FOOD AND NUTRITION TECHNICAL ASSISTANCE

MALAWI

REVIEW OF INTEGRATION OF COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION SERVICES

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ACRONYMS

AED	Academy for Educational Development
ART	Antiretroviral Therapy
BCC	Behavior Change Communication
CAS	CTC Advisory Service
CHAM	Christian Health Association of Malawi
CMAM	Community-based Management of Acute Malnutrition
CTC	Community-based Therapeutic Care
DHO	District Health Office
DHS	Demographic and Health Survey
DIP	District Implementation Plan
EPI	Expanded Program on Immunization
FANTA	Food and Nutrition Technical Assistance Project
GOM	Government of Malawi
HSA	Health Surveillance Assistants
IMCI	Integrated Management of Childhood Illness
MCH	Maternal and Child Health
MOH	Ministry of Health
MVAC	Malawi Vulnerability Assessment Committee
NGO	Non-Governmental Organization
NRU	Nutrition Rehabilitation Unit
OPC	Office of the President and Cabinet
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SFP	Supplementary Feeding Program
SWAP	Sector Wide Approach Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

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I. INTRODUCTION

Severe acute malnutrition (SAM) remains a major killer of children under five years of age in developing countries, including in countries not recently affected by an emergency. Levels of global acute malnutrition in some countries not categorized as being in an emergency are as high as 15 percent during lean seasons (e.g., Burkina Faso, Niger, and Malawi).

Community-based management of acute malnutrition (CMAM) could prevent the deaths of many children in emergency and development settings. The community-based approach for the management of acute malnutrition involves timely detection and referral of cases with SAM in the community, outpatient treatment of those without medical complications, and inpatient treatment of those without appetite or with medical complications. It is intended to provide services that are closer to and less disruptive for communities and families, by making services available at decentralized treatment points and through community outreach and mobilization. Moreover, it can promote participation and behavior change for long-term solutions to inappropriate care and feeding practices, food insecurity, and other threats to public health.

While the evidence base for the nutritional impact of CMAM - also referred to as Community-based Therapeutic Care (CTC) - has been well established in programs run by relief agencies during emergencies, there is a need for greater documentation of the experience in integrating these services into national health systems in the post-emergency period. Moreover, developing countries coping with high levels of acute malnutrition are in need of information on good practices for introducing CMAM services into the basic package of health services. For this purpose, the FANTA project organized visits to three countries to:

- Assess integration of severe acute malnutrition services into health services,
- Document lessons learned, and
- Provide recommendations for improved integration.

This report presents the main observations from the Malawi country visit, and is accompanied by similar reports from visits to Ethiopia and Niger. A CMAM Review Synthesis Report will present a broader review of integrating CMAM services into existing health services and community structures, assessing programmatic and policy approaches associated with successful harmonization and integration of CMAM at the national and local levels, and discussing issues to be taken into account to successfully integrate CMAM services in other countries.

The visit to Malawi was conducted from May 20 to June 2, 2007. This report first provides an overview of the environment in which CMAM services are delivered in Malawi. Next, the current situation of CMAM services is described and the capacity of the Malawian health system is discussed. This discussion is organized around five elements: the enabling environment, access to services, access to supplies, quality of services, and competencies. The next section covers challenges for integration and summarizes the specific lessons learned from reviewing CMAM programs in Malawi. The report ends by highlighting the

conclusions and provides some Malawi-specific recommendations for improved integration of CMAM.

This report, like the trip to Malawi, does not intend to be exhaustive but rather highlights issues that are relevant for CMAM integration in Malawi. It intends to inform the analysis and discussion on CMAM integration in the Synthesis Report and to provide feedback to the numerous partners that shared their experiences and programs, providing the FANTA team with a better understanding of CMAM services on the ground and addressing acute malnutrition in Malawi. To all of them, we express our sincere appreciation and thanks.

II. METHOD

Information was collected through document review; field visits with direct observation of CMAM services; semi-structured interviews with key informants at national, regional, district and community levels; and discussions with health workers, community health workers, community volunteers, beneficiaries and non-beneficiaries.

The FANTA team met with representatives of all relevant stakeholders, including the Government of Malawi (GOM), nongovernmental organizations (NGOs), the UN, community-based organizations, community members, and CMAM beneficiaries and non-beneficiaries.

A framework that was used in the review process is in Annex 1. The itinerary of the country visit and a contacts list are provided in Annexes 2 and 3, respectively. Annex 4 provides a list of documents consulted. Annex 5 provides a map of the country, indicating the CMAM sites visited by the FANTA review team. Annex 6 provides information on the local production of RUTF. Whenever possible, information from interviews, observations and documents was triangulated.

III. THE MALAWI CONTEXT

1. Health and nutrition profile

Malawi, a country of 11.2 million people, of which 2.0 million are children under five years of age, is a land-locked country in southern Africa. Eighty-four percent of its inhabitants live in rural areas, and 65 percent are classified as living below the poverty line. In the 2006 Human Development Index, Malawi ranks 166 out of 177 countries.

Levels of child mortality and malnutrition are high, even in normal (i.e., non-emergency, years). The 2004 Demographic and Health Survey (DHS) shows rates of wasting to be highest in the districts of Thyolo, Zomba, and Blantyre. Table 1 presents a summary of key health and nutrition indicators.

