto	3	1
<b>District Hospitals</b>		
Kaabong	1	0
Masindi	1	0
Nebbi	1	0

\* Data in the 'Staffing Norm' column are from the HRH. Data in the 'Number of Reported Nutritionists' column are from the assessment.

Source: Ogullei 2012.

All assessed hospitals noted that some nutrition positions are still to be filled and remain unfilled due to a lack of funding. One factor that could contribute to the difficulty in recruiting for nutrition positions is their placement within hospital staffing norms. At the national hospital level, nutritionists are included within a broader staffing category of 'Medical Social Workers, Procurement, and Nutrition Staff'. At the regional hospital level, nutritionists are included under the category of 'Non-Medical Professionals and Finance and Accounts Staff'. At the district hospital level, they are categorized under 'Administrative and Other'.

The somewhat misleading headings under which nutritionists are included at regional and district levels may make it more difficult to see that nutrition positions are understaffed. It may also hint at the priority that these positions are given within the public services, as it is confusing that nutritionists would be included alongside administrative personnel.

The MOH has begun collaborating with partners to set up a registration system for nutritionists in Uganda, organized through a professional nutritionist organization. Not only will a registration process bring the benefit of legal protections to practicing nutritionists, it will also facilitate the hiring of nutritionists by elevating the profile of nutrition professionals.

While nutritionists are not included in the staffing norms at the HC levels, these centres play an important part in delivering nutrition services. HCs should, however, designate a nutrition focal person to coordinate and oversee nutrition activities at the facility. Table 10 shows which positions fulfil the role of nutrition focal person at the assessed facilities. Two districts, Masindi and Nebbi, did not make use of nutrition focal persons at any of the HCs.

**Table 10. Personnel Acting as Nutrition Focal Persons at Health Centres**

District	HC IV	HC III	HC II
Kaabong	Midwife	HMIS In-charge	In-charge
Masindi	None	None	None
Namutumba	Enrolled Midwife	Enrolled Nurse	Enrolled Nurse/Nursing Assistant
Nebbi	None	None	None

<sup>5</sup> As this is not a government facility, staffing norms were not available in the HRH Audit Report.

Steps should be taken that all health facilities designate a nutrition focal person to ensure that nutrition services are being provided in the facility. Ideally, the focal person should be someone with a nutrition or medical background who is familiar with the implementation of nutrition services. These designated nutrition focal persons should also be prioritized for additional nutrition training.

### *Staffing of nurses and midwives*

The assessment looked at the availability of nursing and midwifery personnel, as these cadres are often the ones who are delivering nutrition services, especially at the lower-level facilities. The assessment asked about these categories broadly, but they are compared to the staffing norms, which include ‘Nursing Officers’, ‘Enrolled Nurses’, ‘Enrolled Midwives’, and ‘Nursing Assistants’. Table 11 summarizes these findings.

**Table 11. Staffing Norms and Reported Staffing Levels of Nurses and Midwives\***

Facility	Staffing Norm	Reported Number of Nursing and Midwifery Personnel
<b>National Hospitals</b>		
Mulago	1,043	919
St Francis Nsambya <sup>6</sup>	–	230
<b>Regional Hospitals</b>		
Arua	161	124
Hoima	150	100
Mbale	197	198
Moroto	161	54
<b>District Hospitals</b>		
Kaabong	116	34
Masindi	116	85
Nebbi	116	58
<b>HC IVs</b>		
Kaabong – Karenga	17	13
Masindi – Bwijanga	17	16
Namutumba – Nsinze	17	14
Nebbi – Pakwach	17	21
<b>HC IIIs</b>		
Kaabong – Lokolia	9	5
Masindi – Ikoba	9	8
Namutumba – Magada	9	7
Nebbi – Panyigoro	9	10
<b>HC IIs</b>		
Kaabong – Narengapak	4	2
Masindi – Mihembero	4	4
Namutumba – Bukonte	4	2
Namutumba – Buyoboya	4	2
Nebbi – Mukale	4	2

\* Data in the ‘Staffing Norm’ column are from the HRH. Data in the ‘Number of Reported Nutritionists’ column are from the assessment.

Source: Ogullei 2012.

<sup>6</sup> Staffing norms not available.

All but four of the assessed facilities where staffing norms were available reported staffing levels of nurses and midwives to be below staffing norms. Surprisingly, Kaabong has some of the lowest staffing levels at all assessed facilities, despite the high level of nutrition programming. This could indicate that many of the necessary human resources are employed by partners rather than by the government.

When planning for nutrition services, it is important to remember to plan and advocate for these positions as well. They should also target nutrition training, which is discussed further in the section on competencies.

### ***Medical stores and medical records personnel***

Finally, the assessment examined if assessed facilities had health management information system (HMIS) and medical stores personnel on site. These personnel help ensure the healthy functioning of the information system and supply blocks of the health system.

All assessed DHOs reported that these positions existed. Additionally, all assessed facilities down to the HC IV level had both HMIS and medical stores personnel, with the exception of the HC IV in Masindi.

HMIS personnel are included in the facility staffing norms down to the HC III level, where electronic reporting is also required. HMIS personnel were found at all assessed HC IIIs except in Kaabong. However, the assessed HC II in Kaabong reported to have HMIS personnel.

Medical stores personnel are included down to the HC IV level. This is likely because HC IIIs and below receive supplies via the push system. A person should still be designated to track supply levels and ensure that they are properly stored. The Namutumba HC III and the Kaabong HC II, however, reported that they also had medical stores personnel.

### ***Steps for recruitment***

Based on the staffing norms and actual staffing levels found in both the HRH report and this assessment, one can conclude that, in general, the Ugandan health system is suffering from a lack of human resources. While national-level hospitals and the MOH are well staffed, district-level offices and facilities have vacancy rates as high as 55 percent, according to the 2012 HRH Audit Report. If the health system as a whole has staffing weaknesses, it is not surprising that nutrition programs are also short staffed.

At the district level, creation and filling of health positions is overseen by the district local government, per the 1995 Constitution and the 1997 Local Government Act. According to these legal documents, the local government has the responsibility to recruit, deploy, develop, and manage human resources for district health services. Health personnel apply directly to health postings through the local government. To advocate for new positions within the district, positions must be approved by the local government before postings can be opened. The CAO is a key link between the DHOs and facilities and the local government when it comes to the opening of new positions.

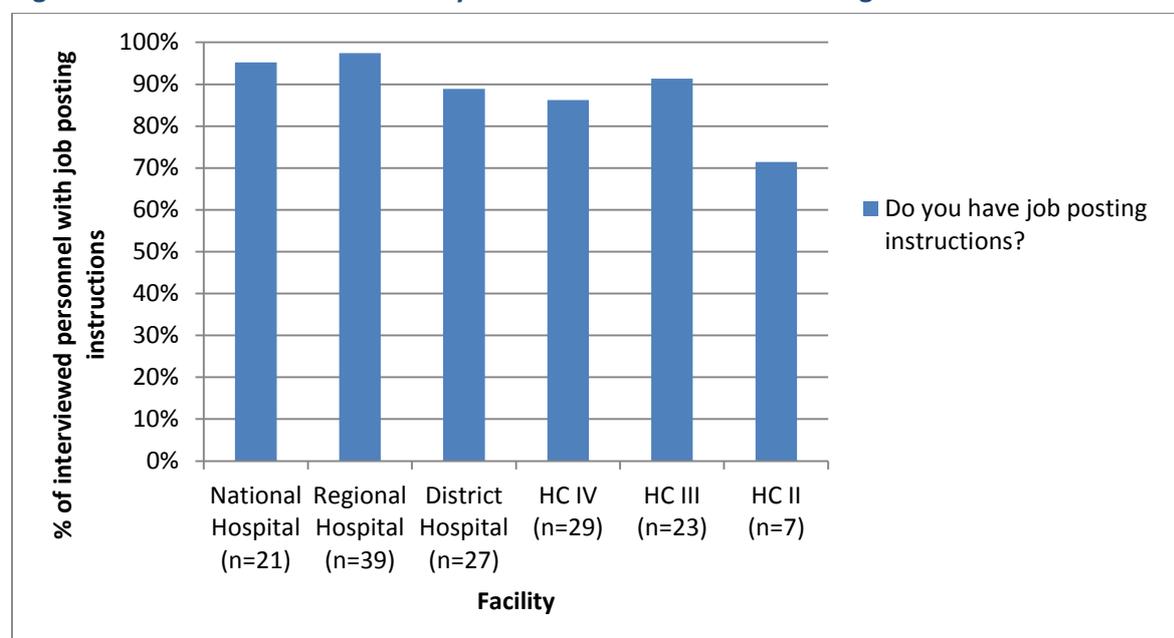
Another challenge facing the district level when seeking to add additional positions, particularly for nutritionists, is the funding allocated by the Ministry of Finance, Planning and Economic Development (MOFPED) in the annual district wage bills. These bills provide a fixed amount of funding with which public service wages are to be paid. Often this bill does not include enough funding to cover the addition of new positions. Advocacy needs to be undertaken at the MOFPED to ensure that wage bills incorporate additional funding earmarked for the inclusion of nutrition positions for districts that still need to hire a nutritionist at the district hospital level.

### Job posting instructions

A basic requirement that should be present in all health systems is the existence of job posting instructions (equivalent to job descriptions) for health workforce personnel. The existence of job posting instructions signals an intent to hire those types of positions. The content of job posting instructions is also important, especially for a new program that is being integrated or scaled up within an existing health system. Job posting instructions may need to be altered to capture additional duties or new positions may need to be created to take up new or additional work. The assessment focused on the presence of job posting instructions for those interviewed and whether or not these existing job posting instructions contained specific tasks related to nutrition.

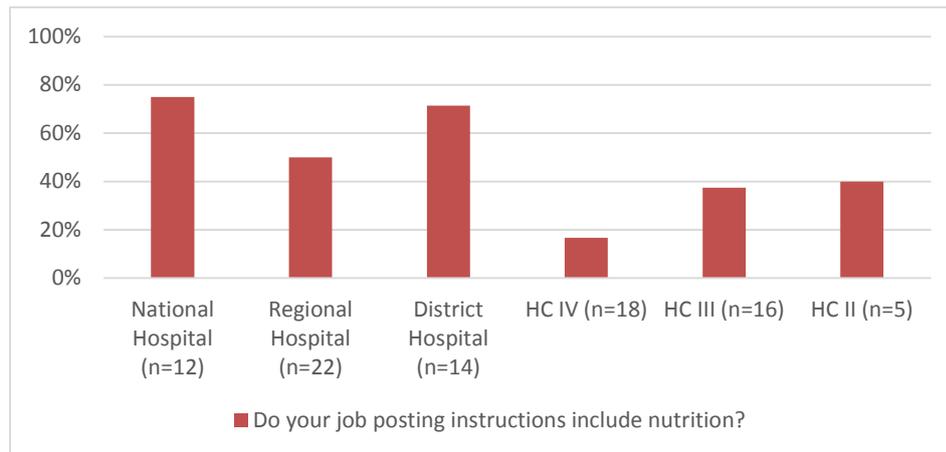
Among facility-level personnel interviewed, which included both personnel in administrative roles and non-clinical roles (directors, administrators, HMIS, medical records) and clinical personnel (in-charges, focal persons, nurses, midwives), 91 percent of respondents had job posting instructions for their current position. Figure 12 shows the percent of personnel at each facility level that reported having job posting instructions. HC IIs have the lowest percent of personnel with job posting instructions.

**Figure 12. Interviewed Health Facility Personnel That Have Job Posting Instructions**



The inclusion of nutrition activities in job posting instructions is inconsistent across facility types. Figure 13 shows the percent of clinical personnel (in-charges, focal persons, nurses, midwives) interviewed that reported having a job posting that also included nutrition.

Nutrition was included in job posting instructions for personnel at both national hospitals (which includes some clinical personnel at St. Francis Nsambya and all clinical personnel interviewed at Mulago). At the regional hospitals, nutrition was included only in the job posting instructions of the nutrition focal persons in Mbale and Arua. In Hoima and Moroto, more clinical personnel had nutrition included (all personnel interviewed at the regional hospital in Moroto had nutrition included). At the district level, facility personnel with nutrition included in their job posting instructions were limited to facilities within Masindi and Kaabong. The latter had all but one of the district-level personnel reporting to have nutrition included in their job posting instructions.

**Figure 13. Percent of Clinical Personnel with Nutrition Job Posting Instructions**

While the existence of nutrition-specific positions is required only down to the district hospital level, nutrition services are still supposed to be delivered at the HC level. Therefore, stakeholders felt that it was still important to mention some of these specific responsibilities in the job posting instructions of personnel at these facilities; otherwise, personnel may view nutrition as an add-on activity that is not part of their daily duties.

#### 4.2.2 Workforce Satisfaction

The assessment sought to gain insight into workforce satisfaction by examining the levels of and reasons for absenteeism and requests for transfers. Workforce procedures, such as on-time salary payments and existence of promotion procedures and standardized benefits packages, were also examined.

The issue of absenteeism was mentioned as a problem that exists in every facility that was visited during the assessment. The 2013 Annual Health Sector Performance Report shows the rate of absenteeism from a panel survey in 2010–2011 at 48 percent. In 2011–2012, a baseline survey was conducted to measure absenteeism at the HC level. Absenteeism was measured at 25 percent for HC IIs, 30 percent for HC IIIs, and 50 percent for HC IVs. Assessment interviewees stated that some of the reasons for absenteeism were demotivation due to salaries and family issues that may take the workers away from the facility site.

Respondents also mentioned that accommodations are a significant problem for health personnel working at the facility level. Ensuring that there is adequate housing for health facility personnel can be an expensive undertaking. Progress is being made on this issue, through both donor and government support based on local budgets and the 2013 Annual Health Sector Performance Report. The extent of the housing problem is not clear and additional investigation is needed to determine both the overall housing deficit and areas with the greatest need. Planning for additional housing should also be considered alongside plans to increase staffing at certain facility sites.

For this assessment, requests for transfers were also included as a measure of workforce satisfaction. Such transfers may indicate dissatisfaction or be linked with the desire of health personnel to work closer to their homes or to urban areas as opposed to rural ones. The highest absolute number of estimated requested transfers was at a regional hospital, with 17 out of 142 personnel requesting transfers in the past 12 months. At an HC III, the highest percentage was 27 percent, with 4 of a total 15 personnel requesting transfers. Reasons cited by respondents for transfer requests were lack of promotion or slow promotions and family issues.

To help minimize absenteeism and transfer requests, it is important that those responsible for the health workforce also respect existing workforce procedures, ensuring consistent and fair

enforcement. Interviewees reported that although these procedures exist, their application and follow-up is rendered difficult by the limited number of human resource personnel in national and district offices and in hospitals. Disciplinary procedures or transfer requests, for example, were reported to lack concrete follow-up because human resources personnel and managers are overwhelmed.

Even though standardized benefits packages and salary scales for each type of personnel exist, most respondents included in the assessment at all health system levels revealed that their salaries are delayed. In addition, personnel performance evaluation systems exist, but do not take personnel satisfaction into consideration. A procedure for performance-based promotions also exists within the system, but was reported to be under-utilized.

Steps should be taken to improve workforce satisfaction and mitigate such problems as absenteeism and requests for transfers. Those responsible for managing the health workforce need to ensure that existing workforce procedures are enforced and that areas lacking clear procedures, such as avenues through which personnel can express concerns, are strengthened. Finally, one of the most important areas for improvement is to determine how to ensure that personnel salaries are paid on time. This may require further analysis to pinpoint where along the finance and workforce systems the salary payment bottlenecks are occurring.

Since the collection of the data for this assessment, the MOH has released a revised version of the HMIS Health Unit and Community Procedure Manual (awaiting final approval) that includes several reporting forms that will be useful for tracking and mitigating some of the workforce procedure challenges mentioned above. Available tools within the revised HMIS Procedure Manual included a duty roster and an attendance register for tracking a scheduling work time of health facility personnel.

These tools can be used to track absenteeism and identify both facility-wide attendance problems and problems with specific personnel. Information on attendance can empower in-charges to seek out additional information about worker satisfaction if it seems that attendance is becoming an issue.

Other useful information gathering tools are provided in the HMIS Procedure Manual that can assist with improving other factors that influence worker satisfaction and performance. These tools include trackers for late salary payments and also an inventory of equipment that includes available personnel housing. In-charges should reach out to personnel and let them know that a mechanism exists through which they can report late salary payments. This tool can also be used to identify facility-wide problems with late salary payments. Information on available personnel housing can be cross-checked with personnel records and used to advocate for increased levels of personnel housing if current availability is found to be inadequate.

### **4.2.3 Capacity Development**

While the MOH did not report the existence of a national-level plan to integrate IMAM and NACS into the current pre-service curriculum, the institutions visited during the assessment do provide some form of teaching on nutrition that is included in courses for health professionals. The curriculum does not, however, cover NACS, and inclusion of IMAM was not systematic. Current IMAM content may not be in-depth enough to meet the needs of health care professionals who will eventually be providing these types of nutrition services.

One institution offered a single course on the management of malnutrition, whereas others only touched on certain aspects of IMAM, but these aspects did not include technical topics required to manage inpatient or outpatient services at the facility level. Some of the reasons educators cited when discussing the lack of IMAM and NACS in the pre-service curricula included gaps in financial resources that limit the number of available instructors and restraints regarding how much additional content can be added to existing courses. Even if teaching and preparation time were not constraints,

academic personnel would need sensitization and guidance for developing the adequate curricula to cover not only general nutrition topics, but also IMAM and NACS.

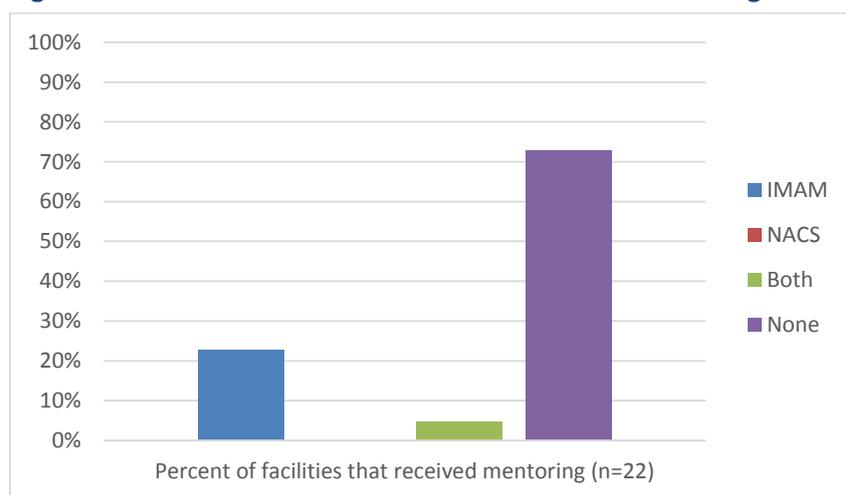
Interestingly, some academic institutions also reported the need for enhancing harmonization between institutions in terms of the curriculum they teach on nutrition. Definition of a core set of competencies for nutrition was mentioned as an initial requirement that has not yet been met. Weak coordination mechanisms around curriculum were also mentioned as an issue between institutions. Centralized guidance from the MOH on minimum standards and competencies for nutrition may help address these issues of inconsistency across institutions.

A national-level plan for in-service training in IMAM or NACS does not exist. In addition, no systematic mechanism exists within health facilities to ensure that newly recruited personnel are provided with in-service training on IMAM and/or NACS, and no system exists for districts that are scaling up IMAM or NACS services to be provided with the necessary in-service training for their existing health personnel. Ten out of 18 implementing partners reported that they had a system in place for in-service training for their workforce. Of this number, four had training for IMAM, two for NACS, and four for both IMAM and NACS. Due to the lack of a standardized in-service training plan, it is not surprising that most facilities reported to have not received any training at all.

The HMIS Procedure Manual also provides some useful tools for tracking personnel skills and in-service training. These records can help track who has received trainings and inform who should be sent for training when opportunities arise.

Mentoring or shadowing systems are essential for ensuring that health personnel are adequately supported in transforming the knowledge acquired during training sessions into sound skills that can be applied in their daily practice. At the national level, mentoring approaches that accompany in-service training were reported to be available only for NACS, but none of the assessed facilities reported having received NACS mentoring. The majority of facilities that received mentoring had done so for IMAM. While mentoring is occurring (6 of 22 facilities reported mentoring), there is room to increase the amount of mentoring facilities receive (see Figure 14).

**Figure 14. Percent of Total Facilities That Received Mentoring on IMAM/NACS**



Interviewees were also asked if a continuous professional development system existed. Results were split at all facility levels, with 10 of 21 facilities reporting that their facility had a continuous professional development system. As with mentoring, it is important to take steps to ensure that opportunities for professional development are available to all personnel at all facilities. This is especially important for senior personnel, as content they received during their pre-service training

may have been changed or updated since they completed their programs. Senior personnel need to be equipped with updated skills so that they can mentor and supervise other facility personnel.

The workforce should also have access to technical reference documents, such as national guidelines. Nine of the 22 visited facilities had access to the existing 2010 *IMAM Guidelines*, which also cover NACS protocols. At the national and regional levels, all assessed facilities had access to guidelines. After that, access dropped off with only one district hospital, one HC IV, and one HC III having access to guidelines. None of the HC IIs had access to guidelines. These results highlight weaknesses and gaps in the dissemination system, as these guidelines should be accessible for all HC personnel in every facility. Hand-outs and posters that assist daily practices should also be part of the minimum package of reference materials. All of the facilities below the regional level with access to the guidelines are located in Kaabong. In addition, one out of four personnel at the DHO offices said that they have access to the 2010 *IMAM Guidelines* (also in Kaabong).

#### 4.2.4 Conclusions

Overall, the Uganda health system lacks human resources, but there are key procedures for hiring, promotions, and other human resource requests already in place. While these systems could use strengthening in terms of consistent and equal enforcement, it is encouraging that the systems already exist.

Steps need to be taken to facilitate the hiring of key nutrition positions, particularly nutritionists at the district level. A sufficient number of nurses and midwives should also be employed at all health facilities, as these cadres of personnel are the ones most frequently delivering nutrition services. At the district level, local government and the CAO should be leveraged to assist with this process.

Finally, systems for building and strengthening workforce competencies must be improved. Nutrition content included in pre-service curriculums for health workers needs to be updated, and in-service training should be planned and budgeted for to ensure that the existing health workforce has the necessary skills to deliver nutrition services. In-service training should be accompanied by strong mentorship, coaching, and support supervision.

#### 4.2.5 Workforce Recommendations

- **Ensure adequate human resources to manage nutrition.** This will require engaging with key ministries, such as the MOFPED and the Ministry of Local Government (MOLG), to ensure that the proper systems are in place to allow for recruitment for and creation of nutrition positions. Actions include:
  - **Create relevant positions at the district level to manage malnutrition.** This includes the creation of a Nutrition Officer position within the DHO and filling vacant nutritionist positions at the district hospitals. CAOs should be leveraged to encourage these actions with the local government public service.
  - **Advocate for revision of the wage bill process** to ensure that additional funds can be added to the bill when a district anticipates that new positions will be added within the upcoming fiscal year.
  - **Hold dialogue meetings at the national and district levels around personnel recruitment** and include representatives from the MOFPED, the MOLG, and local government as appropriate. Districts should be encouraged to develop and submit recruitment plans to the MOH Nutrition Unit so that advocacy for these positions can be undertaken at the national level.
  - **Support the process of creating a professional body for nutritionists** that registers nutritionists. This will improve the visibility of nutrition as a profession, set professional standards for training and quality, and provide legal protections for practicing nutritionists.

- **Advocate for the inclusion of nutrition in job posting instructions for key health personnel.**
- **Organize and implement a comprehensive system for capacity development of personnel throughout their career.** This system should begin with pre-service training that is then reinforced through in-service training, support supervision, and mentorship. To achieve this, the following steps should be considered:
  - Initiate the update of curriculum for pre-service training of all relevant health personnel for integration of up-to-date nutrition services. Define a set of nutrition competencies for nutrition pre-service curriculum and identify which schools and training programs should be targeted (e.g., school of nursing, midwifery, clinical officers).
  - Develop an in-service training schedule and maintain a roster of in-service trainers for nutrition trainings (e.g., IMAM, IYCF, NACS).
  - Strengthen support supervision, mentorship, and coaching by updating/developing appropriate tools, evaluating impact, and ensuring that the budget is available for these activities. These actions should include health workers at all levels, including VHTs. A pool of national and regional-level supervisors should be trained and maintained by the MOH to ensure that support supervision, mentoring, and coaching occur systematically at all health system levels and are not dependent on implementing partner programs.
  - **Ensure that health workers have the appropriate resources to support their job functions.** Relevant guidelines, tools, and job aids should be readily available at all health facilities so that health workers can reference them as needed.
- **Develop strategies to motivate and retain health workers.** Areas to focus on include ensuring adequate personnel housing is available, providing a good working environment at the health facility that includes adequate equipment and reasonable workload, ensuring that salaries are paid on time, providing appropriate training, and giving recognition. In addition, actions should be taken to make sure existing workforce procedures are enforced and that areas lacking clear procedures, such as avenues through which personnel can express concerns, are strengthened.

### 4.3 Financing

Within the finance building block, the assessment focused on the availability of funds for nutrition, both as part of national and local-level health budgets and through implementing partner support. Availability of funding influences every aspect of the health system, as it determines the ability to secure the material and human resources necessary to deliver services. The way in which certain services like nutrition are captured within budgets can simplify or complicate planning. Making sure nutrition is a budget line item facilitates the allocation of funds for nutrition-specific services and activities.

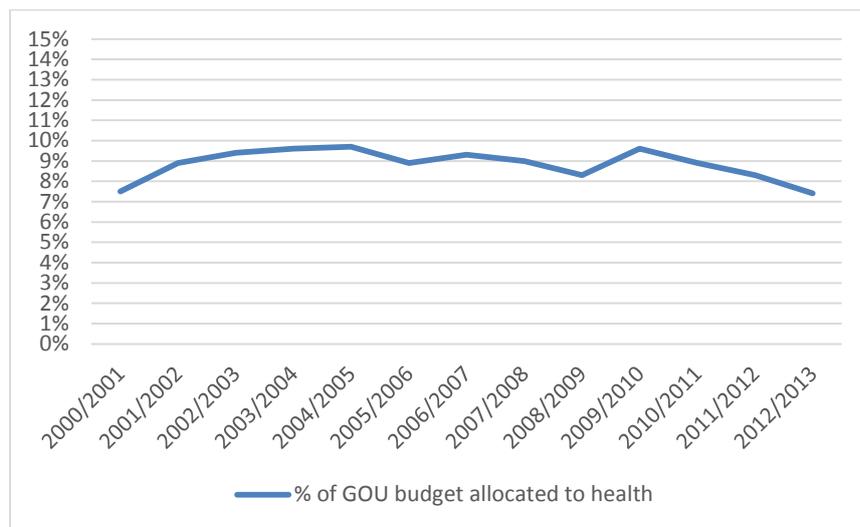
The assessment also examined how nutrition personnel are involved in the planning and budgeting process for nutrition, including the availability of training, tools, and resources. While all decision makers should be informed about nutrition programming, nutrition personnel are still experts in nutrition service delivery and should be consulted about estimation of resource needs during the planning and budgeting process.

Finally, costing of IMAM/NACS was investigated to help inform the development of implementation and scale-up plans. Hence, it is used as a powerful advocacy tool when seeking additional resources for nutrition service delivery, whether they are financial, material, or human resources.

### 4.3.1 Fund Availability

The Health Sector Strategic Plan III reported that while overall spending on health has increased over time, the share of the overall government budget spent on health has decreased. Of the total government budget, only 7.4 percent was allocated to health in FY 2012–2013. Figure 15 shows the trend of GOU spending on health as a percent of the total GOU budget, according to data from the 2013 Annual Health Sector Performance Report. Over the past decade, GOU spending on health has averaged around 9 percent, which is below the 15 percent benchmark of total spending that should be allocated to the health sector, according to the Abuja Declaration (Organisation of African Unity 2001).

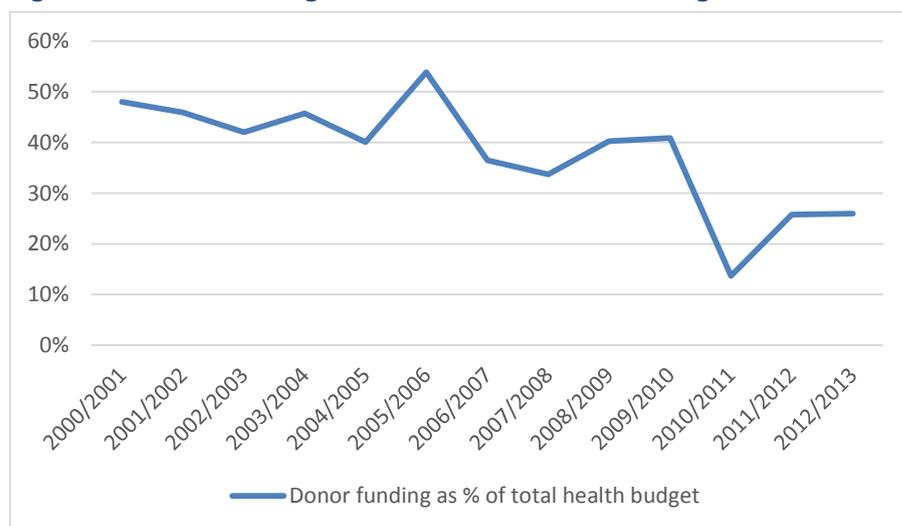
**Figure 15. Health Funding as Percent of Total GOU Budget**



Source: MOH n.d.

The government provides just under 15 percent of the funds that make up the total health budget (MOH 2010b), whereas development partners contribute around 38 percent on average. Households finance nearly 50 percent of health expenditures in Uganda, despite the fact that public health services are largely free in lower-level health facilities (MOH 2010b). While still high, donor funding as a percent of total health funding has been decreasing. In 2012–2013, nearly 26 percent of the total health budget was provided by donors (see Figure 16).

**Figure 16. Donor Funding as Percent of Total Health Budget**



Source: MOH n.d.

Because the overall health system is already functioning with limited resources, it is important to understand the current level of funding available for nutrition, including IMAM/NACS. Being able to anticipate funding needs helps promote the submission of accurate and realistic budget requests. If a budget shortfall is anticipated, it is important to have a plan to compensate for gaps in funding. Unanticipated funding gaps can have repercussions throughout the health system. They may lead to attrition if personnel salaries are not paid on time; they could reduce the quality of services if the proper supplies and equipment are not available; and they could lessen people's confidence in the health system, leading to negative health seeking behaviours.

### National level

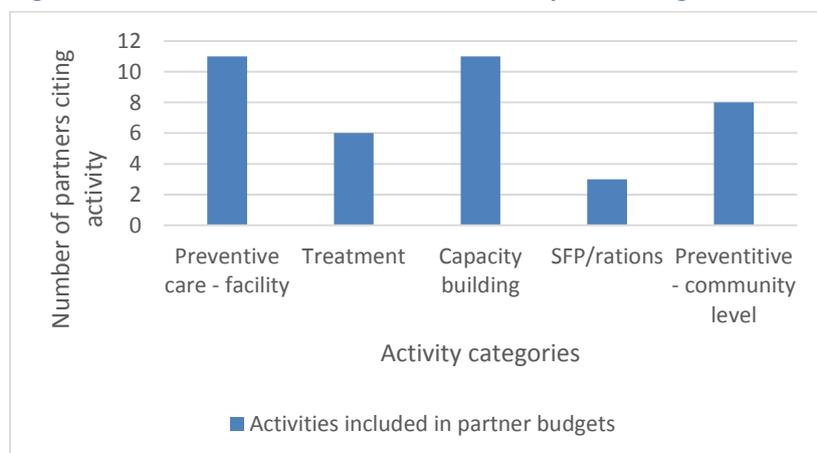
Allocation of funding to the MOH Nutrition Unit falls under the budget of the Community Health Directorate, of which nutrition is 1 of 17 programs and not a specific line item within the national health budget. This directorate determines, with feedback from the Nutrition Unit, how much of its total allocated portion of the MOH budget will go to nutrition. Funds allocated to nutrition by the Community Health Directorate are overseen by the Nutrition Unit.

However, the Nutrition Unit budget does not cover the cost of all MOH nutrition work. Several other MOH personnel outside of the Nutrition Unit stated that their departments/units also had funds available for nutrition activities.

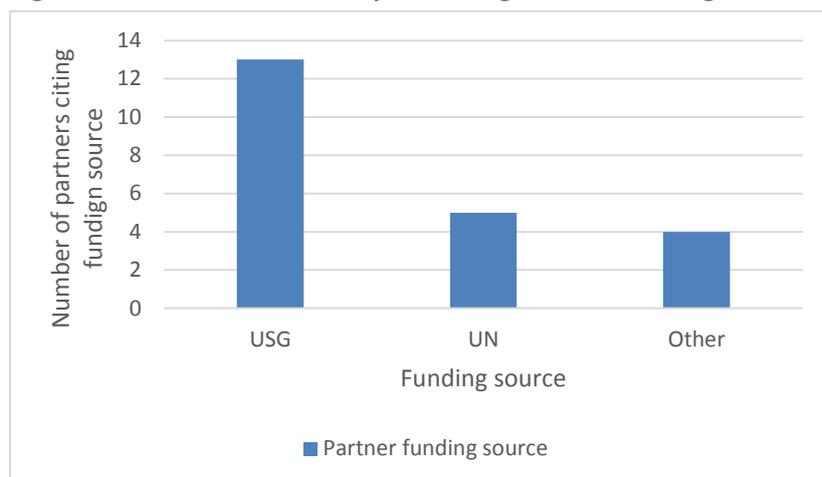
While the MOH budget covers the cost of human resources required for nutrition programs, the cost of implementation of programs like IMAM/NACS is covered largely by donors. This may be, in part, why specific costs for largely donor-backed approaches, such as IMAM/NACS, are not specifically included within the Nutrition Unit budget. Sixteen of the 19 implementing partners interviewed had designated nutrition budgets. Of the 16 partners with nutrition budgets, 13 included dedicated funding for IMAM/NACS.

Figure 17 shows the types of activities included in implementing partner budgets; IMAM/NACS activities are captured under 'Treatment' and 'Preventative care' categories. Figure 18 shows the sources of implementing partner funding. The most frequently cited funding source among interviewed partners was the U.S. Government, which includes funding from USAID and the U.S. Centers for Disease Control and Prevention. U.N. funding includes UNICEF, WHO, and WFP sources. Other cited sources of funding include the Canadian International Development Agency<sup>7</sup>, the Department of International Development, Irish Aid, private donations, and universities.

**Figure 17. Nutrition Activities Included in Implementing Partner Nutrition Budgets**



<sup>7</sup> When this data was collected, the Canadian International Development Agency was a funder. The agency is now part of the Department of Foreign Affairs, Trade and Development.

**Figure 18. Main Sources of Implementing Partner Funding**

Outside of the health sector, MAAIF and MOES noted that they include nutrition funds or activities in their budgets. MAAIF's funded nutrition-sensitive activities include: food and dietary diversification, livelihood food security activities, energy saving programs, demonstration gardens, nutrition education and food preparation demonstrations, surveillance and training along the value chains, promotion of school gardens, and support to HIV clients. The MOES stated that it does not have nutrition-specific funding, but does have a budget to conduct a curriculum review that will include the integration of IMAM into the health curriculum.