Table 1: Malawi: key demographic and health indicators

Total population	11.2 million
Under five population	2.0 million (17.9%)
Life expectancy at birth (M/F)	43 / 46 years
Infant mortality	76/1000
Under-five mortality	133/1000
Maternal mortality	984/100,000 births
Total fertility rate	6.0 children born per woman
Adult HIV prevalence (15 – 49 yrs)	11.8% (DHS) or 14.2% (WHO 2006)
Access to safe drinking water	64%
Access to sanitation	84% (81.7 % in rural areas)
Children exclusively breastfed (< 6 mo)	53%
Children vaccinated (DPT3) (12-24 mo)	82%
Vitamin A supplementation coverage	65%
Malnutrition rates:	
Stunting (<-2 height for age z score)	47.8%
Underweight (<-2 weight for age z score)	22.0%
Moderate and severe wasting (<-2 weight for height z score)	5.2%
Severe wasting (<-3 weight for height z score)	1.6%

Source: DHS 2004

2. Recent history of emergencies and nutrition and food security institutions

Malawi is prone to droughts and its rain-fed, mono-culture agriculture, a sector highly vulnerable to adverse weather conditions, is the mainstay of the economy. Hence food insecurity is a major feature in the country's profile, which includes chronic and recurrent food emergencies. The other major vulnerabilities are a high prevalence of HIV, high endemic malaria, and widespread poverty. Cholera outbreaks are yearly events during the flood periods, which coincide with the lean season (November to March).

The country was heavily affected by drought in 2002 and again in 2005. Crisis-level food insecurity and associated malnutrition, especially among children under five years of age, was widespread. In 2005, the Malawi Vulnerability Assessment Committee (MVAC)[1] predicted a shortfall in both availability and accessibility of food, and estimated that nearly four million people were unable to meet their food needs. Nutrition surveys were conducted in all districts nationwide, coordinated by the Ministry of Health (MOH) and UNICEF. The results showed prevalence rates of global acute malnutrition ranging between 12.6 and 13.1 percent. The nutrition emergency stimulated a national level scaling-up of services for CMAM[2], supported by the MOH. Nearly 300 acute malnutrition treatment sites, providing

[1] The MVAC is a committee tasked with strengthening vulnerability assessments and is comprised of representatives from governmental, inter-governmental, non-governmental, and academic institutions. It resides in the Ministry of Economic Planning and Development and releases regular reports predicting the impact of hazards on people's entitlements and household food security.

[2] In Malawi the term Community-based Therapeutic Care (CTC) is used.

inpatient and outpatient care and community outreach, were set up with support from UNICEF, WFP, and numerous NGOs, and strong leadership from the MOH Nutrition Unit.

3. Health services system

The Malawi health system is decentralized into five health regions with administrative functions, and 27 district health offices (DHOs) with operational functions. Each district has a district hospital and a network of health centers and health posts[3]. Districts are divided into health zones, each of which is managed by three to five health DHO staff. Health centers are staffed with clinical assistants[4], a nurse, a midwife, and Health Surveillance Assistants (HSA), while health posts are run by HSAs, providing community-based vaccination, maternal and child health, reproductive health, and other preventative health services. The Christian Health Association in Malawi (CHAM) runs 42 percent of the health facilities in the country (e.g., 20 hospitals and more than 100 health centers), in collaboration with the MOH and in line with MOH policies. CHAM services are not free, except for children under five years of age, pregnant and lactating women, and patients being treated for tuberculosis or HIV. CHAM staff is hired and paid by the MOH. There is no social security system in place for health care.

A human resource crisis in Malawi has lead to a reduced capacity to deliver health services, especially in the rural areas, where primary health care is severely compromised. Migration out of the country of well-trained Malawi health workers is high. Forty percent of MOH positions are vacant, with only one physician and 26 nurses per 100,000 people. Only five of the 27 DHOs currently have a Nutrition Officer on staff. The situation is exacerbated by high staff mortality from AIDS. Moreover, World Health Organization (WHO) surveys (2002-2004) show that almost half of all facilities have drug shortages and inadequate means of communication and transportation. Despite the weaknesses of the health system, access and use of certain health services is relatively good in Malawi, as evidenced by 82 percent coverage with diphtheria, pertussis and tetanus (DPT dose 3) vaccine.

The DHO develops annual District Implementation Plans (DIP) with a budget, following national MOH policies and recommendations. The DHO has access to two main sources of funding: 1) Sector Wide Approach Program funding (SWAP), where the health budget is allocated to the districts based on population (e.g., US$14 per capita); and 2) district-level funds from local partners. Salaries of health staff are not included in the DIP, but are paid directly from the national level. The health system relies heavily on international funding, which is mainly received through the SWAP. Health sector reform is currently in process, with the SWAP becoming the main funding source for the Essential Health Package, which includes services for acute malnutrition.

A “health passport” is provided, for a fee, to all infants at the first visit to a health facility. This document contains all the basic information of the child’s health history, and is used in health centers to note vaccinations, growth monitoring, and preventive or curative visits.

[3] In a recent reform, dispensaries have been upgraded to health centers or downgraded to health posts.
[4] A clinical assistant is a grade under a physician and above a nurse, consisting of four years of training in clinical management and primary surgery.

There is a plan to assign a unique number with a barcode to each health passport, which can be used for registration in different health programs or hospital visits and admissions.

The major vertical programs active in Malawi include the expanded program of immunization (EPI); malaria; tuberculosis; and HIV, which includes home-based care, voluntary counseling and testing, antiretroviral therapy (ART), and provision of ready-to-use therapeutic food (RUTF) if the patient is severely malnourished and RUTF is available. Some of the vertical programs are said to perform remarkably well (e.g., EPI) thanks to long-term external support, while others are deficient (e.g., malaria control).