### ***District level***

According to the 1995 Constitution and the 1997 Local Government Act, district local governments have the responsibility to plan, budget, and implement health sector policies and plans. Local governments develop and submit their budgets directly to the MOFPED (MOH 2010b). District sectors, such as the DHO, feed into their specific sections of the local government budget. Much like the national-level budget, nutrition is not included as a specific line item in the district-level health budget. Instead, facilities are given a lump sum under a PHC line item, out of which facilities are required to deliver a package of services, including nutrition. Only the DHO in Nebbi reported that it budgeted for nutrition. Planned activities included health education for expecting mothers, health education in schools, and demonstration gardens. However, the requested funds were not received for these activities, and should have been covered as part of the PHC funds.

Non-health offices in two districts (Gender, Labour/CDO and District Planning Officer in Nebbi, Agriculture/National Agricultural Advisory Services in Kaabong) reported having nutrition funds in their budgets. In Kaabong, while the DHO did not report having a nutrition budget, it did submit requisitions for nutrition supplies and commodities during the previous fiscal year. In-service training and supervision funding for nutrition were generally not included in the budgets of assessed districts, except in Kaabong, where it is part of an integrated budget for supervision activities. All DHO and human resources are funded from government sources, but (as discussed in Section 4.2), due to lack of funding, many positions remain unfilled and are covered by other personnel.

At the district level, both government and implementing partner budgets were identified as sources of nutrition funding, with variation in understanding among districts about options for including nutrition.

Based on comments from respondents, it seems that there are challenges at the DHO level about what types of activities should be included in their budgets and how specific these activities should be. One DHO respondent explained that the MOH stipulates what should be included in the DHO budget, but if DHOs were told they could or should budget for activities such as IMAM, they would. All other

DHOs reported that IMAM/NACS is funded by NGOs. One DHO went as far as to say that ‘NGOs control the funding’ and that it is ‘not available to the district’.

To gain more insight into the level of donor funding in the districts included in the assessment, local government budget allocations for FY 2013–2014 were examined to see the percent of budget allocated for health and the percent of the health budget that is funded by donors. Details are provided in Table 12 (values in thousands of UGX). These figures related to funding of the health sector, as detailed information on levels of nutrition funding cannot be extracted from local government budgets.

**Table 12. Local Government Budget Allocations for Health, FY 2013–2014**

District	Total approved budget for district 2013–2014	Total health expenditure in approved budget	% of total budget allocated to health	Donor funding planned for in approved health budget	% of total health budget funded by donors
Kaabong	20,977,651	4,830,128	23.03	902,207	18.68
Masindi	20,024,307	3,384,454	16.90	200,202	16.91
Namutumba	13,420,017	1,866,156	13.91	260,758	13.97
Nebbi	26,469,317	3,992,030	15.08	0	00.00

Source: MOFPED 2014.

When compared to the national budget, a larger percent of local government budgets are allocated to health. A smaller portion of budgeted health funding is coming from donors at the district level. However, official budget figures may be misleading, as stakeholders raised concerns about off-budget donor support to nutrition activities. Some implementing partners provide funds directly to facilities; if these funds are not captured in facility budgets and reported back to the DHO and eventually the local government, they may not be accurately captured. In addition, implementing partners may provide support in terms of supplies, equipment, and technical assistance that may not be monetized and reflected in budgets, meaning that total program costs are not accurately reflected.

Budgeted donor funding versus actual donor funding also may not be consistent. Table 13 shows budgeted donor funds for FY 2012–2013 and actual spent donor funds at the end of the fiscal year (figures in thousands of UGX). While the reasons for the differences in what was planned and what was spent are not detailed, the figures do shed some light on the difficulty of accurately forecasting donor spending as part of the planning and budgeting process. Possibilities for and underestimation of donor funding could be that additional funds were injected in response to a shock or that donors come with additional funding mid-fiscal year. Reasons for possible overestimation could be limited capacity at the district to spend all of the funds or funds that were not released as anticipated. Stakeholders also stated that there is a lack of transparency when it comes to budgeting. Donors may not always share full information about the funds that are available; therefore, it is difficult to budget within the parameters of what will actually be available throughout the course of the fiscal year.

**Table 13. Budgeted and Spent Donor Funds for FY 2012–2013**

District	Donor funds included in 2012–2013 approved health budget	Donor funds spent by June 2013	% of budgeted donor funds spent by June 2013
Kaabong	542,942	823,464	151.67
Masindi	169,356	85,812	50.67
Namutumba	222,807	178,481	80.11
Nebbi	0	151,254	–

Source: MOFPED 2014.

### **Facility level**

National and regional hospitals submit budget requests directly to the MOFPED, but are supervised by the MOH. District hospital and HC budgets are part of the local government budget that is within the health budget. Amounts allocated to each facility within the district are detailed in the health portion of the local government budget. Again, funds for program implementation are to be delivered as a package of services, captured under the PHC line item.

National hospitals in the assessment had nutrition budgets, and two of the four regional hospitals visited had nutrition budgets. Yet nutrition budgets did not exist at the facilities. While budgets are not required at district-level facilities to make funding requests, because that is handled through the local government budget, they should still engage in a planning and budgeting process to facilitate efficient allocation of limited resources across programs and to advocate for additional funds in future fiscal years if they experience budget shortfalls.

### **4.3.2 Budgeting and Planning**

In an environment with limited resources, efficient planning and budgeting processes become especially important. Because nutrition interventions are often cross-cutting and not limited to only the health sector, a certain level of coordination between actors, both government and implementing partners, must happen on a regular basis during the planning and budgeting cycles. Ideally, this coordination should be linked to coordination meetings and work planning processes as discussed in the leadership and governance section of this report. The assessment specifically looked at the involvement of nutrition actors in the planning and budgeting process, as these individuals will be the most informed about nutrition resource needs. Training on planning and budgeting was also investigated to see if those involved had been trained on how to estimate and budget for nutrition resources.

At the MOH, nutrition focal persons reported participating in their departments' planning and budgeting exercises. Three DHOs reported that their nutrition focal persons participate in the planning and budgeting process; Masindi was the only district that did not have a nutrition focal person involved. To help ensure better coordination around planning and budgeting for nutrition at the district level, stakeholders suggested that DNCCs be leveraged to assist.

At the time of data collection, the MOH did not have its own training package on nutrition planning and none of the MOH nutrition focal persons had received any training on planning and budgeting for IMAM/NACS. The National Planning Authority (NPA) indicated that its office was never asked to be involved in nutrition planning and budgeting. Since then, discussions have been initiated with partners to develop these materials. Packages are also available from implementing partners. Two implementing partners reported having training packages for IMAM planning and budgeting, and one reported having a training package for NACS. Despite the lack of a training packages, the Kaabong DHO reported that it had received training on planning and budgeting for IMAM, but likely through implementing partner support.

Because there is no national training package for IMAM/NACS planning and budgeting and only three partners have training packages available, it is not surprising that only seven personnel in total across all facilities had received training on planning and budgeting for IMAM/NACS, with the majority of training being for IMAM (four IMAM, one NACS, two both IMAM/NACS). However, of those trained, only two (one at a national hospital and one at a regional hospital) actually participated in the planning and budgeting process for nutrition.

One consequence of the lack of training on planning and budgeting is the fact that acute malnutrition caseload estimates were not used as part of the planning and budgeting process at the national and some district levels. Without caseload information, it is difficult to anticipate the amount of resources

that will be required to serve the anticipated number of clients and thus the anticipated cost of those resources. If facilities do not consistently use caseload to inform their budgeting process, they may not have enough funds in their budgets to purchase necessary supplies and pay the required amount of human resources.

At the district level, assessment data indicate that only the Kaabong DHO uses caseload data for its planning and budgeting process. Among facilities, caseload estimates were used consistently for planning financial resource needs in national hospitals, in one of four regional hospitals, and one of three district hospitals. However, caseload data were not used at all at the HC level for planning and budgeting. Because national and regional hospitals prepare and submit their own budgets to the MOFPED, it is especially important for these facilities to be using caseload information for budgeting and planning purposes. District hospitals and HC IVs should also be encouraged to use caseloads, as this aligns with their planning for supplies and equipment as well.

Representatives from the NPA encouraged stakeholders to initiate plans to ensure that nutrition is included as part of the National Development Plan II (NDP II), which is currently under development and will begin in FY 2015–2016. NDPs are key for setting the national agenda. The MOFPED prioritizes funding decisions based on NDP content; therefore, including nutrition as a prominent part of the NDP II will help secure funding for nutrition programs. Ideally, the OPM UNAP secretariat could be leveraged to assist with including nutrition content in the NDP II.

### 4.3.3 Costing

While the overall UNAP has been costed, specific approaches and interventions contributing to the achievement of UNAP objectives, such as the national IMAM and NACS plans, have not all been costed. The lack of national-level costed plans makes it difficult for nutrition implementers, at any level, to plan and budget in advance and to position any budgeting exercise within a larger strategy or plan for scale-up.

Costing can be used as an effective advocacy tool to leverage additional funds from both government and implementing partners to achieve scale-up and implementation goals. Once developed, the national-level nutrition work plan should be costed to inform planning and budgeting, and to be used as an advocacy tool for additional nutrition funds. Some implementing partners reported that they have costed plans for activities such as IMAM/NACS. It is worth investigating if these partners can support the costing of a national nutrition work plan or if their costed plans can be used to inform national-level nutrition work plan costing.

### 4.3.4 Conclusions

Resources for health programs are limited, and, as a result, it is important that nutrition actors are able to accurately plan and advocate for a share of these limited resources. The ability to do this is further complicated by the fact that nutrition does not have its own budget line item anywhere in the health system, but rather is considered part of PHC budgets. In light of this, it is critical that guidance be provided to both national-level and district actors on how to plan and budget for nutrition. In addition, work planning for nutrition should be encouraged at all levels so that it can inform the planning and budgeting process.

### 4.3.5 Financing Recommendations

- **Nutrition stakeholders should engage in the development of the NDP II to ensure that nutrition is emphasized and becomes part of the NDP II.** Inclusion of nutrition in the NDP II can be used to advocate and mobilize additional government and donor funding for nutrition. OPM, through the UNAP secretariat, should take the lead on this action.

- **Ensure that there is a functional DNCC in every district that can advocate for nutrition funding at the local government level.** DNCCs can also facilitate the process of developing district nutrition action plans and advocate for their inclusion in the district development plans.
- **Prioritize development of guides and tools and build capacity in planning and budgeting for nutrition at all levels.** This should include training on planning and budgeting tools included in the revised HMIS facility manual. It should also emphasize the need to use caseload for planning and budgeting purposes at all facility levels, but especially at hospitals and HC IVs.
- **Efforts should be made to enhance coordination and involvement of donors and partners in the national and local government planning and budgeting process.** Specifically, planning and budgeting for nutrition should be linked to a national-level nutrition work plan to ensure that all proposed activities are adequately funded.
- **The proposed national nutrition work plan should be costed** for improved planning and budgeting.
- **Create a specific and separate budget for nutrition at all levels.** This includes a detailed budget for the Nutrition Unit, based on annual budget allocations from the MOFPED. DHOs and facilities should also be encouraged to develop budgets for their nutrition activities as part of the process of planning for the allocation of received health funds to specific activities.

## 4.4 Information Systems

A strong health information system allows health personnel to capture, analyse, and share information about the health system, service provision, beneficiaries, and the overall health status of the population. This information helps leadership make decisions about prioritizing resources, expanding services, and identifying public health concerns, and provides communities and stakeholders with information to hold leaders accountable. Functions within this building block cover everything from national-level health surveys to discrete emergency plans. The assessment focused on how the system monitors implementation and performance of ongoing IMAM/NACS activities, specifically through the nutrition information system as part of the HMIS and through access to other information resources for nutrition.

### 4.4.1 Nutrition Information System

HMIS data and reporting should flow upward from communities to the national level, with each health facility level feeding data into the system along the way. At the community level, VHTs and the VHT supervisor feed information to the HC II. HC IIs, HC IIIs, and HC IVs feed information to the district through their records assistants and the District Health Information System 2. Bio-statisticians feed in information at the district, regional, and national levels into the HMIS.

The assessment examined the efficiency of the HMIS and reporting systems by collecting information on the timeliness of reporting, the mechanisms used for reporting, and the level of training on reporting.

#### *Collection of data*

At the time of the assessment, the MOH Nutrition Unit reported that it had not received any facility reports in the past month. For NACS, the ACP estimated that it had received 15 percent of regional hospital reports, 25 percent of district hospital reports, and 25 percent of reports from the HCs. All of the DHOs visited reported that they had not received any district hospital, HC, or VHT reports in the past month.

The low level of reporting to the MOH is likely due to confusion that has arisen during the transition to the revised HMIS reporting system for nutrition. Previously, direct reporting to the MOH for

IMAM was supported by UNICEF, and monthly IMAM reports were sent to the Nutrition Unit, where they were compiled. Similarly, partners implementing NACS supported the MOH with the receipt and processing of monthly NACS reports. However, once this support stopped, the MOH no longer had the capacity to directly receive and process reports. Stakeholders cited that the lack of feedback about the receipt of reports at the MOH led to a reduced level of reporting and may be contributing to the low levels of reporting seen in the assessment data.

Since the completion of data collection for this assessment, nutrition indicators, including key indicators that were collected in IMAM/NACS monthly reports, have been integrated into the HMIS reporting system. In general, the HMIS system seems to function well in Uganda. The 2013 Annual Health System Performance Report provides district-level information on the percent of reports completed and sent on time (see Table 14). While there is still room for improvement, the assessed districts are generally at or above the national average for timeliness and completeness of monthly and facility reporting. This is a good sign, as inclusion of nutrition data in the HMIS system will hopefully help significantly increase the level of nutrition data that reaches the MOH and that is accessible to users with access to the HMIS system.

**Table 14. Timeliness and Completeness of Reporting**

District	% monthly reports sent on time	% completeness of monthly reports	% completeness of facility reporting
Kaabong	51.9	83	96
Masindi	87.0	100	100
Namutumba	66.4	75	93
Nebbi	82.4	83	94
National Average	80.0	79	94

Source: MOH n.d.

Prior to the introduction of the standardized nutrition reporting forms in the revised HMIS, facilities implementing IMAM/NACS should have been using IMAM/NACS reporting forms as provided in the *IMAM Guidelines* and NACS training materials. At the time of data collection, only Kaabong reported using a standardized monitoring and reporting tool for IMAM/NACS. Once the new HMIS reporting forms for nutrition are finalized, it will be important for facilities to be informed and trained on these new reporting tools.

Facilities should also be furnished with the proper tools and equipment to meet their reporting requirements. The assessment asked about access to computers for reporting purposes. Three of the four DHOs reported that they did not have access to computers for reporting; however, all of the DHOs mentioned that they report electronically to the MOH. In addition, in the three districts with district hospitals, two DHOs reported that these hospitals reported electronically. These hospitals were located in the districts where the DHOs do not have access to computers. Because the health system is moving toward electronic reporting, DHO offices must be provided with the necessary equipment to fulfil their basic reporting duties.

Two of the three nutrition personnel at the MOH had been trained on the use of computers for reporting, and the MOH HMIS technical person had been trained as well. At least one person at each DHO had been trained on computer reporting, with a total of 5 of the 11 respondents across the DHOs having received training. All national and regional hospitals have personnel who have been trained on computer reporting but only one of three district hospitals has personnel trained in this area. Only one HC IV, in Nebbi, had a member of personnel trained on computer reporting; however, this facility also reported that they did not have access to a working computer for reporting purposes. None of the other HCs had received training on computer reporting. From HC III level and up, computer reporting

is supposed to be the standard reporting mechanism. It is therefore important that the appropriate personnel have training on computer reporting and access to computers for this purpose.

At the HC II and VHT levels, computer reporting is not required, but enough paper reporting forms should be available to capture data that can then be given to the closest HC III for input into the computer reporting system. Some paper forms are also required at the higher facility levels, where departments capture data and submit it to the facility's records assistant or bio-statistician.

DHOs also reported that VHTs have not been trained on the use of mobile phones for reporting. Uganda currently uses the mTrac mobile phone reporting system for reporting on malaria. Ideally, VHTs could be trained on this system for nutrition reporting as well. This same system could also be used as an alternative to paper reporting at the HC II level. mTrac also allows for reporting on supply stock-outs (see Section 4.5 on Supplies and Equipment).

### ***Quality of HMIS data***

Questions were also asked about training on quality monitoring and reporting as well as the frequency of supervision visits for monitoring and reporting. Accuracy and quality of reporting data are very important, as information from these reports also affects other building blocks, such as workforce and supplies.

Results on efforts to ensure the quality of reporting data were not very strong. The HMIS technical person and one member of the MOH nutrition personnel had been trained on quality monitoring and reporting. Three of four DHOs had personnel who had also been trained in this area. Very few personnel had been trained at the facility level (nine total across the 22 facilities included in the assessment), and HMIS personnel seemed more likely to have been trained than nutrition personnel (six HMIS versus three nutrition). This makes sense, since HMIS personnel are responsible for entering data and preparing reporting data for the HMIS system.

Training topics cited included data use, HMIS use, indicators, performance quality and quality improvement for HIV, command and supply chain, data entry, data reporting, and reporting timeliness. Only one person in Kaabong responded that she had received M&E training for IMAM. As part of the training on the revised HMIS, topics related to data quality and reporting should be included.

Supervision of monitoring and reporting is also key to ensuring data quality. Three of the four DHOs reported that they had received a supervision visit within the last 12 months. When asked if a report on the outcome of the visit was available, DHOs said that reports and feedback on the visits were not provided. Among the 22 health facilities included in the assessment, 10 reported that they had received supervisory visits for monitoring and reporting. All of the district-level facilities that received supervisory visits were located in Kaabong and Masindi.

### ***Use of HMIS data***

The assessment looked at access to HMIS data as well as general information sharing mechanisms, such as sharing of reports and data among the MOH and implementing partners and the availability of information resources.

The MOH does not systematically analyse and disseminate information from IMAM/NACS reporting. Only the Kaabong DHO reported that it disseminates available IMAM/NACS data. In Kaabong, information on the number of malnourished children is shared with the district health team, facilities, and partners and in coordination meetings.

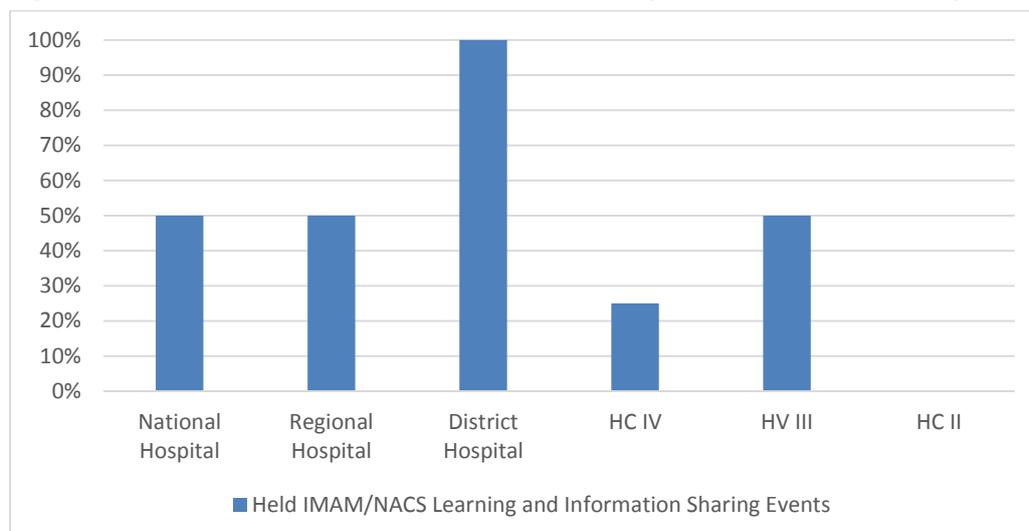
#### 4.4.2 Access to Additional Nutrition Information Sources

Information on nutrition resources is available through direct contact with the MOH nutrition officers. Non-health ministries were not aware of an MOH resource centre for nutrition. While the MOH Nutrition Unit does have some hard copy resources available in its office, these are limited. The Nutrition Unit also has its own page within the MOH website, with links to some key resource documents. The availability of online resources could be greatly expanded to include additional training materials, guides, and tools produced by the MOH and those produced in collaboration with partners. Ideally, every nutrition resource produced or endorsed by the MOH should be easily accessible via its website.

Non-health ministries reported having access to other nutrition resources that included IMAM/NACS information. However, it was frequently mentioned that the information was sent or shared directly by implementing partners or collected at meetings and workshops. Implementing partners also have access to nutrition resources, with 14 out of 19 respondents answering positively. When asked about access to IMAM/NACS information, only 6 of the 14 reported that the resources included information on IMAM/NACS. Most implementing partners stated that they found their required resources online.

Thirteen out of 19 implementing partners had IMAM/NACS learning or information sharing events at their organizations in the past 12 months. Two DHOs, Nebbi and Kaabong, reported having information sharing events for IMAM/NACS at the district within the past 12 months. Figure 19 summarizes the number of facilities that had these events in the past year. Event types cited included trainings, workshops, and sensitization.

**Figure 19. Facilities That Held IMAMC/NACS Learning and Information Sharing Events**



#### 4.4.3 Conclusions

Much remains to be done to improve the timeliness of reporting and the use of reporting data. Without proper information, monitoring of activity implementation and performance cannot be undertaken. Once rolled out, the nutrition modules included in the updated HMIS should help ensure that data on nutrition indicators are available via the HMIS. It will be essential that all actors have the necessary training, mentoring, and reporting tools to maximize their use of the revised HMIS.

#### 4.4.4 Information Systems Recommendations

- **Support the roll-out of the new HMIS.** Support should include capacity building and training on the new materials, the dissemination/roll-out of HMIS tools, and the job mentorship and support supervision on the HMIS reporting and information flow. For the HMIS roll-out to be

successful, it must be ensured that health facilities have the resources and tools required to fulfil their reporting requirements. This includes equipment such as computers and nutrition registers. The use of mTrac for reporting at the HC II and VHT levels could also be explored.

- **Establish and strengthen nutrition information sharing platforms at different levels with various nutrition stakeholders.** Platforms should include sharing of reports, project data, lessons learnt, and best practices through face-to-face meetings and sharing online.
- **Create a centralized nutrition resource centre for health, both physically located at the MOH and via the MOH nutrition website.** Other key sectors should also develop nutrition resource centres as appropriate.
- **Strengthen feedback mechanism on reporting at the MOH and DHO levels.** Facilities should be informed that their reports have been received and processed and they should receive updates on relevant summary data.
- **Strengthen data analysis and utilization at all levels.** Work with MOH, DHOs, facilities, and implementing partners to identify data to be shared and encourage the sharing of data analysis findings through the proposed information sharing platforms.

## 4.5 Supplies and Equipment

Functions included in the supplies and equipment block consist of the selection, approval, and quality monitoring of essential health system supplies, as well as the procurement and distribution of these supplies. IMAM/NACS, along with other nutrition approaches, require many of the same supplies and equipment to carry out their activities. This section examines the access to quality supplies and planning for supplies. If there are no supply shortages, or spoilages, then it is likely that the supply chain management is working well.

A respondent from the National Medical Stores (NMS) explained that the NMS central warehouse transports medical supplies for each health facility to each district store from where last-mile deliveries are made to the individual health facilities by a contracted company on behalf of the NMS.

The NMS also reported that a push system is used for distributing supplies to HC IIIs and HC IIs. This type of system is found commonly in emergency settings, which lack storage facilities and personnel to manage products. Instead, a set of products is ‘pushed’ from a higher-level warehouse to the health facilities during a defined time frame. In Uganda, the NMS is responsible for pushing supplies to HC IIIs and HC IIs through Essential Medicines Kits.

Stakeholders voiced concerns about the push system as it is used for nutrition products. Often products are pushed when they are close to expiration or in inappropriate quantities. A proposed solution could be the use of mTrac technology, which can be used to send updates on supply levels and to request additional supplies.

In contrast, national, regional, and district hospitals and HC IVs use a pull system, wherein they submit supply requisitions to the NMS.

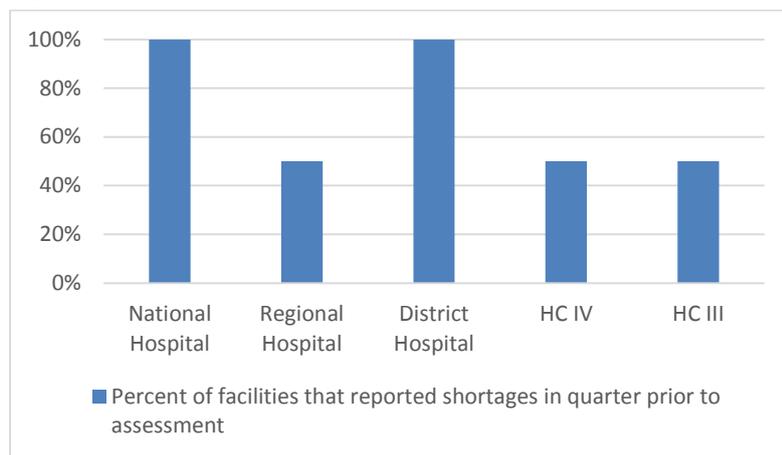
### 4.5.1 Access to Supplies

Many different supplies are required for IMAM/NACS services to be provided. RUTF was used as a proxy for supplies in general because it is required for both services and is the most costly item to procure. The assessment included an investigation into the existence of supply shortages, spoilages, and the effect of standards on the availability of RUTF.

Uganda uses both imported and locally produced RUTF, also known as RUTAFAs. Figure 20 summarizes the number of facilities that experienced shortages of RUTF in the quarter prior to the assessment. The HCs that experienced shortages were all located in Namutumba and Kaabong

districts. Some of the reasons for shortages cited by facility personnel included delays in procurement of RUTF, underestimation of needs, transportation problems, and delays in submission of reports and requisitions. Many of these issues stem from problems with planning, budgeting, and information systems (discussed in Sections 4.3 and 4.4). One facility mentioned that a long delay happened during project handover, highlighting the dependence on implementing partners. It was also mentioned that sometimes requests for supplies were not filled. Shortages were experienced in facilities using both imported and locally produced RUTF.

**Figure 20. Percent of Facilities That Reported Shortages of RUTF**



RUTF spoilage, which includes expired, damaged, or swollen packaging, was also investigated. Spoilage was reported in three out of the four regional hospitals, but not in any other type of facility and there were no cases of illnesses following clients' consumption of RUTF. Because supply shortages seem to be such a common problem, it is not surprising that HCs do not have RUTF on hand long enough for it to spoil. However, further investigation into why products are spoiling at the regional hospitals should be undertaken. Regional hospitals cited damaged packaging, poor storage, and delivery just before products expire as reasons for RUTF spoilage. Possible additional reasons are that fewer clients travel to these facilities for services and that supplies are not effectively redistributed to other facilities before they expire.

Nutrition products, including F-75, F-100, and RUTF, have been included on the essential medicines list. See Box 5 for details. Other essential products, such as vitamin A and nasogastric tubes, are also included on the essential medicines list. However, ReSoMal and equipment such as MUAC tapes, weight scales, and length and height boards are not included in the list.

Because nutrition products such as RUTF are included on the essential medicines list, it should reduce the risk of supply shortages and stock-outs. RUTF is included as a third-tier product, categorized as necessary, which means that it will get the lowest priority if NMS funding for products is limited.

Additionally, the NMS reported that nutrition supplies and equipment had not been budgeted for because health facilities had not made requests for these supplies. Due to budget constraints, these supplies are purchased only if requested, as they are expensive and other drugs and supplies take priority over those for nutrition. In fact, funding for nutrition supplies such as RUTF comes almost entirely from non-government sources.

### Box 5. Nutrition Products Included in Essential Medicines List

Products and categorization:

- F-75: vital, provided at all facilities through hospital level
- F-100: essential, provided at all facilities through hospital level
- RUTF: necessary, provided at all facilities through HC II/HC I level

Definitions of categories:

- Vital (V)—medicines used to treat life-threatening diseases and health supplies and laboratory commodities that are necessary for basic health care
- Essential (E)—medicines are effective to treat less severe, but nevertheless, widespread illnesses
- Necessary (N)—medicines used for diseases with less impact on the population, medicines of doubtful efficacy, or medicines with a high cost for marginal therapeutic benefit

Source: MOH 2012.

It was also mentioned by the NMS that very few of the requisitions received from facilities include nutrition products. To investigate this further, stakeholders were asked to map the current facility supply chain for nutrition products. This mapping revealed that there are several supply chains acting in parallel to the NMS supply chain. Supplies arrive at facilities through several mechanisms: from partners through the DHO, to hospitals that request directly from partners, to district stores by district vehicles or partners (such as STRIDES), or delivered directly to facilities from partners.

Some facilities receive nutrition products directly from UNICEF, which applies mostly to IMAM programs. Other facilities receive locally produced RUTF directly from the USAID Production for Improved Nutrition project, which is piloting the delivery and use of locally produced RUTF to a subset of NACS service sites.

These parallel supply chains are likely contributing to the low levels of requests for nutrition productions through the NMS. Ideally, all nutrition products, regardless of their source and funder, should be channelled through the NMS supply system to ensure standardization of supply requests for nutrition. In addition, this will allow the NMS to get a sense of the true demand for these products and to begin to budget for them accordingly.

It should be noted that use of imported versus locally produced RUTF is a decision made by development partners funding the products. IMAM typically uses only imported RUTF, whereas NACS uses primarily RUTAF. Additional discussion around some challenges facing local production are discussed in the next section.

#### 4.5.2 Local Production

Local production capacity is a valuable asset and can help alleviate pressures on the supply system and on budgets, as locally produced RUTF is often less expensive due to lower transportation costs. In Uganda, however, not all partners currently view locally produced RUTF as an acceptable product. As mentioned earlier, some partners, including UNICEF, import RUTF that meets a set of U.N. production standards.

The existence of standards of quality and safety regulations and an associated monitoring system for locally produced RUTF are also unclear and not consistently reported. Some MOH officials reported that these were in place while others reported that they do not exist. Stakeholders confirmed that

regulations for therapeutic and supplementary foods are non-existent, but that locally produced RUTF has been accredited and approved for use by the National Drug Authority (NDA). The Uganda National Bureau of Standards (UNBS) also confirmed that it had certified locally produced RUTF, but that this certification was not based on a set of product standards. Currently, standards reported by UNBS are under development.

The NDA reported that it is not part of its mandate to monitor the quality of locally produced RUTF. However, measures are under way to expand the authority of the NDA to include food products through the creation of a Uganda Food and Drug Authority. Once the required act has passed parliament to establish this new body, regulation of therapeutic food products will more clearly fall under the purview of the NDA, with UNBS holding the responsibility to develop specific product standards for locally produced RUTF.

With the variation in regulatory terminology and different approvals coming from a variety of ministries, agencies, and key partners, it is easy to see how there is confusion among actors about the current status of locally produced RUTF. Both the MOH and implementing partners should invest in bringing RUTAFAs up to a standard that is acceptable for use in all nutrition programs in Uganda and also work to ensure that standardized quality and safety regulations are in place for this product. Universally recognized use of RUTAFAs, in conjunction with streamlining the supply chain system (as described in the section above), would greatly improve challenges around nutrition supply shortages and stock-outs.

### 4.5.3 Planning for Supplies

If shortages are systematically reported by facilities, it is then important to collect additional information about planning for supplies, as poor planning can lead to shortages or spoilages based on incorrect caseload estimates. Questions were asked about training and guidance on planning for supplies and on the setup of the supply system itself.

The NMS reported that it has national-level standard operating procedures (SOPs) for supply management, although these are not specific for nutrition and do not exist at the regional level. The NMS also reported that at both the national and regional levels it does not have standardized forms for forecasting and stock management for IMAM/NACS supplies. However, the NMS does have standard planning and order forms for supplies included in the essential medicines list.

While 16 of the facilities reported that their medical store had standardized forms for supplies, only HCs in Kaabong reported that these forms included IMAM/NACS supplies. Three of four regional hospitals and all assessed district hospitals also reported that these forms included IMAM/NACS.

Upon reviewing the NMS planning and order forms, it was found that the nutrition supplies included in the essential medicines list had not been included in the planning and order forms. The failure to include nutrition products on NMS supply order forms reduces the ability of facilities to order their nutrition supplies through the NMS. In turn, the NMS explained that it does not plan and budget for supplies for which there is not a demand. Including nutrition supplies on the appropriate NMS forms will be key to generating demand for these products through the NMS supply chain. More investigation will be needed to determine if all facilities are using the standard NMS supply forms to order their nutrition supplies or if those facilities that reported that IMAM/NACS supplies are included on order forms are ordering directly from implementing partners.

NMS personnel have not been trained in forecasting for IMAM/NACS. At the district level, forecasting and procurement plans for IMAM/NACS supplies were not established as systematically as desired. Only one HC IV and two district hospitals reported designing such plans, as well as one of four DHOs, two regional hospitals, and one national hospital. The absence of a procurement plan

makes it difficult for store managers and persons responsible for procurement to supply required items in due time.

One of the most important elements of accurate supply forecasting is the use of caseload. Just under half (10 of 22) of the facilities used caseload when calculating supply estimates. This practice was the most common at the regional hospital level, where all four regional hospitals reported that caseload was used for supply forecasting.

While the MOH reported that guidance does exist on the calculation of caseloads, it did not have guidelines or tools available for planning and estimating material resource needs for IMAM/NACS. Given that guidelines and tools on supply planning and estimating are not available from the MOH, it is not surprising that none of the facilities had personnel who had been trained in this area. Of the 22 different facilities visited, only 5 had at least one personnel member trained on supply chain management for nutrition/food products. However, 6 of 19 implementing partners, including key stakeholders such as UNICEF, WHO, and WFP, all reported having guidelines and tools for planning and estimating resource needs. Unless these are internal planning tools, it is a concern that this guidance has not been shared with the MOH. The MOH should investigate to see if these tools could be adapted for its use.

In terms of guidance available, the 2010 *IMAM Guidelines* contain very limited information on how to plan for adequate supplies for IMAM program components. Requirements for setting up an OTC site are provided, under which RUTF is listed as a basic supply, and guidance states that there should be 'enough RUTF'. No guidance on supply management is given for ITC planning and no further details on how to ensure RUTF supplies are given. While RUTF stocks are supposed to be included in monthly facility reports (these include monthly tallies of RUTF packets, F-100, F-75, and ReSoMal), guidance is lacking on how to store supplies, how to ensure their quality (including checking of expiration dates), and how many supplies to have on hand based on estimated caseload. The 2010 *IMAM Guidelines* also do not include information on how to calculate and estimate caseloads.

The draft NACS training materials include extensive information on supplies and logistics management, such as lists of essential supplies; the use of a logistics information management system; and guidance on how to order, receive, store, and distribute supplies. The materials also include sample tools, like stock cards. The essential supplies included in these materials overlap almost exactly with the supplies required for IMAM activities, and could be a useful resource for those managing nutrition supplies.

#### 4.5.4 Conclusions

The Health Sector Strategic Plan III reported that procurement delays, poor estimation of orders, late orders from facilities, and poor record keeping are all contributing to shortages and waste of medical products. The same seems to be true for nutrition-specific products, such as RUTF. An in-depth review of the supply chain and procurement system for RUTF and other nutritional products is needed to identify the main bottlenecks and remedy the current supply chain issues.