The GOM has promoted "Improving the nutritional status of the people of Malawi"[5] as one of the government's highest priorities. Because nutrition is a cross-cutting issue, the GOM established the Department of Nutrition, HIV and AIDS in the Office of the President and Cabinet (OPC). The mandate of the department is to provide stakeholders with policy direction, guidance, coordination, monitoring and evaluation in the implementation of nutrition programs. Further, the department advocates for improving human capital development as a prerequisite for wealth creation and economic growth, stipulated in the Malawi Economic Growth and Development Strategy. The department has developed major policy documents, strategic plans, and guidelines in 2007 (see Table 2 below). It is not clear how the roles and responsibilities of the Nutrition Unit at the MOH relate to the Department of Nutrition, HIV and AIDS at the OPC.

4. Nutrition policies and initiatives

The National Nutrition Policy (OPC, 2007) outlines priority nutrition strategies, including preventive and curative approaches. These are summarized in Table 2 below.

Table 2: Malawi National Nutrition Policy (2007) Key Components:

- Standardize, coordinate and improve the quality of nutrition service delivery within all sectors through the development of national guidelines and communication strategies for nutrition service delivery.
- Advocate for and facilitate the provision of adequate and comprehensive nutrition care and support for men, women, boys and girls.
- Promote the adoption of healthy lifestyles and appropriate dietary habits among men, women, boys and girls.
- Guide and lead resource mobilization, project implementation, structural development and capacity building in relevant areas.
- Advocate and lobby for the mainstreaming of nutrition issues into policies, plans and programs.
- Facilitate documentation, dissemination and sharing of current research findings, lessons learned and best practices.
- Facilitate research and development in the area of nutrition.
- Facilitate the development of partnerships with relevant stakeholders.
- Facilitate the development and implementation of nutrition legislation.

[5] National Nutrition Policy, Office of the President and Cabinet Nutrition, Department of Nutrition, HIV and AIDS, 2007.

The document further underlines that the OPC Nutrition and HIV/AIDS strategy will be incorporated into policies and plans; will guide programs aimed at achieving general human well-being, improving child health and survival rates, promoting public health; and will include humanitarian aid provisions. It identifies several existing policies that already contain elements of nutrition that must be scaled up and integrated into a national nutrition strategy, including:

- Food Security Policy (2006)
- Infant and Young Child Nutrition Policy (2005)
- Integrated Management of Childhood Illness (Draft, 2005)
- Essential Health Package (2002)
- National Plan of Action for Nutrition (2000)
- Ministry of Health Annual Plan and Program of Work

During the 2002 and 2005 emergencies, management of SAM was identified as a major priority for the MOH. Nationally, UN and NGOs supported Nutrition Rehabilitation Units (NRUs), providing inpatient care for SAM during the 2002 and 2005 crisis, either in combination with or without outpatient care and community outreach components. Following the evidence demonstrated in the CTC pilot programs implemented in 2002-03 in Malawi, NGOs opened more than 200 CMAM sites in 13 districts in 2005 and 2006, providing inpatient care of SAM with complications and outpatient care of SAM without complications. The CTC Advisory Service (CAS) was formed and funded to provide technical support to the MOH and NGOs for introducing and expanding CMAM services in the country. The CAS has provided CMAM capacity development support to the MOH by developing CMAM guidelines and supervision and monitoring tools, and conducting pre- and in-service trainings. The MOH encourages and envisages the expansion of CMAM sites to all districts.

Many NGOs, mostly in collaboration with WFP, ran supplementary feeding programs (SFPs) for treatment of moderate acute malnutrition. Many SFPs were closed once the food security situation improved by mid-2006. However, WFP continues to supply and support SFPs at NRU sites and plans to expand to all outpatient care sites in 2007 and 2008.

Other ongoing initiatives involve the use of RUTF for severely malnourished people living with HIV at ART clinics. Starting in 2005, the MOH and UNICEF procured 500 metric tons of RUTF with funding from the Global Fund to Fight AIDS, Tuberculosis, and Malaria. No RUTF was purchased by the MOH or UNICEF for the 2005 nutrition emergency.

USAID funds a large Title II consortium in Malawi, in coordination with NGOs and the GOM. Various livelihood programs, school health, and nutrition and community-based initiatives for orphans and vulnerable children are ongoing.

IV. ELEMENTS OF CMAM: CURRENT STATUS IN MALAWI

1. Enabling environment for CMAM

1.1 Leadership, roles, and responsibilities for CMAM

The Malawian MOH has demonstrated strong political will and commitment to develop CMAM services. Once evidence on program impact, effectiveness, and good practices was available and published internationally, the MOH provided leadership and guidance during the nutrition emergency of 2005-2006 and promoted CMAM within the NGO community and at the DHO level.

For many years, the MOH Nutrition Unit has been engaged and directed CMAM services countrywide from NGOs and UNICEF. The CAS plays an important technical support role for the scale-up of services among NGOs and the MOH. More recently, the CAS has evolved towards providing direct support to the DHOs, and is currently being integrated into the MOH Nutrition Unit to assist with rolling out CMAM services to new districts.

Most of the DHOs, and the District Health Officers in particular, are very engaged in CMAM services, devoting such a significant amount of time to it that they are in danger of neglecting other essential health and nutrition services. DHOs are increasingly encouraged by the MOH to give CMAM major attention - receiving guidance and support from NGOs to do so - and to include CMAM in workplans and budgets in 2007 and thereafter.