Although questions about supply chain issues for other medical supplies were not specifically asked, it does seem that one of the major gaps in facilities visited is that nutrition products are not systematically included with facility supply requisitions that include other necessary medical supplies. More investigation into coordination between partners, the MOH medical supply system, and facilities is also needed. There seem to be gaps between implementing partners that procure RUTF products and the planning that is happening for these supplies at the MOH and facility levels.

Involving the national authorities, especially NMS and NPA personnel, in the management of RUTF supplies, even if funds are provided by external sources, would also be instrumental in preparing the health system for eventually managing them alone.

#### 4.5.5 Supplies and Equipment Recommendations

- **In the long term, efforts should be made to streamline the purchase and distribution of all nutrition commodities and supplies through the national supply chain.** This will generate demand for nutrition products within the national supply chain, which will then ensure that these products are available and planned for during the NMS planning and budgeting process. An in-depth review of the current supply chains for nutrition products may be required to inform this process.
- **Include nutrition commodities and supplies on the standardized NMS planning and order forms to generate demand for these items in the national supply chain.** Generating demand for these products will help ensure that the NMS plans and budgets accordingly and also has these products available in their warehouses.
- **Encourage facilities to use the revised HMIS nutrition reporting tools to inform decisions about forecasting of nutrition commodities and supplies, specifically through the use of caseload information.** This is of particular importance for facilities that use the ‘pull’ system for supply management. However, caseload data can also be used to inform the content of Essential Medicines Kits that are pushed to lower-level facilities.
- **The MOH should develop quality standards for nutrition commodities and supplies to ensure that adequate, appropriate, and quality supplies are available to facilities.** The NMS, NDA, and UBOS should all actively participate in this process.
- **Equip facilities with the necessary equipment, supplies, and tools to deliver the necessary services.** The MOH should initiate a process to include essential nutrition equipment (e.g., scales, height boards, MUAC tapes) on the essential medicines list so that the NMS will have these products available in their warehouses.

### 4.6 Service Delivery

Service delivery can encompass an extremely broad range of functions. This assessment focused on the extent to which IMAM/NACS are currently being offered at the various facilities, as well as the extent to which BCC for IMAM/NACS, quality improvement, and communities is integrated into service delivery. There is a great deal of overlap between IMAM/NACS clients and service providers. Therefore, it is important that procedures, messages, and services are aligned as much as possible to create continuity between approaches. This reduces confusion among both health service providers and clients.

#### 4.6.1 IMAM and NACS Service Provision

The 2010 *IMAM Guidelines* indicate that ITC should be available from national hospitals down to the HC III level. OTC should be available down to the HC II level. VHTs are responsible for linking communities with health facilities through community mobilization. Assessment and counselling components of NACS should happen at all levels; referrals to support services should also happen at all levels in both directions, depending on the type of support that is needed.

Figure 21 summarizes how many of the visited facilities were implementing IMAM/NACS approaches at the time of the assessment.

NACS services were most common at the assessed regional and district hospitals. This is likely because many of the assessed facilities had received support for NACS implementation from the NuLife project. St Francis Nsambya national hospital was also supported by the NuLife project.

Generally, availability of IMAM/NACS services dropped off at the lower HC III and HC II levels. Stakeholders mentioned that there is a lack of assessment at lower-level facilities, which may be part of the reason why the availability of IMAM/NACS is not reported as frequently at these lower levels.

**Figure 21. Facilities Implementing IMAM/NACS Approaches**

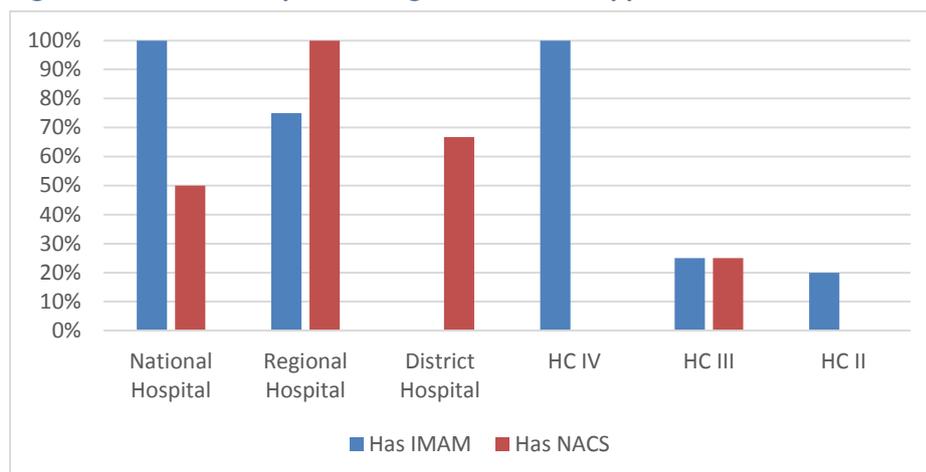
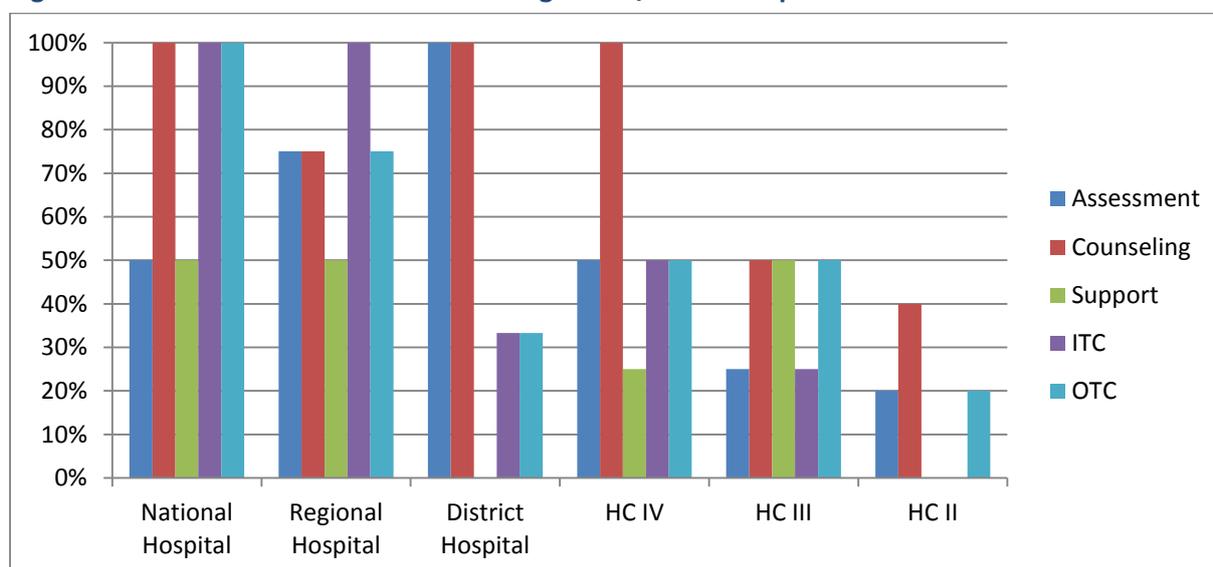


Figure 22 details the availability of NACS components at the various facility levels. NACS components should be available at all facility levels, though their specifics, such as the type of support, may differ depending on the facility level. For example, an HC III may be able to provide OTC support, whereas a national hospital would be able to offer more specialized support services.

The *IMAM Guidelines* detail what level of IMAM/NACS services should be provided at each level of the health system. ITC services should be provided from the national hospital level down to the HC III level. OTC services should be offered all the way down to the HC II level. HC Is/VHTs are responsible for community-level referrals to either ITC or OTC services. Availability of ITC and OTC was good at the national and regional hospital levels, but decreased beginning at the district hospital level, with only Kaabong offering ITC and OTC services. It was also mentioned by stakeholders that even if HC IIIs report that they offer ITC services, these services are often below standards.

**Figure 22. Percent of Total Facilities Offering IMAM/NACS Components**



The variation in nutrition services currently available at the various health facility levels creates possible gaps in nutrition service coverage. For example, while Mulago does treat malnourished children up to 13 years of age regardless of their HIV status, there is a gap in the treatment of adolescents and adults beyond 13 years of age. St Francis Nsambya specifically includes NACS in its work plan, which covers treatment of all malnourished PLHIV, due to its implementation history with the NuLife project. However, here too there is a potential for a gap in treatment of malnourished

adolescents and adults who do not have HIV. To begin to remedy this problem, the MOH should supplement the guidance currently provided in the *IMAM Guidelines* so that health personnel know how to provide treatment to clients who may not fall into a specific target group.

### **Community-level service delivery**

In Kaabong, community members were able to indicate that they knew where nutrition services are available and had a mechanism through which they could discuss nutrition concerns and that events such as food demonstrations and nutrition education sessions had been held in the community. Beneficiaries also made specific reference to VHTs and HCs providing nutrition services and stated that they knew that children in IMAM programs had been given ‘peanut paste’ and ‘porridge flour’, and that HIV-positive persons had received *posho* (maize/corn flour), beans, sugar, and cooking oil from the HC, all of which are references to RUTF and supplementary food products used in IMAM/NACS.

In the Masindi and Nebbi districts, the beneficiary focus groups reported that there were no nutrition activities taking place in the community, and if beneficiaries did know of available nutrition services, they were not community based. In Namutumba, beneficiaries stated they had seen children screened for malnutrition and had previously received food support from the OPM. Ongoing activities, such as a community-driven referral system, are absent. In Namutumba, the closest site referenced for nutrition services was HC III; in Nebbi it was HC IV. None of the beneficiaries in Masindi knew where to access nutrition services.

### **4.6.2 Social Mobilization and BCC for Nutrition**

Important components of all nutrition services, including IMAM/NACS, are BCC and social mobilization efforts. For nutrition interventions to be successful, community members often must change household practices around sanitation and hygiene, health seeking behaviour, and feeding practices, as well as the way they make decisions about what and how much to eat of certain foods. Education around the symptoms and causes of problems, such as acute malnutrition, is also important to improve health seeking behaviours. These interventions should target entire communities and families, rather than be focused only on mothers and children who may come to a health facility to seek treatment.

At the time of this assessment, only 4 of 19 implementing partners reported having a BCC strategy and materials that include IMAM/NACS. However, since the time of data collection, the National Nutrition Communication and Advocacy Strategy has been developed and is currently under review; the strategy includes sections on BCC and social mobilization. The strategy and corresponding materials are scheduled to be launched by the end of 2014.

The *IMAM Guidelines* contain additional guidance on social mobilization and BCC. They encourage the development of messages that can be communicated to communities through mass media, including radio, television, and print. Individual counselling and small group discussions are also recommended for those with specific nutrition challenges, such as mothers with malnourished children. The *IMAM Guidelines* also emphasize the need to provide messages in local languages and dialects and provide sets of key messages by topic area, such as optimal breastfeeding, maternal nutrition, and growth monitoring and promotion.

Despite the recommendations included in the *IMAM Guidelines*, design and dissemination of BCC or social mobilization materials related to IMAM does not seem to have been completed. None of the visited health facilities had BCC or social mobilization materials for IMAM/NACS. Local media messages on IMAM/NACS have also not been broadcast in the districts that were visited. Because resources for nutrition services are already limited (as seen in the finance section of this report), it is unlikely that health facilities have the necessary resources to go beyond the minimum requirements of

facility-level service delivery. Stakeholders suggested outreach activities with a lower cost than media campaigns, such as sharing nutrition messages at community gatherings and sporting events and using testimonies from nutrition champions and expert clients.

### 4.6.3 Quality Improvement

There is a clear recognition among the MOH and national actors of the importance of quality improvement, but the availability of national trainers is less certain. The ACP reported that there are quality improvement trainers for NACS, which may be associated with the former NuLife project. Both the NuLife project and the Partnership for HIV-Free Survival initiative include quality improvement in their NACS programming. Implementing partners reported a mix of available trainers, some saying they existed for IMAM, others for NACS, and others for both services. Just under half of the visited facilities (10 of 22) had personnel trained in quality improvement, and only four of the facilities had quality improvement teams that included IMAM/NACS. These teams were located at the regional and district hospital levels.

Another aspect of quality management is associated with the existence of a feedback mechanism for facilities to understand clients' opinions about their practice and services. Three of the four DHOs reported to have feedback mechanisms in place; 11 of the 22 facilities reported having a feedback mechanism in place, with about half of the facilities at each level reporting these mechanisms. Most of the facilities use informal mechanisms where clients express concerns to counsellors or VHTs. The collection of feedback is often informal, and no formal monitoring of client satisfaction is undertaken. Only one facility reported that they used a suggestion box, which is located in the HIV clinic. Community members confirmed that they typically expressed concerns about health services to VHTs; however, only community members in Kaabong said that they talked to VHTs about nutrition, as members of other communities were not aware that nutrition services were available to them or did not know about a mechanism for discussing nutrition concerns. This reflects the relatively weak BCC and community mobilization that was found in the assessed communities. With stronger, more focused outreach, community members would be aware of available services and how to access them.

### 4.6.4 Community Involvement

Community involvement was investigated both from the perspectives of the community members and through the level of involvement sought by health officials and service providers. The MOH and DHOs were asked about community involvement in planning for services, and community members were asked about the presence of services in their communities and the extent to which they support these services. Community involvement is key to the success of nutrition approaches such as IMAM/NACS, as community involvement promotes early detection of malnutrition and early treatment seeking. Active communities also stimulate demand for nutrition services, which can support the securing of financial, physical, and human resources for service delivery.

The level of input from community-level actors is limited at the national level, with only the ACP reporting that a CBO was involved in national-level NACS committees and working groups. Results were much better at the district level, with all four DHOs reporting that community representatives were involved in annual district planning.

Only community members in Kaabong reported that key nutrition activities were taking place in their community, including screening of children, nutrition education, referrals, and distribution of rations. They were also able to elaborate on specific sessions, such as food and garden demonstrations, group discussions, and nutrition education sessions. All of these activities were reported to take place at least once or twice a week. Community members in Kaabong also reported that VHTs go to homes to screen children. In Nebbi and Masindi, none of these activities were reported. In Namutumba, growth monitoring, referrals, and ration distribution were reported to occur in HIV-affected homes; however, community members in non-HIV-affected homes stated that they do not receive volunteers in their

homes and that they organize their own transportation to go to HCs when they need help or advice. This situation in Namutumba is concerning and further investigation should be undertaken to see if this situation extends beyond the community visited.

Kaabong was also the only district in which community members support the referral system for IMAM/NACS. These community members stated that they pool resources for malnourished children to be taken to HCs or that sometimes they use their own transportation, such as bicycles. They also participate in sensitizing other community members and encourage mothers to go for screening. In other communities, it was mentioned that food or some money may be provided to assist parents with malnourished children, but this support was not systematic. When asked if resources would be provided if requested, all communities stated that they would be willing to contribute.

#### 4.6.5 Conclusions

More remains to be done to ensure that all of the required elements of IMAM/NACS care are available at the designated facility levels. In addition, the low levels of nutrition assessment that are occurring at the lower-level health facilities reduce the success of other nutrition interventions.

Increasing community participation in services is important. Increased participation improves both awareness and ownership of services, both of which should contribute to higher service utilization rates. Kaabong is by far the strongest district in this area.

Because so much work remains to be done at the community level, efforts to coordinate IMAM/NACS outreach can still be done. Coordination of these efforts will save on resources, as many of the target groups overlap, and will be beneficial to community members by reducing the number of sensitization and different messages that they are receiving from various actors.

#### 4.6.6 Service Delivery Recommendations

- **The MOH should develop clear guidance on which nutrition services (OTC, ITC, SFP, referral, etc.) should be offered along the levels of the health structure.** This guidance should also instruct health personnel on how to treat clients who do not fall into a typical nutrition target group (e.g., children under 5, pregnant and lactating women, PLHIV). In addition, the following actions should be considered in line with updated guidance.
  - Ensure that health facilities provide the services that are needed in the catchment areas that they serve, particularly the establishment of ITC and OTC at the appropriate levels. The ability of facilities to deliver quality services must also be considered.
  - Equip facilities with the necessary equipment, supplies, and tools to deliver the necessary services. (Refer to recommendations in Section 4.5.)
  - Ensure health workers have received appropriate pre-service and in-service training that covers nutrition programs being delivered at the facilities in which they will be assigned.
- **Ensure that nutrition personnel are included in facility quality improvement activities in line with the national quality improvement framework.** Review current QI activities to include nutrition at national and regional levels.
- **Efforts should be made to develop harmonized BCC and social mobilization materials for nutrition that are in line with the new National Nutrition Advocacy and Communication Strategy and that are used by all nutrition partners.** This would include counselling materials, education materials, and a system that includes home visits and the social support that families need. There should also be training on how to properly use these materials to guarantee their use during client visits.
- **Identify best practices in nutrition service delivery and create platforms for experience sharing across districts and facilities.** (See recommendations in Sections 4.1.5 and 4.4.4, as

successful implementation of these recommendations will have a positive influence on service delivery outcomes.)

- **Initiate, scale up, and improve support supervision, mentorship, and coaching to ensure quality of care and skill development among health personnel.** These activities should be routine at all levels and implemented as described in Section 4.2.
- **Strengthen community linkages with VHTs and health facilities.** Doing so will strengthen the referral system, improve rates of service utilization, and ultimately improve health outcomes. Establishing mechanisms at all health facilities and communities through which community members can express needs and concerns about their health and nutrition will also strengthen and reinforce established linkages.

## 5 Moving Forward

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Many of Uganda's health system challenges facing nutrition are also likely affecting other health services as well. Advocating for changes in the health system that will close existing gaps will have benefits that extend beyond improvements in nutrition.

One of the recurring issues that came up in examination of several building blocks is the ability of the MOH Nutrition Unit to effectively advocate for nutrition programming. Strengthening this unit will be key to achieving many of the other recommendations presented in this report. Elevating the Nutrition Unit to the division level within the MOH will create more autonomy over the nutrition budget, remove bureaucratic layers between nutrition leadership and MOH leadership, and reflect the MOH's commitment to supporting Uganda's prioritization of achieving food security and good nutrition for its citizens.

Likewise, lack of sufficient funding and health personnel are major gaps affecting the successful scale-up and delivery of nutrition services. As suggested by the extent of the recommendations in this report, this will be a long process that requires coordinated and focused advocacy at both the national and district levels, and throughout the health sector. To strengthen the health system in these areas, the MOH and nutrition stakeholders must engage with the MOFPED and the MOLG to strengthen systems that inform the budgeting and planning processes for nutrition.

Several promising initiatives have been undertaken by nutrition stakeholders since the time of the assessment data collection that should address additional gaps uncovered during the assessment. Of particular note is the development of the National Nutrition Communication and Advocacy Strategy, which promises to provide the much-needed guidance for stakeholders to speak with one voice on nutrition. This strategy, working hand in hand with the UNAP, can assist with the much-needed coordination of nutrition interventions both within and beyond the health sector.

The successful roll-out of the new HMIS manual and accompanying tools will be integral to the success of nutrition coordination and scale-up efforts, as it finally provides a mechanism through which valuable nutrition data can be collected and analysed to inform nutrition budgeting, planning, and programmatic decisions.

Now that health system strengths and gaps have been identified, work must be undertaken to ensure that strengths continue to function well and that budgeting, health personnel, and strengthening of the MOH Nutrition Unit are addressed. The leadership of the MOH Nutrition Unit will be key in achieving the recommendations put forth in this report. Nutrition stakeholders from all sectors must also play an active role. OPM, as the host of the UNAP secretariat, should also take on a strong role, especially when advocating for systematic changes that need to take place among several ministries.

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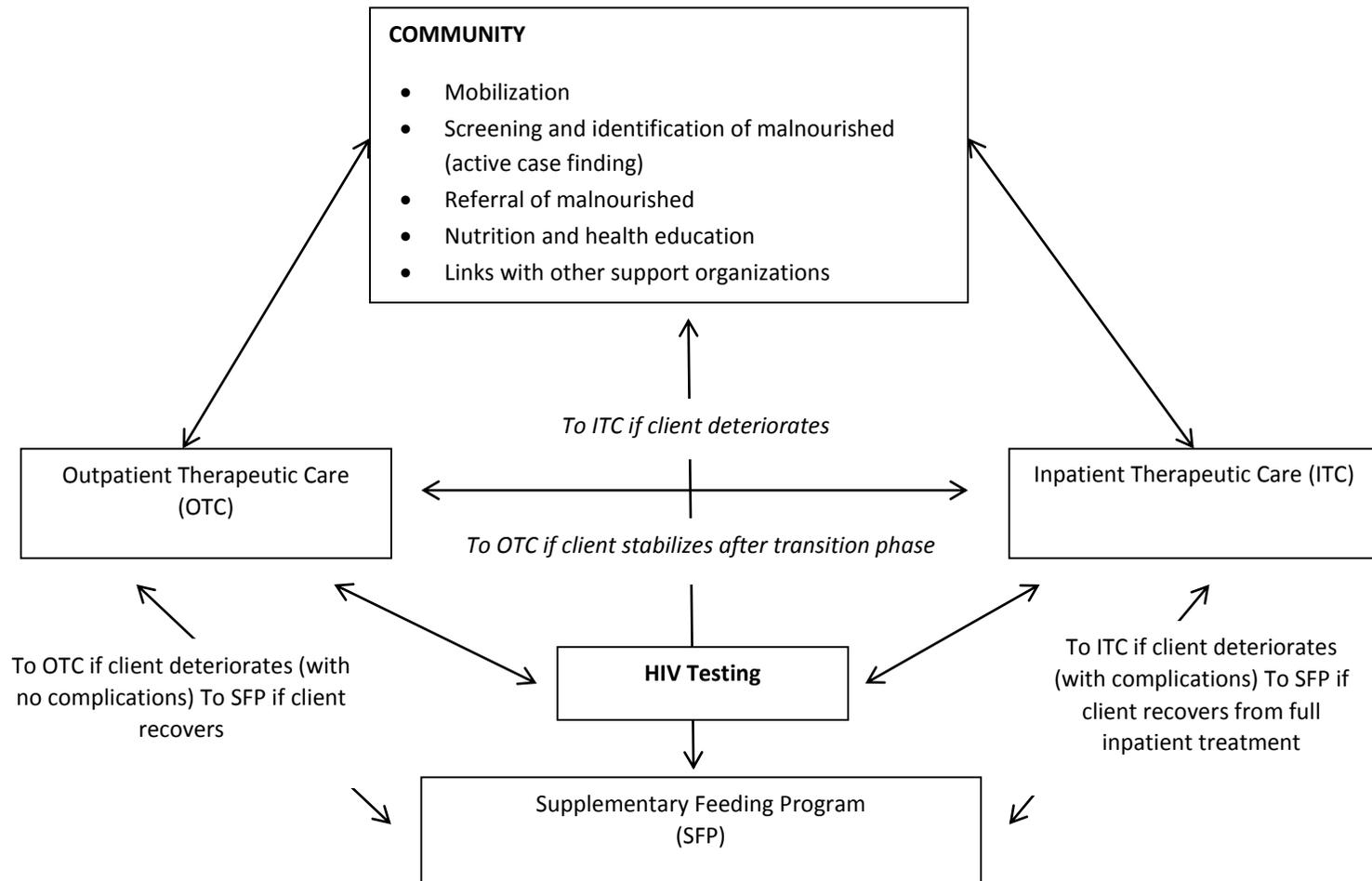
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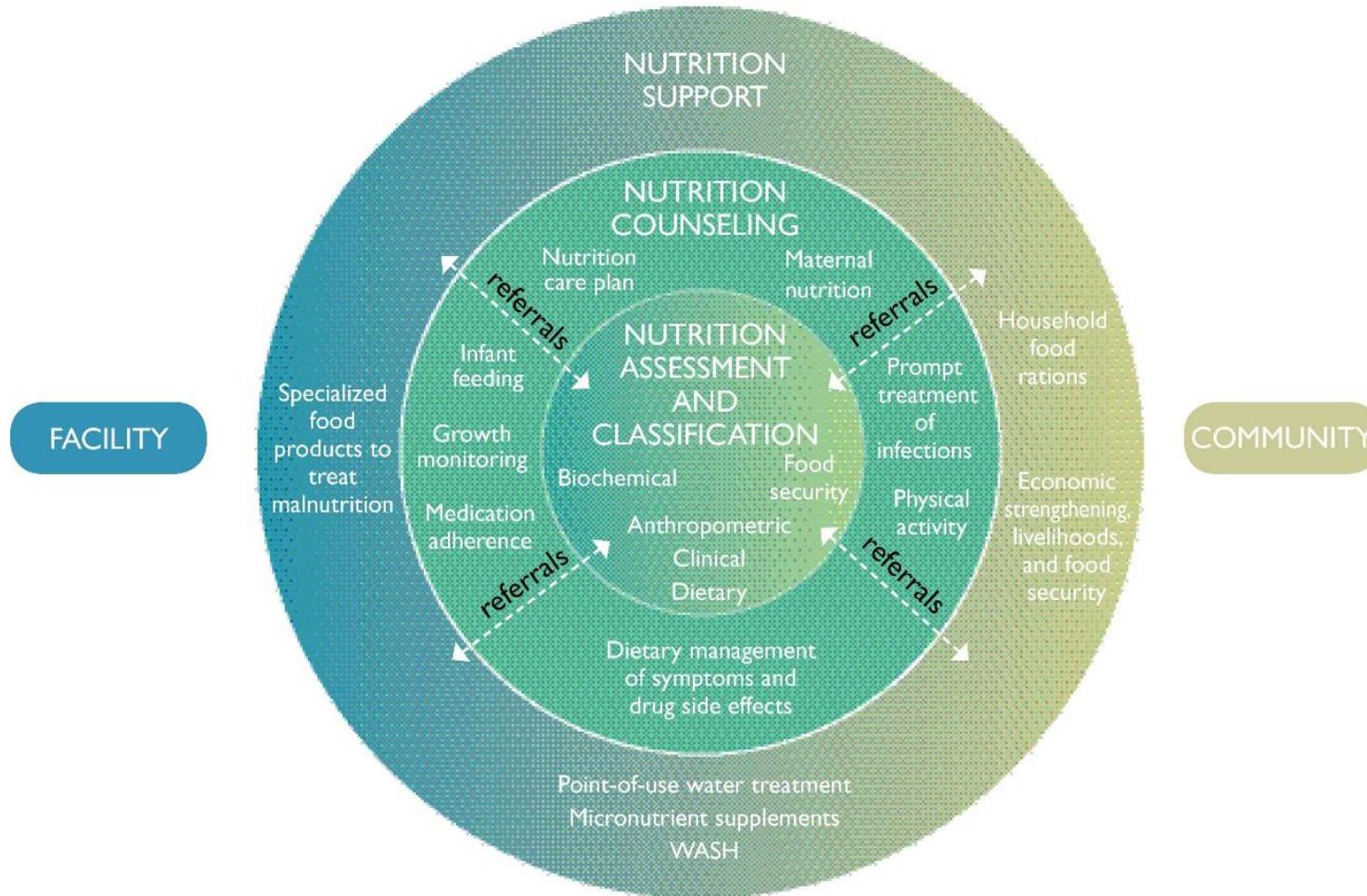
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## Annex 1. IMAM Framework



## Annex 2. NACS Framework



## Annex 3. Performance Metrics for Reported Results

Priority Health System Function (Leadership):				
Empowering leaders* to prioritize and support IMAM/NACS (* leaders are, e.g., policy and decision makers, managers, academics)				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
Technical knowledge and skills in IMAM/NACS	Do leaders have knowledge on IMAM/NACS?	Percent of selected government sectors/implementing partner/district/academic institutions' leaders who can describe the burden of disease that explains why IMAM/NACS is needed, and list at least 2 components of both IMAM and NACS.	Please describe why IMAM and NACS are needed in Uganda. Please list two or more components of IMAM and/or NACS.	
		Percent of selected health facility leaders who can describe/list the IMAM/NACS services meant to be provided at their level.	Please list IMAM and/or NACS services that could be provided at your health facility.	
		Percent of selected communities' leaders who can describe the need for IMAM/NACS, and list components of IMAM and NACS that are meant to be provided at community level.	Can you describe why nutrition services are needed in your community? Can you list two or more nutrition services that could be provided in your community?	
	Have leaders been trained in IMAM/NACS management and/or implementation?	Percent of selected government sectors/implementing partner/district leaders who have been exposed to at least 1 day worth of IMAM/NACS events (e.g., training, meeting, sensitization/orientation discussion, workshop).	Have you participated in IMAM and/or NACS trainings, workshops, or meetings that lasted at least one day in total?	
		Percent of selected academic institutions' leaders who have been exposed to at least 2 days of IMAM/NACS events.	Have you participated in IMAM and/or NACS trainings, workshops, or meetings that lasted at least two days in total?	
		Percent of selected health facility leaders who have been exposed to at least 2 days of IMAM/NACS events.	Have you participated in IMAM and/or NACS discussions in trainings, workshops, or meetings that covered at least two days in total?	
		Percent of selected communities' leaders who have been exposed to at least 2 distinct IMAM/NACS events.	Have you participated in IMAM and/or NACS discussions in trainings, workshops, or meetings that covered at least two days in total?	

Priority Health System Function (Leadership):				
Empowering leaders* to prioritize and support IMAM/NACS (* leaders are, e.g., policy and decision makers, managers, academics)				
<b>A forum for learning and information sharing on IMAM/NACS exists at all levels (accessing and sharing knowledge and evidence, needs, performance of services, lessons learning, evaluations)</b>	Is there a forum for learning and information sharing on IMAM/NACS that can be accessed at all levels?	Frequency of national/district IMAM/NACS learning and information sharing events in the past 12 months	In the past 12 months, how many IMAM/NACS learning and information sharing events have there been at your health facility?	What type of events? (training, meeting, workshop, other) Who attended? What topics were discussed? What were the event objectives?
		Percent of selected health facilities that had $\geq 1$ IMAM/NACS learning and information sharing event in the past 12 months.	In the past 12 months, how many IMAM/NACS learning and information sharing events have there been at your health facility?	What type of events? (training, meeting, workshop, other) Who attended? What topics were discussed? What were the event objectives?
		Percent of selected communities that had $\geq 1$ IMAM/NACS learning and information sharing event in the past 12 months.	In the past 12 months, how many IMAM and/or NACS learning and information sharing events have there been in your community?	What type of events? (training, meeting, workshop, other) Who attended? What topics were discussed? What were the event objectives?
		Frequency of national IMAM/NACS planning meetings in the past 12 months.	In the past 12 months, have there been IMAM and/or NACS national planning meetings?	
		Percent of selected health facilities that covered IMAM/NACS as a topic in at least 1 routine planning meetings in the past 12 months.	In the past 12 months, did you include IMAM and/or NACS as a topic in a routine planning meeting at your health facility?	
		Percent of selected districts that covered IMAM/NACS as a topic in at least 2 routine planning/coordination meetings in the past 12 months.	In the past 12 months, did you include IMAM and/or NACS as a topic in a routine DHO planning meeting?	
<b>Having advocacy strategies and materials for nutrition</b>	Do advocacy strategies and materials for nutrition exist (including audio, visual and electronic)?	Number of selected government sectors/implementing partners with advocacy strategies on nutrition.	Does your government sector/department have a specific advocacy strategy on nutrition?	If 'yes'... Who produced this strategy? Does it include IMAM and/or NACS? What are the objectives? What stage is it in the implementation process? Can you provide me with a copy of the strategy?
		Number of selected government sectors/implementing partners with advocacy materials on nutrition (including audio, visual, print and electronic).	Does your government sector/department have specific advocacy materials on nutrition?	If 'yes'... Who produced these materials? Does it include IMAM and/or NACS? Who do the materials target? Are the materials being used? Can you provide me with a copy of the materials?
	Are national, regional, district, health facility, and community levels oriented on the advocacy strategy	Percent of selected government sectors/academic institutions/districts/health facilities/VHTs oriented.	If yes, has there been an orientation on the nutrition advocacy strategy?	

Priority Health System Function (Leadership):				
Empowering leaders* to prioritize and support IMAM/NACS (* leaders are, e.g., policy and decision makers, managers, academics)				
	Are national, regional, district, health facility, and community levels having received a copy of nutrition advocacy materials	Percent of selected government sectors/academic institutions/districts/health facilities/VHTs have a copy.	If yes, have you received a copy of the advocacy materials?	
<b>Accessing evidence on nutrition</b>	Does a national (and/or other) information and documentation repository (e.g., documents, guidelines, routine information, from across departments and agencies) for nutrition exist? If it exists, does it cover IMAM/NACS? If it exists, is it publically accessible	Existence of a national information and documentation repository for nutrition.	Is there a national information and documentation repository for nutrition? Does it include IMAM and/or NACS?	How do you access the information? Are you able to access it easily? Is it easy to use? Are you able to find what you are looking for?
		Existence of other information and documentation repository for nutrition	Do you have access to another information and documentation repository? Does it include IMAM and/or NACS?	How do you access the information? Are you able to access it easily? Is it easy to use? Are you able to find what you are looking for?
<b>National government sector leaders prioritizing and supporting IMAM/NACS</b>	015i Are sector leaders prioritizing and supporting IMAM/NACS?	Percent of selected government sectors/implementing partners/academic institution/district level government officials who can demonstrate existence of implementation plan and/or budget lines for IMAM/NACS, as proof that leaders prioritize and support IMAM/NACS at national level.	Does your department/unit/institution/agency/district have an implementation plan for IMAM and/or NACS?	
<b>IMAM/NACS are a priority for budgeting and financing</b>	016i Is IMAM/NACS prioritized as a key area for budgeting and financing?	Percent of selected government sectors/implementing partners/health facilities/districts with budget plan for nutrition at national level.	Does your sector/agency/facility/district have a budget for nutrition?	If yes... What programs are included? Does it include IMAM and/or NACS?
		Name/percent government sectors/implementing partners/health facilities/DHOs/district sectors which have available funds for IMAM/NACS.	Does your sector/agency/facility/district have available funds for IMAM and/or NACS?	What is the source of these funds?

Priority Health System Function (Leadership):				
Involving nutrition focal persons in national and district planning and budgeting for nutrition (including IMAM/NACS)				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Strengthening skills of nutritionists in the planning and budgeting process for nutrition</b>	Are national, regional and district nutritionists/nutrition focal persons being trained on planning and budgeting for IMAM/NACS?	Existence of training packages of government sectors/implementing partners for planning and budgeting on IMAM and NACS.	Does your sector/agency have a training package for IMAM and/or NACS planning and budgeting?	Who does the training target? Can you share a copy of the training package?
		Percent of selected key nutrition technical persons who have been trained in planning and budgeting for IMAM/NACS in targeted government sectors/implementing partners.	Have you been trained in IMAM and/or NACS planning and budgeting for your sector/agency?	
		Percent of selected district key technical persons (minimum two) who have been trained in planning and budgeting for IMAM/NACS.	Have at least two in your district office been trained in IMAM and/or NACS planning and budgeting?	
		Percent of selected key persons from health facilities who have been trained in planning and budgeting for IMAM/NACS.	Have you been trained in IMAM and/or NACS planning and budgeting for your health facility?	
<b>Involving nutritionists/nutrition focal person in national, regional and district planning and budgeting</b>	Are nutritionists involved in planning and budgeting?	Percent of selected government sectors that have nutritionists/nutrition focal persons participating in annual planning and budgeting activities for nutrition at national level.	Has a nutrition focal person participated in the annual sector/department planning and budgeting for nutrition?	
		Percent of selected districts that have nutrition focal persons participating in their planning and budgeting meeting.	Has the district nutrition focal person participated in the annual district planning and budgeting meeting?	
		Percent of selected health facilities that have nutritionists/or focal persons participating in planning and budgeting for nutrition including IMAM and NACS.	Has a nutrition focal person participated in the annual hospital planning and budgeting for nutrition?	
<b>Planning and estimating resource needs for IMAM/NACS scale-up</b>	Are national planning and resource needs estimation for IMAM/NACS scale-up done?	Existence of national scale-up strategic plan for nutrition including IMAM/NACS (specify by who and for what period).	Does a national scale-up strategic plan for nutrition including IMAM and/or NACS exist?	Can you share a copy of the plan?
	Do multi-sectoral nutrition and food security committees with planning role for scale-up exist at the district level?	Percent of selected districts that have multi-sectoral district nutrition and food security committee in place.	Does your district have a multi-sectoral nutrition and food security committee in place?	How often does it meet? What activities does it engage in?