1.2 National health and nutrition policies reflecting CMAM

The Malawi Essential Health Package strategy and guidelines outline 11 essential health services, including growth monitoring and promotion and identification of children requiring nutrition rehabilitation and micronutrient supplementation. Other national nutrition policies, strategic plans, and programs are quite advanced and position CMAM as part of essential health and nutrition activities.

At the district level, national policies and strategies have not yet been translated into the DIPs, though guidance from the Nutrition Unit, with CAS and NGO assistance, is being provided. There is the risk that, through the high profile, strong emphasis and sizeable resources for CMAM, the DHOs may overemphasize the importance of CMAM in comparison to other essential services.

1.3 National CMAM guidelines

During the 2001 emergency, national SAM management guidelines based on the WHO protocol were developed and health staff was trained in them to run NRUs in the affected districts. In 2006, the guidelines were updated with a great deal of technical input from international organizations. These “CTC guidelines” cover community mobilization, inpatient treatment in NRUs, outpatient treatment at health center treatment sites, and supplementary feeding. At the time of the FANTA visit, the national guidelines had been endorsed and were being printed.

1.4 Stakeholder participation in CMAM

From the start, all stakeholders at the national level were involved through the numerous meetings and activities. The MOH, with support from leading NGOs and UNICEF, organized several national workshops for dissemination of CMAM pilot findings. CMAM sensitization has been organized with wide participation by the MOH, NGOs, and academic

and teaching institutions (College of Medicine). Orientation meetings were replicated at the district levels and have engendered interest in CMAM among district-based international and national NGOs, DHOs, health workers, and communities. The strong traditional community leadership that characterizes the Malawian culture means that traditional leaders are involved and meetings are convened to present and discuss new initiatives.

Academic and teaching institutions are not engaged in capacity development initiatives but participate in the CMAM discussions and meetings. With regard to the private-sector involvement, there are two local manufacturers of RUTF.

1.5 Coordination of CMAM activities

The Targeted Nutrition Program is an MOH-lead coordination body that includes all partners involved in acute malnutrition at the national level. Its monthly meetings are very effective at strengthening CMAM program coordination and management, and at standardizing services. There are numerous other nutrition task forces and coordination structures in place that risk promoting vertical approaches to health and nutrition programming. The great number of coordination meetings is helpful, but can also be disruptive. Many MOH staff and partners are unable to attend all meetings, which are conducted at the national level in Lilongwe or Blantyre. District-level coordination among the DHO and NGO is less formal but does take place and is usually built upon the collaboration of the NGO, the District Heath Officer, the DHO Maternal and Child Health (MCH) Coordinator, and the DHO Zonal Coordinator (if one exists).

1.6 Information, documentation, and research for CMAM

All UN, NGO and MOH partners involved in management of acute malnutrition in Malawi participate and have access to the CTC Learning Forum. The forum has its own publications and disseminates minutes of meetings or proceedings of national and international CMAM workshops. Moreover, results from pilot programs have been presented and published for the Malawian and international humanitarian and scientific communities.

1.7 Funding availability for CMAM services and supplies

MOH funding support of CMAM services is limited, relying heavily on NGOs and UNICEF. Until recently, NGOs purchased RUTF, while UNICEF provided most of the other CMAM supplies. For fiscal year 2007, a bilateral donor is covering the cost of all RUTF needs for the country. In line with this support, the MOH has instructed DHOs to incorporate CMAM activities into their DIPs for the next fiscal year, thereby committing the national budget to cover CMAM-related activities such as training and supervision. In addition, most NGO programs have limited funding, having started CMAM activities using emergency funds with budgets of less than one year. Two NGOs visited by the FANTA team were in the process of closing down programs and all CMAM support activities. Because funding ended, those NGOs were obliged to accelerate hand over of CMAM activities and responsibilities to the DHO. At the time of the FANTA visit, no donors had been identified for long-term support of the CAS or for continuing or scaling up CMAM services.

2. Access to CMAM services

2.1 Inpatient and outpatient care

CMAM services are currently provided in 13 districts at 200 sites, with national-level scale-up ongoing over the next three years. Most often, the DHO is much engaged in the CMAM services, regardless of the level of NGO support. However, districts do not necessarily provide CMAM services in all health facilities. The strategy employed for introducing CMAM in a district is characterized by an initial set-up of learning sites at a few health centers within a district, followed by a gradual expansion of CMAM services to more facilities until most of the district is covered. Plans to start CMAM programs in districts without previous NGO support are under way and are planned to be implemented directly by the MOH with support from the CAS.

Inpatient care is provided at 95 NRUs located at district and referral hospitals spread over the country. Staff from 62 NRUs has received training and support from UNICEF on the WHO protocol for the treatment of SAM. Training at the remaining NRUs is planned. Over the past four years, 48 NRUs received intensive support from one NGO in on-the-job training, supervision and logistics. In the districts without outpatient care programs, NRUs provide inpatient treatment for the complete recovery of the child.

Outpatient care is provided at 200 sites based at health centers and health posts with NGO support. Health centers recently upgraded from "dispensaries" do not always have nursing staff but HSA,[6] who cannot provide certain elements of the CMAM protocol (such as medical examination, referral and antibiotic treatment, all of which require nursing skills). Some NGO partners fill the gap by providing extra staff or organizing mobile teams that include nurses. Other health posts provide "reduced" outpatient care services (e.g., screening, admission, and weekly provision of RUTF) while having to refer all cases to health centers to receive the remaining services (e.g., medical examination and antibiotic treatment). The NGOs have assisted MOH health facilities to integrate SAM management into the routine health center service package, especially at Mother and Child Clinics.