Priority Health System Function (Leadership):				
Planning and estimating resource needs for IMAM/NACS (Resources: i.e., guidelines, equipment, therapeutic foods, planning and M&E tools, staff)				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Guidelines for planning and estimating resource needs for IMAM/NACS</b>	Do guidelines for planning and estimating resource needs for IMAM/NACS exist and are they disseminated at national, regional, district, and facility levels?	Existence of guidelines (i.e., guidelines, guidance and/or tools) for planning and estimating resource needs for nutrition including IMAM/NACS.	Are there guidelines or tools for planning and estimating material resources needs for nutrition that includes IMAM and/or NACS?	
		Number (proportion) of selected government sectors with access to guidelines for planning and estimating resource needs for IMAM/NACS.	Does your sector have access to guidelines or tools for planning and estimating material resource needs for nutrition including IMAM and/or NACS?	
		Percent of selected districts/health facilities with copies of guidelines for planning and estimating resource needs for nutrition including IMAM/NACS.	Does your district/health facility have copies of guidelines or tools for planning and estimating material resource needs for nutrition including IMAM and/or NACS?	
<b>Key staff have the necessary skills to plan and estimate resource needs for IMAM/NACS</b>	Are key staff being trained in planning and estimating resource needs for IMAM/NACS services?	Percent of selected government sectors/implementing partners where focal persons have been trained on planning and estimating/forecasting resource needs for IMAM/NACS at national level.	Has a focal person from your sector/agency been trained on planning and estimating resource needs for IMAM and/or NACS?	
		Number of key staff of the National Medical Store (forecasting/procurement office) that have been trained on planning and estimating/forecasting resource needs for IMAM/NACS.	Has a key staff of the National Medical Store (procurement office) been trained on planning estimating resource needs for IMAM and/or NACS?	
		Percent of selected districts/health facilities where nutrition focal persons have been trained on planning and estimating/forecasting resource needs for IMAM/NACS.	Has a nutrition focal person from your district/health facility been trained on planning and estimating resource needs for IMAM and/or NACS?	
		Percent of selected districts/health facilities where supply chain/store managers have been trained on planning resource needs for IMAM/NACS.	Has a supply chain/store manager from your district/health facility been trained on planning resource needs for IMAM and/or NACS?	
<b>Delivery of IMAM/NACS services according to strategy and action plan</b>	Are IMAM/NACS services being delivered?	Percent of all selected health facilities providing IMAM/NACS services.		

Priority Health System Function (Leadership):				
Multi-sectoral joint planning and coordinated implementation for nutrition, including IMAM/NACS				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Multi-sectoral collaboration and coordination for nutrition established at national and district levels</b>	Are multi-sectoral collaboration and coordination for nutrition established?	Number of joint multi-sectoral coordination meetings for nutrition at national level with government sectors and IPs in the past year.	How many joint multi-sectoral coordination meetings for nutrition (that included government sectors and IPs) did you have in the past 12 months at the national level?	Was IMAM and/or NACS included as a topic? What other topics were included? What impact did the meeting have on nutrition activities?
		Number of joint multi-sectoral coordination meetings for nutrition at district level with government sectors and IPs in the past year with government sectors and implementing partners.	How many joint multi-sectoral coordination meetings for nutrition	Was IMAM and/or NACS included as a topic? What other topics were included? What impact did the meeting have on nutrition activities?
<b>Improved leadership (collaboration and coordination) for IMAM/NACS at national, national and regional hospitals, and district levels</b>	Do government sectors have IMAM/NACS related activities in their annual sectoral plan?	Number of selected government sectors/implementing partners/districts/health facilities with IMAM/NACS activities in annual plans at national level.	Are IMAM and/or NACS activities included in your government sector/agency/district/health facilities' annual work plan?	What type of activities are included?

Priority Health System Function (Finance):				
Allocating financial resources for IMAM/NACS				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Availability and use of case load data on acute malnutrition for decision making at national, regional and district levels</b>	Is caseload data on acute malnutrition available and used to inform financial resources needs at the district, regional, and national levels?	MOH planning and policies department receive advice from technical expert on estimated expected caseload of acute malnutrition for planning financial resources needs (considering HMIS + scale-up plans) in the previous year.	How did you estimate budget needs for IMAM and/or NACS?	Did you use caseload data to estimate IMAM/NACS budget needs? Did a technical expert (nutritionist or HMIS) assist you with the planning?
		MOH planning and policies use estimated expected caseload information on acute malnutrition for planning financial resources needs in the previous year.	Did the MOH planning and policies department use estimated expected caseload information on acute malnutrition for planning financial resources needs in the previous year?	
		Percent of selected district/health facility planning and budget authority receive advice from technical experts (Nutrition Focal Person) on estimating expected caseload of acute malnutrition for planning financial resource needs in previous year.	Did your district/health facility's planning and budget unit receive advice from technical experts (Nutrition Focal Person & Medical records) on estimating expected caseload of acute malnutrition for planning financial resource needs in the past twelve months?	
		Percent of selected district/health facility planning and budget authority use estimated expected caseload of acute malnutrition for planning financial resource needs in previous year.	Did your district/health facility's planning and budget unit use estimated expected caseload information on acute malnutrition for planning financial resources needs in the past 12 months?	
<b>Costing data for decision making at national, regional, and district levels</b>	Are detailed costing estimates of IMAM/NACS activities been done?	Existence of national scale-up strategic plan for nutrition including IMAM/NACS (specify by who and for what period).	Is the national scale-up strategic plan for IMAM and/or NACS costed?	
<b>Allocating financial resources for IMAM/NACS at national, district, HF and community levels</b>	Are there sufficient resources allocated for IMAM/NACS at national, district and community levels?	MOH nutrition unit has allocated funds for IMAM/NACS (Presence of line items in budget).	Does the MOH nutrition unit have allocated funds for IMAM and/or NACS; Are there specific IMAM and/or NACS line items in the budget of the previous fiscal year?	

Priority Health System Function (Workforce):				
Strengthening knowledge and skills of health and nutrition providers for IMAM/NACS				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Strategic plan for strengthening knowledge and skills of health workforce (health care providers and health managers) on nutrition including IMAM/NACS</b>	Is there a strategic plan (either included in a 5-year plan or a dedicated strategy) for strengthening knowledge and skills on nutrition including IMAM/NACS?	Existence of (multi-year) strategic plan at MOH for in-service training on nutrition including IMAM/NACS.	Does a multi-year strategic plan exist at the MOH for in-service training on nutrition?	If yes, does it include IMAM and/or NACS?
	<b>Budget line items for strengthening IMAM/NACS knowledge and skills of health workforce</b>	Does MOH annual budget have a budget line for in-service and supervision training of the health workforce?	Existence of budget line in MOH annual budget for in-service training on nutrition including IMAM/NACS for the health workforce?	Does the MOH annual budget have a budget line for in-service training on nutrition?
		Existence of budget line in MOH annual budget for supervision on nutrition including IMAM/NACS.	Does the MOH annual budget have a budget line for supervision for nutrition?	If yes, does it include IMAM and/or NACS?
Does MOES annual budget have a budget line for pre-service education of the health workforce?		Existence budget line in MOES annual budget for pre-service education on nutrition including IMAM/NACS for the health professions?	Does the MOES annual budget have a budget line for pre-service education on nutrition?	If yes, does it include IMAM and/or NACS?
Do districts annual budgets have a budget line for in-service training and supervision?		Percent of selected districts with existence of budget line in DHO annual budget for in-service training on nutrition including IMAM/NACS for the health workforce at the district HF?	Does your district health sector annual budget have a budget line for in-service training of the health staff in the district health facilities on nutrition?	If yes, does it include IMAM and/or NACS?
		Percent of selected districts with existence of budget line in DHO annual budget for supervision on nutrition including IMAM/NACS	Does your district health sector annual budget have a budget line for supervision for nutrition?	If yes, does it include IMAM and/or NACS?
<b>Approved Academic and training institutions of health professions curricular including IMAM/NACS</b>	Do approved academic and training institutions curricula include IMAM/NACS	List of selected academic and training institutions having IMAM/NACS in their curricula.	Does your academic/training institution have IMAM and/or NACS in the curricula?	If yes, please provide details.
<b>Mentoring system for the health workforce that either includes IMAM/NACS or is devoted fully to IMAM/NACS</b>	Are there mentors for MAM/NACS service provision at national and district levels?	Number of national trained mentors in IMAM/NACS service provision.	Is there a mentoring system in place for IMAM and/or NACS?	If yes, approximately how many mentors are there?

Priority Health System Function (Workforce):				
Strengthening knowledge and skills of health and nutrition providers for IMAM/NACS				
<b>Mechanism for in-service training in IMAM/NACS</b>	Is there a national mechanism by which health workforce can receive in-service training in IMAM/NACS?	Existence of a national/district mechanism for IMAM/NACS in-service training for the health workforce.	Is there a national/district mechanism for IMAM and/or NACS in-service training for the health workforce?	If yes, please describe the mechanism.
<b>Reports with IMAM/NACS key performance indicators are accessible</b>	Are IMAM/NACS performance reports made available?	Percent of selected health facilities with IMAM/NACS performance reports access.	Does this health facility have access to IMAM and/or NACS performance reports?	
<b>Strengthening knowledge and skills of health and nutrition service providers for IMAM/NACS</b>	Does in-service training for IMAM/NACS service providers exist (continuous professional development)?	Percent of selected health facilities where health care providers have received in-service training in IMAM/NACS	Did this health facility receive in-service training on IMAM and/or NACS?	How many staff were trained?
		Percent of selected districts where VHTs have received in-service training on IMAM/NACS.	Did your DHO provide in-service training on IMAM and/or NACS to VHTs?	How many VHTs were trained?
	Does in-service mentoring for IMAM/NACS service providers exist?	Percent of selected health facilities where health care providers have received mentoring in IMAM/NACS.	Did this health facility receive mentoring in IMAM and/or NACS?	How often?
		Percent of selected districts where VHTs have received mentoring on IMAM/NACS.	Did the DHO provide mentoring in IMAM and/or NACS to VHTs?	How often?
Are national guidelines/standards on IMAM/NACS effectively disseminated to service providers?	Percent of selected health facilities/DHOs with access to updated national guidelines/standards.	Does your health facility/DHO have access to the 2010 IMAM guidelines and/or NACS national guidelines/standards?		

Priority Health System Function (Workforce):				
Ensuring health workforce satisfaction and motivation on involvement with IMAM/NACS				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Career development opportunities for the health workforce on IMAM/NACS</b>	Is there a continuous professional development system in place for the health workforce?	MOH/DHO continuous professional development system covers nutrition including IMAM/NACS at national level for national and regional hospitals.	Does the MOH/DHO continuous professional development system cover nutrition?	Does it include IMAM and/or NACS topics? Which staff (e.g. national hospitals, regional hospitals, district hospitals, HC III, HC II) has access to the professional development system?
	Is performance being evaluated?	Existence of a MOH system by which employee performance is evaluated for national and regional hospital staff.	Does the MOH have a staff evaluation system in place for evaluating national and regional hospital staff performance?	
		Percent of selected districts with DHO system by which employee performance is evaluated for district hospital, HCIII, and HCII staff.	Does the DHO have a staff evaluation system in place for evaluating district health facility staff performance?	
	Are there chances for promotion?	Existence of a MOH system by which employee promotion is possible for national and regional hospital staff.	Does the MOH have a staff promotion system in place for national and regional hospital staff?	
		Percent of selected districts with DHO system by which promotion is possible for district hospital, HCIII, and HCII staff.	Does the DHO/CAO have a staff promotion system in place for district health facility staff?	
	<b>Providing remuneration and compensation for the health service providers</b>	Are salaries being paid on time?	Percent of MOH/DHO paychecks issued on correct date in previous quarter at national level for national, regional hospital/district hospitals, HC III, HC II staff.	Were MOH/DHO paychecks for national and regional hospital staff issued on the correct date in the previous quarter?
Are salaries and benefits packages in line with level of expertise		Existence of MOH salary bands and benefits packages corresponding to staff positions at national and regional hospitals.	Does the MOH have salary bands and benefits packages corresponding to staff positions at national and regional hospitals?	
		Percent of selected districts with DHO salary bands and benefits packages corresponding to staff positions at district hospital, HCIII and HCII.	Does the DHO have salary bands and benefits packages corresponding to staff positions at district health facilities?	
<b>Monitoring of health service providers job satisfaction for IMAM/NACS Implementation</b>		Is job satisfaction for IMAM/NACS implementation by the health service providers being monitored?	National level MOH staff evaluations include monitoring of job satisfaction	Do the national level MOH staff evaluations include monitoring of job satisfaction?
	Percent of selected health facility staff evaluations include monitoring of job satisfaction		Do your health facility staff evaluations include monitoring of job satisfaction?	
	Percent of selected districts have DHO staff evaluations that include monitoring of job satisfaction.		Do your district DHO staff evaluations include monitoring of job satisfaction?	
<b>Defined job descriptions for the health workforce</b>	Does every employee hired have a job description?	Percent of selected health facility staff have job descriptions.	Do you have a job description?	
		If yes, percent of health facility staff job descriptions include nutrition (and IMAM/NACS).	If yes, does it include nutrition? If yes does it include IMAM and/or NACS?	

Priority Health System Function (Workforce):				
Ensuring health workforce satisfaction and motivation on involvement with IMAM/NACS				
<b>Ensuring health workforce satisfaction and motivation</b>	Is the workforce satisfied and motivated?	Trend of selected MOH/health facility/DHO staff requesting mutations (request to change station.	Approximately how many of your national MOH staff/health facility/DHO staff requested mutations (requesting to change duty-station) in the previous year? Less than 1/3, less than 2/3, more than 2/3?	Do you know the most common reasons for these requests?
<b>Having a reliable health workforce</b>	Is the workforce reliable?	Trend in unjustified absenteeism of selected national MOH/health facility/DHO staff in previous quarter.	What is the rate of absenteeism of national MOH/health facility/DHO staff in the previous quarter?	Do you know the most common reasons for absenteeism?

<b>Priority Health System Function (Workforce):</b>				
<b>Recruiting nutritionists to work at all levels of the health sector</b>				
<b>Determinant</b>	<b>Performance question</b>	<b>Indicator</b>	<b>Questionnaire</b>	<b>Additional qualitative follow-up</b>
<b>Professional health bodies include nutritionists</b>	Which professional health bodies include nutritionists?	Existence of professional health bodies, which formally recognizes and registers selected health professions, have included nutritionists.	Does your organization have nutritionists as members?	If yes, how many?
<b>Defined nutrition positions by public service structure (Ministry of Public Service) at all levels of MOH</b>	Are nutrition positions defined by public service structure at all health sector levels?	Existence of nutrition positions that are defined by public service structure (organogram) for MOH decision making and management level.	Do you have nutrition positions in the organogram of your department/unit (at the MOH decision making and management level)?	If yes, name the positions. Do the positions have formal job descriptions?  If no, who takes care of nutrition activities? Do you think a nutritionist is needed?
		Percent of selected health facilities with defined nutrition positions.	Does your health facility have defined nutrition positions?	If yes, name the positions. Do the positions have formal job descriptions?  If no, who takes care of nutrition activities? Do you think a nutritionist is needed?
<b>Nutritionists involved in relevant government sectors and districts HR planning process, and employed (i.e., MOH, MES, MAAIF, MGLSD, OPM)</b>	Are nutritionists involved in relevant government sectors' HR planning process?	List of national/district government sectors that involve nutritionists in the HR planning mechanism during projecting, monitoring and evaluating nutrition staffing requirements.	Does your national/district government sector/department/unit involve nutritionists in planning for nutrition staffing requirements?	What is the specific role of the nutritionist?
	Are nutritionists employed by relevant government sectors?	Number of nutritionists employed in national/district government sectors.	Is there a nutritionist employed in your national/district government sector/department/unit?	
<b>Sectors (i.e., MOH, MOES, MAAIF, MGLSD, OPM, MOLG) receive funds (allocated by Ministry of Public Service and provided by Ministry of Finance) for recruitment/salaries of nutrition service providers as per the national policy and action plan</b>	Have sector (i.e., MOH, MOES, MAAIF, MGLSD, OPM, MOLG) budget for recruiting/paying salaries of nutrition service providers been allocated?	MOH/DHO requested and received funding for nutrition positions at national/district level.	Did you request funding for nutrition positions at MOH/health facility at national level within the last 12 months?	If yes, did you receive the funding? If yes, how many of the positions were filled?
		MOH/DHO requested and received funding for nutrition positions at national/district health facilities.	Did you request funding for nutrition positions at the national, regional hospital/district hospital, HC, III, HC II within the last 12 months?	If yes, did you receive the funding? If yes, how many of the positions were filled?
<b>MOH recruitment of nutritionists to fill positions at all levels of the health sector</b>	Have nutritionists been recruited to fill all positions at management and service delivery?	Number of unfilled positions for nutritionists at MOH/DHO/health facilities.	How many unfilled positions for nutritionists do you have at the MOH/DHO/health facility?	If yes, how long have they been unfilled? Why do they remain unfilled?