Prior to 1999, Community Feeding Centers, staffed with Home Craft Workers, conducted nutrition rehabilitation by providing improved local foods, nutrition education, and monitoring of nutritional status. Ill children were admitted to hospital pediatric wards. The process of transitioning community feeding centers to inpatient NRUs was challenging and made more difficult by the lack of health staff. Thus, some pediatric wards continued to admit children with SAM for treatment, at the risk of admission to wards with untrained staff and without access to the therapeutic diet.

The health services policy in Malawi provides for free care to children under five years of age, including CMAM services.

Health and nutrition education is weak at CMAM sites, most often limited to information on food groups, without practical applications or broader household food security or essential nutrition behavior change communication (BCC) messages.

2.2 Community outreach

[6] Health Surveillance Agents receive a 10-week health and nutrition training.

The community outreach system for CMAM builds on existing community outreach as an essential part of the extension services of MCH programs that engage communities and involve volunteers (e.g., growth monitoring, EPI, etc.)

To date, community outreach for CMAM is variable, with a number of strategies employed. The DHOs use the District Health Officer or MCH Coordinators, and NGOs use outreach officers. Outreach tends to be strongest (high activity with high coverage) where NGOs have invested significant resources to support volunteer training and activities.

Village committees and district assemblies are involved in CMAM services, particularly in the supervision of centers and the organization of community outreach. Village committees and leaders generally identify volunteers and play a role in follow up of any related community activities. Village committees regularly recruit new volunteers, usually at the request of the HSA.

Volunteers receive training and support via supervision and often receive incentives (e.g., lunch allowances for participation in training and outpatient service days, t-shirts, and certificates) as well as other perceived benefits (respect from the community, improved access to health services for their family, and opportunity to access HSA trainings). In some districts, the HSAs support the community volunteers, but there is no institutionalized government support (e.g., no travel allowances or trainings). In general, sufficient incentives to keep volunteers active and engaged are provided through NGO support. However, the trend in the MOH is to promote the use of HSAs – with plans to train 8,000 - and to discourage the use of volunteers.

CMAM activities implemented by volunteers tend to be limited to screening and referral of cases of acute malnutrition as well as follow up of current cases. Health and nutrition education is generally not conducted during outreach activities, though education sessions may be held at outpatient care waiting areas prior to service provision.

At the community level, it is not common to refer SAM cases to the health services, as malnutrition has not been perceived to be a medical problem and adequate treatment services had not been available at health centers until recently. Traditional healers are consulted instead. A change in behavior has been noted after start up of the CMAM services and after adequate community sensitization. Distance remains an important barrier to accessing health services.

2.3 Health and nutrition staff for CMAM

The national health system has highly qualified staff, but suffers from chronic shortages and high turnover. This leaves many health facilities understaffed.

In principle, a clinical assistant or physician, based in the hospital pediatrics department, provides CMAM inpatient care treatment, along with a nurse. A Home Craft Worker is in charge of feeding the child and nutrition education. Staff organization varies by hospital: in some, specific assistants and nurses are allocated to the NRU, while in others there is a rotation of staff. Some inpatient care treatment sites are run with additional NGO staff, including national and international nurses and doctors. Outpatient services at health centers

are provided by the MOH nurses, or in the absence of MOH staff, by NGO staff. CMAM services at the health posts are conducted by HSAs. Although roles and responsibilities of health managers or health staff working in inpatient and outpatient care are not questioned, and CMAM is accepted as a job responsibility, CMAM is not a part of their job descriptions.

At the district level, nutrition activities are coordinated by DHO Nutrition Officers - currently staffed in only five DHOs - or by the MCH Coordinators. The MCH Coordinator is in charge of integrated management of childhood illness (IMCI) activities and community outreach and provides the strongest MOH coordination and supervision of nutrition programs. As such, presence of MCH Coordinators improves the likelihood that CMAM services become integrated into the basic health service delivery package, as the Coordinator is responsible for all health and nutrition services targeting mothers and children under five years of age.

2.4 Referral system and transportation of referred cases

The referral system between CMAM inpatient and outpatient care is generally well-established but only exists because of NGO support. As distances to district hospitals can be great and transportation is not always available, referred cases do not always make it to the facilities or, in many instances, the caretakers refuse referral to a hospital because of the opportunity cost of not being home to care for the remaining children and to work.

Transportation from health centers to inpatient care depends on the availability of district hospital ambulances or NGO vehicles, and is most commonly facilitated by the NGO. Distance is also a barrier for initial entry to CMAM services once a case has been screened at the community level and referred for treatment. Another important barrier is the rumor of high mortality rates at inpatient care treatment sites, discouraging the use of the NRUs.

2.5 Links with informal health systems

Traditional beliefs, traditional healers, and herbalists play an important role in the management of malnutrition in the communities. Where weak community mobilization and outreach is noted, children are referred to health centers at a more advanced stage of malnutrition or not at all. Mothers display appropriate health-seeking behavior for malaria and diarrhea, but not necessarily for malnutrition. Thus, links with informal health systems have great potential to improve access to CMAM in Malawi.

Unfortunately, connections between CMAM and the informal health system have been limited. In some districts, traditional healers have been sensitized, but their actual participation in CMAM activities usually remains weak. As with many other activities, the involvement of different stakeholders at the district level depends a lot on the personalities of the staff from the MOH or NGO that sets up or supports the program.

2.6 Links with health and nutrition programs

The integration of acute malnutrition into the IMCI guidelines was discussed in a June 2007 MOH/WHO meeting. A pilot project of integrating CMAM into Community-IMCI started in two districts.

Numerous NGOs provide support to growth monitoring services and several Positive Deviance/Hearth initiatives are ongoing. The FANTA team could not assess the capacity of these programs to link appropriately with CMAM services.

The OPC and the National AIDS Commission provide guidance and support for the management of severely malnourished ART clients, which includes the provision of RUTF. The national protocol in place for treatment of severely malnourished adults with HIV was not examined by the FANTA team.

2.7 Links with food security and livelihoods programs

There are many food security and livelihoods programs in Malawi implemented by numerous NGOs, in addition to Ministry of Agriculture programs. Most do not have links with CMAM services, though certain NGOs have development programs that address nutrition, livelihoods, food security, health, water and sanitation, and education in defined geographic areas. It is understood that the Department of Nutrition, HIV and AIDS of the OPC will play a role in strengthening the linkages between those livelihoods programs and CMAM services.

3. Access to CMAM supplies

3.1 Supply system

The national Central Medical Store is in charge of the purchase of drugs, medical equipment, and supplies, as well as the delivery to the districts. The system is weak with frequent stock outs at several levels. Currently the system is undergoing reform from reliance on a single central pharmacy to the competitive use of multiple suppliers.

CMAM supplies, such as F75, F100, and RUTF, are not on the essential drugs list, though negotiations between the MOH and UNICEF are under way. Consequently, the central medical store does not currently order or distribute CMAM supplies. A decision on whether to include RUTF on the essential drugs list is not simple. As an essential drug, RUTF could be ordered, purchased and delivered through the medical supply system. However, if RUTF is classified as a drug, then procurement would become strictly regulated and local production would not be possible unless the food manufacturer was qualified as a pharmaceutical manufacturer, with associated quality control testing and manufacturing regulations.

UNICEF provides CMAM supplies and equipment except for RUTF, which NGOs procure themselves. The Clinton Foundation is providing national RUTF needs for fiscal year 2007 (July 2007 to June 2008). Other supplies like therapeutic milks, drugs, and patient care forms are supplied by UNICEF or the NGO supporting the program. Pre-printed patient cards and registry books are provided by MOH, though the standard format is not yet used in all districts and is very NGO-dependent.

WFP provides commodities (a fortified corn-soy blend, oil, sugar) to the supplementary feeding centers, operated through the NRUs, and provides food for the caretakers of the inpatients at the NRUs.

3.2 Supply transportation and management

The CMAM supply system, including purchasing, transportation, storage, and stock management, is generally managed or supported by NGOs, as there is less capacity in the MOH. UNICEF transports CMAM drugs to the district level, while transport of RUTF is provided by the NGOs.

At the district level, transportation of supplies to the health facilities is organized by the NGOs, except in some districts where the DHO provides for its own transportation (e.g., Nsanje). Lack of storage capacity at the DHO level was cited by several district officers as a problem.

3.3 Local production of RUTF

Two companies, supported by Valid Nutrition and Nutriset, produce RUTF locally in Malawi and have the capacity to cover the country's needs in RUTF (see Annex 6). However, neither producer had been audited by UNICEF for accreditation as a UNICEF supplier at the time of the FANTA visit (the Nutriset franchise was subsequently audited and Valid Nutrition was undergoing auditing as of November 2007). Thus, the MOH, with UNICEF support, is currently importing RUTF from Europe with funds from a donor that requires purchase from a UNICEF-qualified producer. While the intent of this donor initiative was to boost the local production and to reduce the cost of the treatment, it seems that it could have the opposite effect. Moreover, not all necessary quality control tests can be performed on RUTF in Malawi, as some of the national laboratories lack the necessary equipment.

In the meantime, both local RUTF producers directly supply several districts and NGO programs. A limitation of the locally produced RUTF is a shelf life of only six months. Alternative formulations of RUTF, based on soy, sesame, and chickpea, are currently being piloted for the treatment of malnourished adults with HIV.

4. Quality of CMAM services

4.1 Adherence to CMAM treatment protocol

Guidelines for SAM management were developed in 2001 and updated by the MOH, with UNICEF and NGO support, as CTC guidelines in 2006.

In practice, several different treatment protocols are being implemented in Malawi. The 2001 inpatient care protocol is still applied at NRUs, while outpatient care is provided using either the 2006 protocol or NGO protocols, depending on which NGO is providing support. This has created confusion, as have the multiple versions of beneficiary cards, and registration and monitoring systems, despite efforts by the MOH, UNICEF and the CAS to standardize treatment and services.

Misclassification of patients was observed on several occasions by the FANTA team in both inpatient and outpatient services. In particular, edema was over-diagnosed, leading to incorrect admissions of children, overestimation of the number of SAM cases, and the unnecessary occupation of inpatient care beds. In other situations, cases with complications

were admitted to outpatient services, or cases without complications remained in inpatient facilities for full treatment despite the presence of outpatient services nearby.

4.2 Implementation of services: organization, supervision, coordination, and support
Both inpatient and outpatient facilities are well-managed in general, though the physical organization of services varies widely from one district to another. However, some uniform guidance is being provided through the CAS.

Variations observed included the organization of the flow of patients and definition of service days. Outpatient care is usually provided in health centers as a separate activity on specific days, with routine activities suspended on those days except for emergencies. Most of the health center staff assists in CMAM services with the help of volunteers. Very few health centers provide services on a daily basis.

In general, the current caseload of patients did not seem to disrupt the normal functioning of hospitals and health centers. This could change in the case of a significant seasonal increase in admissions or in the event of a new crisis.