Priority Health System Function (IS):				
Communicating information on IMAM/NACS for all levels of the health sector				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Standardized monitoring and reporting tool for IMAM/NACS are available</b>	Is a standardized monitoring and reporting tool available at all levels?	Standardized monitoring and reporting tool for IMAM/NACS has been developed by the MOH.	Has a standardized monitoring and reporting tool for IMAM and/or NACS been developed by the MOH?	
		Standardized monitoring and reporting tool for IMAM/NACS has been disseminated to the DHO.	Are you using a standardized monitoring and reporting tool for IMAM and/or NACS at your DHO?	
		Standardized monitoring and reporting tool for IMAM/NACS has been disseminated to health facilities.	Are you using a standardized monitoring and reporting tool for IMAM and/or NACS at your health facility?	
<b>Timely filling and sharing of monitoring and reporting for IMAM/NACS</b>	Are monitoring and reporting forms for IMAM/NACS filled and shared timely?	Percent of reporting forms on IMAM/NACS are received within 4 weeks of end of previous reporting month: at MOH from national/regional hospital to national MOH.	What percent of expected IMAM and/or NACS reports did you receive last month from the national/regional hospital?	What percent of reports received have been processed? How did you use the reports? (109a-b)
		Average percent of reporting forms on IMAM/NACS are received within 4 weeks of end of previous reporting month at selected districts from district health facilities/VHT to district DHO.	What percent of IMAM and/or NACS reports did you receive last month from the health facilities/VHT?	What percent of report received have been processed? Did you share the compiled reports with the MOH and/or DHO? How did you use the reports? (109a-b)
<b>Equipment for rapid reporting and information feedback (e.g., computers, internet, and mobile phones)</b>	Is equipment for rapid reporting and information feedback being available in the health sector at MOH, DHO, health facilities levels?	National MOH have working computers for monitoring and reporting.	Does the national MOH have working computers for monitoring and reporting on IMAM and/or NACS?	
		Percent of selected districts DHO/health facilities have working computers for monitoring and reporting.	Does your district DHO's office/health facility have working computers for monitoring and reporting on IMAM and/or NACS?	
<b>Use of communication technologies for rapid reporting of routine data (e.g., electronic and short message systems (SMS))</b>	Are electronic/SMS communication technologies for rapid reporting of routine data being used?	Percent of selected health facilities report electronically to national level.	Does your health facility report electronically to the MOH at the national level?	
		Percent of selected VHTs report by mobile phone (SMS) to district level.	Do the VHTs in your district report by SMS to the DHO?	
<b>Skills of health workforce in the use of communication technologies (computers, internet and mobile phones/SMS) for rapid reporting and information feedback</b>	Is health staff being trained on use communication technologies (computers, internet and mobile phones/SMS) for rapid reporting and information feedback?	Percent of selected staff in MOH departments/health facilities/VHTs are trained on use of communication technologies.	Are you trained on use of computers for reporting?	

Priority Health System Function (IS):				
Communicating information on IMAM/NACS for all levels of the health sector				
<b>Skills for quality reporting on IMAM/NACS</b>	Do skills for quality reporting on IMAM/NACS exist at all levels?	Percent of selected staff in MOH departments/health facilities/VHTs are trained on quality monitoring and reporting.	Are you trained on quality monitoring and reporting?	What kind of training did you receive?
<b>Communicating information on IMAM/NACS for all levels of the health sector</b>	Is information on IMAM/NACS communicated?	108a National MOH analyse and disseminate information from routine IMAM/NACS monitoring and reporting.	Does the national MOH analyse and disseminate information from routine IMAM and/or NACS monitoring and reporting?	What information is included in analysis? How/to whom is it disseminated?
		Percent of selected districts where nutritionist/nutrition focal/HMIS focal person analyse and disseminate information from routine IMAM/NACS monitoring and reporting.	Does the nutrition focal/HMIS focal person analyse and disseminate information from routine IMAM and/or NACS monitoring and reporting in your DHO's office?	What information is included in analysis? How/to whom is it disseminated?

Priority Health System Function (Supplies):				
Accurate forecasting of IMAM/NACS supplies by MOH (e.g., drugs, therapeutic and supplementary foods, forms, anthropometric equipment)				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
Forecasting and procurement plans of health and nutrition supplies including for IMAM/NACS at all levels	Do plans for forecasting and procuring supplies exist at all levels?	Existence of national standardized guidelines on caseload estimation calculation.	Do national standardized guidelines on caseload estimation calculation exist?	
		Percent of selected districts/health facilities with forecasting and procurement plans which include IMAM/NACS supplies/commodities.	Does your DHO's office/health facility have forecasting and procurement plans which include IMAM and/or NACS supplies/commodities?	
Standardized forecasting and stock management of health and nutrition supplies including for IMAM/NACS at all levels	Are standardized forms for forecasting and stock management being used?	Existence of standardized forms for forecasting and stock management for IMAM/NACS supplies.	Do standardized forms for forecasting and stock management for IMAM and/or NACS supplies exist?	
		National medical store (NMS) with standardized forms available.	Does the National Medical Store (NMS) have standardized forms for forecasting and stock management for IMAM and/or NACS supplies?	
		Percent of selected NMS at regional satellites with standardized formats available.	Does your regional satellite NMS have standardized forms for forecasting and stock management for IMAM and/or NACS supplies?	
		Percent of selected district/health facility medical stores with standardized forms available.	Does your district/health facility medical store have standardized forms available?	
Standing operating procedures (SOP) for stock management of health and nutrition supplies at all levels (which should include IMAM/NACS supplies as well)	Are SOPs for stock management available?	Existence of national SOP for supply management.	Do national standard operating procedures for health and nutrition supply management exist?	
		National NMS has SOP for supply management.	Does the national NMS have the standard operating procedure for supply management?	Does it include specific guidance for nutrition/food products? Is the guidance applied? If not, why?
		Percent of selected NMS regional satellites have SOP for supply management.	Does your regional satellite NMS have the standard operating procedure for supply management?	Does it include specific guidance for nutrition/food products? Is the guidance applied? If not, why?
		Percent of selected districts/health facility medical stores with SOP for supply management.	Does your district/health facility medical store have the standard operating procedure for supply management?	Does it include specific guidance for nutrition/food products? Is the guidance applied? If not, why?
Skills of health managers in forecasting, ordering,	Do health managers have the skills for effective forecasting, ordering, and	National NMS has at least two trained staff in supply chain management.	Does the national NMS have at least one staff member trained in supply chain management for nutrition/food products?	

Priority Health System Function (Supplies):				
Accurate forecasting of IMAM/NACS supplies by MOH (e.g., drugs, therapeutic and supplementary foods, forms, anthropometric equipment)				
<b>stock management for health and nutrition supplies including for IMAM/NACS (supply chain management) at all levels</b>	stock management of supplies?	Percent of selected regional satellite NMS have at least two trained staff in supply chain management.	Does your regional satellite NMS have at least one staff member trained in supply chain management for nutrition/food products?	
		Percent of selected health facilities with at least one staff person trained in supply chain management.	Does your health facility have at least one trained staff in supply chain management for nutrition/food products?	
<b>Forecasting of health and nutrition supplies including for IMAM/NACS according to needs at all levels</b>	Is forecasting of IMAM/NACS supplies being done accurately?	National NMS forecasting IMAM/NACS supplies according to the estimated needs (based on expected case load).	Does the NMS forecast IMAM and/or NACS supplies according to the estimated needs?	If a needs estimate wasn't provided, how is forecasting completed?
		Percent of selected regional satellite NMS forecasting IMAM/NACS supplies according to the estimated needs.	Does your regional NMS forecast IMAM and/or NACS supplies according to the estimated needs?	If a needs estimate wasn't provided, how is forecasting completed?
		Percent of selected health facilities forecasting IMAM/NACS supplies according to the estimated needs.	Does your health facility forecast IMAM and/or NACS supplies based on expected case load?	If not, how is forecasting completed?
<b>Increased availability of essential health and nutrition supplies including for IMAM/NACS</b>	Are essential supplies for IMAM/NACS availability in health facilities and communities?	National medical store with IMAM/NACS stock-outs in the previous quarter.	Did the national NMS have IMAM and/or NACS supply shortages in the previous quarter?	If yes, why?
		Percent of selected NMS regional satellites with IMAM/NACS stock-outs in the previous quarter.	Did your regional satellite NMS have IMAM and/or NACS supply shortages in the previous quarter?	If yes, why?
		Percent of selected health facilities with IMAM/NACS stock-outs in the previous quarter.	Did your health facility have IMAM and/or NACS supply shortages in the previous quarter?	If yes, why?
<b>Reduced waste of health and nutrition supplies including for IMAM/NACS supplies</b>	Are supplies being wasted in health facilities?	Percent of selected health facilities with no IMAM/NACS supplies spoilage in the previous quarter.	Did your health facility have spoilage of IMAM and/or NACS supplies in the previous quarter?	If yes, why?

Priority Health System Function (Supplies)				
Producing safe, quality ready-to-use therapeutic food (RUTF) and supplementary food (SF) locally				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>Updated quality and safety standards for local production of RUTF developed and officially adopted</b>	Are quality and safety standards for local production of RUTF developed and adopted at the national level?	Existence of standards on quality and safety for local production of RUTF developed.	Are there standards on quality and safety for locally produced RUTF?	
<b>Monitoring of quality and safety standards for local production of RUTF</b>	Is there a monitoring system in place for local production of RUTF?	Existence of monitoring system for quality and safety for local production of RUTF.	Does a monitoring system for quality and safety for locally produced RUTF exist?	
<b>Producing quality, safe RUTF locally</b>	Is safe, quality RUTF produced locally with accreditation?	Locally produced RUTF obtained Government accreditation.	Did the locally produced RUTF receive government accreditation?	
		Locally produced RUTF obtained UNICEF accreditation.	Did the locally produced RUTF receive UNICEF accreditation?	
<b>Procurement of locally produced RUTF at health facilities for treatment of SAM and MAM</b>	Are locally produced RUTF procured for health facilities that treat SAM and MAM	Percent of selected health facilities using locally produced RUTF.	Does your health facility use locally produced RUTF?	
		Percent of selected health facilities with locally produced RUTF without stock-out of in the previous quarter.	If yes, did your health facility have RUTF supply shortages in the previous quarter?	If yes, why?
		Percent of selected health facilities without locally produced RUTF without stock-out of in the previous quarter.	If no, did your health facility have RUTF supply shortages in the previous quarter?	If yes, why?
<b>Safety of locally produced RUTF</b>	Are locally produced RUTF safe?	Total number of reported cases of illness resulting from unsafe RUTF.	How many cases of illness from consuming unsafe RUTF have been reported?	

Priority Health System Function (Community):				
Involving communities in design and implementation of IMAM/NACS services				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
Involving communities in IMAM/NACS design and implementation of IMAM/NACS services (of MOH-health sector only)	Are communities involved and participating in IMAM/NACS design and planning?	135a-f =144b-g 135a Percent of selected districts/health facilities with minimum one community rep involved in annual national hospital planning for IMAM/NACS.	How many community representatives are involved in the annual planning for IMAM and/or NACS in your district/health facility?	
	Are communities involved and participating in IMAM/NACS implementation?	135g-i= 145a-c= 151a-c 135g Trend of communities supporting community case referral system for IMAM/NACS to health facility in the past year (e.g. transportation means, individual advice on service use, or other).	How does your community support the case referral system for IMAM and/or NACS?	
		135h Trend of communities involving in case screening and referral (e.g., volunteers do house-to house screening, or other).	How is your community involved in case screening and referral?	
		135j=152a Percent of communities that have VHT/Health Unit Management Committees reaching out to the community for being involved in IMAM/NACS detection, referral, follow up of cases.	Does your community have VHT/Health Unit Management Committees that asked for community involvement in IMAM and/or NACS detection, referral, follow-up of cases?	

<b>Priority Health System Function (Community):</b>				
<b>Participation by community representatives in setting objectives and making resource allocation decisions for IMAM/NACS services</b>				
<b>Determinant</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>
<b>Communities understanding causes, prevention and treatment for acute malnutrition</b>	Are VHT aware of IMAM/NACS and know about acute malnutrition?	141a =174a Percent of selected communities with trained VHTs on IMAM/NACS.	Does your community have trained VHTs on IMAM and/or NACS?	
<b>Communities aware of IMAM/NACS services</b>	Are communities aware of IMAM/NACS services for acute malnutrition?	142b= 174c Percent of selected communities that discussed health issues including IMAM/NACS in the previous quarter.	Did your community discuss health issues including IMAM and/or NACS in the previous 3 months?	

<b>Priority Health System Function (Service Delivery):</b>				
<b>Continuously making improvements to IMAM/NACS service quality service and client satisfaction</b>				
<b>Determinant</b>	<b>Performance question</b>	<b>Indicator</b>	<b>Questionnaire</b>	<b>Additional qualitative follow-up</b>
<b>Existence of a platform for regular client feedback on IMAM/NACS, which links client feedback to the services that they used</b>	Is there a platform for regular client feedback in place?	Percent of communities have mechanisms through which clients can freely express their view on services provided.	Does your community have a mechanism through which clients can freely express their view on services provided?	Please describe the mechanism
		Percent of selected districts/health facilities with feedback mechanisms in place for users to express satisfaction.	Does your DHO/health facility have a feedback mechanism in place for users to express their satisfaction on service delivery?	What is the mechanism? How is it monitored?
<b>Established quality improvement (QI) mandates for HF on IMAM/NACS</b>	Have QI approaches been applied/proposed for HF providing IMAM/NACS services?	Existence of national mandate to do QI approach for IMAM/NACS for national and regional health facilities.	Is there a national mandate to use the Quality Improvement approach?	If yet, at what facility levels (national, district, etc.)? Are IMAM and/or NACS included?
<b>A system for providing health workers with the training and tools needed for QI for IMAM/NACS</b>	Are the support systems in place for strengthening capacities of health workers in QI for IMAM/NACS	Existence of national trainers to train on QI approach.	Are there national trainers to train on QI approach for IMAM and/or NACS?	
		Percent of selected health facilities with training sessions for QI process application on IMAM/NACS organized.	Has there been quality improvement training in this health facility?	If yes, did it include IMAM and/or NACS staff and activities?
<b>Monitoring and assuring service quality on IMAM/NACS</b>	Is performance of IMAM/NACS being monitored?	Percent of selected health facilities with IMAM/NACS QI teams in place.	Does your health facility have a QI team that includes IMAM and/or NACS?	If yes, what are their activities? How often do they meet? Does the team have established improvement aims for IMAM and/or NACS? Does the team review monthly reporting forms? Are clients part of the QI team?

Priority Health System Function (Service Delivery):				
Facilitating the use of social behaviour change communication (BCC) approaches (BCC strategy, and BCC materials)				
Determinant	Performance question	Indicator	Questionnaire	Additional qualitative follow-up
<b>BCC approaches on IMAM/NACS exists</b>	Are BCC materials on IMAM/NACS being developed?	Existence of national BCC strategy for IMAM/NACS.	Is there a national BCC strategy that includes IMAM and/or NACS?	Was a BCC specialist involved in the development?
		Existence of IP specific BCC strategy for IMAM/NACS.	Does your agency have a BCC strategy that includes IMAM and/or NACS?	Was a BCC specialist involved in the development?
		Existence of national BCC materials for IMAM/NACS.	Does your agency have BCC materials that include IMAM and/or NACS?	Was a BCC specialist involved in the development? Have they been translated? Have they been tested?
		Existence of IP specific BCC materials for IMAM/NACS.	Are there national BCC materials that include IMAM and/or NACS?	Was a BCC specialist involved in the development? Have they been translated? Have they been tested?
	Is the MOH effectively disseminating the IMAM/NACS BCC approaches	BCC materials for IMAM/NACS disseminated to the district.	Has your district received the BCC materials for IMAM and/or NACS?	
<b>BCC approaches for IMAM/NACS are used</b>	Are BCC materials for IMAM/NACS being used?	Percent of selected health facilities with BCC materials on IMAM/NACS information (as defined in the strategy, e.g. posters, video).	Does your health facility have BCC materials on IMAM and/or NACS	If yes, what materials do you have?
		Percent of selected health facilities where service providers have affirmed using BCC messages in IMAM/NACS counselling sessions (as defined in the national guidelines and as per the strategy).	Do health workers in your health facility use BCC messages in IMAM and/or NACS counselling sessions (as defined in the national guidelines and as per the strategy)?	
		Percent of selected districts that have IMAM/NACS messages aired on radio by at least one local media outlet.	Does your district broadcast IMAM and/or NACS messages on radio by at least one local media outlet?	

## Annex 4. National-Level Entity Sampling

<b>National-Level Government Structures</b>
Ministry of Health <ul style="list-style-type: none"> <li>• Child Health Department</li> <li>• Nutrition Unit</li> <li>• AIDS Control Programme</li> <li>• Health Promotion and Education Department</li> <li>• Reproductive Health Department</li> <li>• Clinical Services</li> <li>• Resource Centre</li> </ul>
National Medical Stores
Ministry of Agriculture, Animal Industry and Fisheries
Ministry of Education and Sports
Ministry of Gender, Labour and Social Development
National Planning Authority
National Drug Authority
National Bureau of Standards
<b>National-Level Implementing Partners</b>
AVSI/SCORE
Baylor
Concern
FANTA
Mildmay Uganda
MSH STRIDES
MUJHU
Reco Industries
RCQHC
SPRING
SURE
SUSTAIN
UHMG
UNICEF
UPA
VEDCO
WFP
WHO
World Vision/Uganda
<b>Academic Institutions</b>
International Health Sciences University
Kyambogo University
Makerere University Food Technology, Nutrition and Bio-engineering
Mulago Nursing School
<b>Professional Bodies</b>
Uganda Action for Nutrition
Uganda Dietetic Association