Supervision of CMAM services is provided by the DHO Zonal or MCH Coordinators, sometimes with support from the NGO CMAM coordinator. A system of supervision is in place and adopted by the DHO staff at hospitals and health centers. However, this supervision usually concentrates on administrative issues and logistics, and does not play a role in quality control of the treatment (e.g., assessment of the quality of application of protocols, clinical skills, etc.). Clinical supervision is necessary, given the important amount of misclassification of patients detected during the FANTA team visit. The division of the district into supervision zones seems to have been an effective way to organize the workload of district staff. This system is not yet functional in all districts.

The supervision and support of community outreach activities varies by district, depending on the supporting NGO, as it is not yet an official part of the health care services system. In most districts, HSAs supervise the volunteers, often with direct support from the NGO community outreach officers.

No standardized supervision tools were seen during the visit apart from those developed by specific NGOs.

4.3 Monitoring of cases
Registration of SAM cases in registers at the health facility level is not standardized. Systems vary by centers and by districts. The system in place in some centers requires providing the same information in at least four different places: the patient's treatment card, the patient's health passport, the patient register, and the daily tally sheet. This system is complicated, time-consuming and prone to recording errors. The registration numbering system for new admissions is complex and does not allow tracing back information to the register or to identify the point of admission of the beneficiary. It is also not possible to trace the full treatment record of patients treated in both inpatient and outpatient settings. Some cards and registration books following old protocols are still in use. In one NRU, the beneficiary card

contained elements of a research data sheet that was introduced years earlier but never removed.

4.4 Monitoring of services

Data aggregation for inpatient and outpatient care is not currently possible, as NRUs and outpatient care sites have different reporting systems. As a consequence, it is impossible to get a complete picture of the performance of SAM case management at any level (individual, health facility, district, or national), including among NGO and MOH services.

In most districts visited, the reporting system was the one introduced by the NGO, including forms and indicators in use. Although these are usually quite similar, they are not completely compatible. In some centers, monthly reports are completed twice: once in the NGO format and once in the MOH format.

CMAM databases and performance indicators are available at the DHO level but do not appear to be utilized to improve performance. A national CMAM data management system is planned for the MOH Nutrition Unit.

The CAS has developed a framework for analysis of the institutional capacity of health facilities for long-term CMAM implementation.

4.5 Surveillance

Nutrition surveys are regularly organized by NGOs involved in nutrition or food security activities in their geographic area or by the MOH and UNICEF at the national level. There is the capacity in-country to implement nationwide surveys, and this has been organized on several occasions in the recent past by the MOH and UNICEF with NGO support. The information feeds into the MVAC. No other nutrition surveillance system for acute malnutrition is currently in place in Malawi. Household food security and agricultural surveillance does exist through the national MVAC and the Famine Early Warning System Network.

4.6 Evaluation of coverage of services

Some NGOs conducted coverage surveys in their geographic area during the emergency intervention. Coverage surveys have not been conducted by the MOH but are supported by international agencies. Currently, only one or two NGOs have the capacity to perform these surveys and it is not clear whether in-country capacity exists or has been developed.

5. Competencies for CMAM

5.1 Pre-service training

Doctors are trained in the only Malawian medical school, the College of Medicine of Blantyre, where the WHO SAM treatment protocols are part of the curriculum. Masters in Public Health students are receiving more detailed training in CMAM. The training of nurses does not currently cover the management of malnutrition.

5.2 In-service training

From the initial introduction of CMAM in Malawi, services have benefited from important international expertise, creating a thin base of national expertise. The MOH has been very enthusiastic to learn from the Malawian experience of the CMAM pilot programs. Hence, from the beginning, the pilots have served as learning sites and have promoted learning on good practices nationally as well as internationally.

Prior to introducing CMAM services, in-service theory-based training is provided by the CAS team or by the respective NGO. The CAS has developed a CMAM training manual. Both the training curriculum and the manual rely heavily on the emergency model of CMAM. Often health workers in new programs are sent on learning visits to the district's learning site. Despite the great learning opportunities in-country, the skills set of NGOs for providing CMAM in-service training (i.e., theory and practical training), and hence the CMAM services, is still inconsistent. However, one NGO with expertise in strengthening health systems developed in a short time period good capacity for CMAM in-service training and support. Training of volunteers is still in the hands of the respective NGO in the district.

Refresher training sessions have been organized by the NGOs. There has been discussion within the MOH of the MCH Coordinator taking over training sessions, if the DHO integrated the training support activities into the DIP. However, the DHO lacks resources and capacity for doing so and will continue to rely on the CAS or the NGO.

Support for training, such as for training materials, per diems, and transportation, is covered by the NGO or DHO, as increasingly more districts are including these expenses in their DIP budgets. Planning workshops on introducing CMAM activities in the DIP and budget have been conducted for DHOs and ongoing support is being provided by the respective NGO in the district.

5.3 Peer information exchange

Malawi has been a learning ground for many health workers from NGOs and MOH staff from neighboring countries. Visits to learning sites and exchange visits between NGOs and district health workers have been organized by stakeholders.

The CTC Learning Forum started in 2006 and facilitates access to new information, lessons learned, and experiences, and encourages peer exchange of knowledge and expertise. Publications on program performance and effectiveness are collated by UNICEF and disseminated at the CTC Learning Forum and other nutrition-related meetings. Unfortunately, these exceptionally good learning opportunities mainly benefit NGOs and not as much the district level MOH staff, due to difficulty in attending regular meetings in Lilongwe or Blantyre.

5.4 Research

Malawi has been a popular site for research in CMAM over the last few years. The NRU at the Queen Elizabeth Central Hospital, the Moyo House, has led research on inpatient management of SAM and kwashiorkor for decades. More recently, numerous research initiatives on SAM and RUTF have been conducted and are ongoing. The CAS was involved in research in the past but is no longer involved. Other current research programs and plans include the testing of alternative formulations of RUTF, a test for the prevention of

kwashiorkor, the piloting of CMAM integrated into IMCI, and the use of RUTF as an improved complementary food to prevent growth faltering.

Malawi is also home to many research projects on nutritional management of HIV/AIDS. There is research examining the use of RUTF as a replacement food as part of prevention of mother-to-child transmission programs and of its use as part of nutritional care and rehabilitation of chronically ill adults.

5.5 Attitudes

Personal motivation and positive attitudes among health staff make a noticeable difference in CMAM service quality. Motivation may be related to the perception of acute malnutrition as a priority and therefore the need for these services is appreciated. Previous negative experiences of NRUs with high mortality rates have, in part, shaped current opinions and attitudes towards CMAM. Malawi is a good example of how this perception can change through dissemination of information and sensitization of health workers and communities. The fast recovery of severely ill children and the overall excellent performance indicators have also been very strong tools for advocacy and motivation.

A change in population attitudes regarding preferences for formal health services, instead of traditional healers, for treating wasting and kwashiorkor has been key to increasing the number of people seeking CMAM services. It is not clear if standardized health and nutrition education and BCC messages have been developed to address this.

V. CHALLENGES FOR CMAM INTEGRATION IN MALAWI

1. Enabling environment for CMAM

The strengths of the enabling environment for CMAM in Malawi identified by the FANTA team are strong leadership, coordination, and information sharing. At the national level, within the MOH and OPC, there is strong political will and leadership in support of CMAM. The MOH has benefited from capacity building by NGO technical leads. Moreover, the CAS is an immense asset for the MOH and forms a crucial and continuous backbone for CMAM in Malawi through maintenance of good practices and capacity development. The CAS, together with the Targeted Nutrition Program partners, enhances and disseminates knowledge, skills and information on CMAM through program support, coordination, learning fora and workshops. Malawi has provided and continues to provide fertile grounds for learning about CMAM. While CMAM has not been incorporated into all national nutrition policies, in half of the country it has become a part of the routine health services delivery package and in the DIPs.

As CMAM programs were initiated by NGOs during the recent emergency, and still rely on NGO support, integration of NGO CMAM programs into the national health system is ongoing but slow. A variety of transition strategies are being employed by different NGOs, but it is clear that DHOs will continue to rely on NGO support for a number of years for certain activities, such as capacity building and logistical support. The short-term nature of NGO funding, which can precipitate rapid hand over of programs to the MOH when funding

is not renewed, threatens the continued support, and hence the quality and the sustainability, of the services. No donors have been identified for longer-term funding of CMAM, for sustaining the CAS, or for providing CMAM supplies. Despite MOH encouragement for integration of CMAM services into DIPs, the budget for such activities will be dependent on external resources for the foreseeable future. It is impossible to expect that the MOH, with a US$14 per capita health budget, will be able to sustain CMAM without serious donor commitment and funding.

Advocacy for CMAM in Malawi has been powerful and its success risks drawing attention and resources away from other essential health and nutrition strategies. For example, the FANTA team met with several enthusiastic District Health Officers who estimated that 80 percent of their work day was spent on CMAM-related activities. While CMAM has been included as one of the 11 essential services within national health and nutrition policies and strategic plans, its application is uneven at the district level. While CMAM services need increased resources to become a part of routine activities, they should be developed within the larger health and nutrition portfolio. Treatment of acute malnutrition should not come at the cost of diminished attention to other critical causes of child mortality, such as malaria, diarrhea, and respiratory infections.

A threat to the CMAM enabling efforts is a recurrent nutrition emergency. In that event, UN and NGO support would be required, as there is not enough capacity or resources within the MOH to handle any significant rise in the prevalence of SAM. Careful contingency planning could be an important exercise and could create momentum within the MOH to prepare for increased support of CMAM services. Nevertheless, the chronic lack of health workers is a major impediment to any solution. However, Malawi is in a good position, with the strong foundation of MOH support, to turn the next nutritional crisis into an opportunity to scale up and establish integrated CMAM services.

2. Access to CMAM services

Strengths for CMAM integration include a well-developed health system infrastructure with qualified health workers. CMAM services have expanded rapidly and already cover half of the country. Many health staff and community workers are engaged in CMAM services and have built confidence within their communities in SAM treatment at outpatient treatment sites. The understanding of communities that acute malnutrition can be addressed and that an effective treatment is available has facilitated a health-seeking behavior shift. Moreover, Malawian CMAM programs have provided a wealth of experience and understanding of good practices for community outreach, which is well documented. The CAS health facility capacity assessment tool is a good tool for preparing for integration and expansion of CMAM services.

Several weaknesses were observed. For instance, CMAM is still being implemented as it was under the emergency strategy, which hinders integration into the health system in the non-emergency context. Stakeholders seem to be aware of this and are looking into options and lessons for improved integration into health facilities and IMCI activities. Lessons from this

integration will be an opportunity to review and adapt the current CMAM strategy, training packages, and monitoring tools to the non-emergency context in Malawi.

Another weakness is the frequent turnover of policy makers at the MOH, which slows and threatens the expansion process. In addition, the chronic lack of health staff, particularly of nurses and physicians at the district levels, undermines the integration and sustainability of CMAM services. While the MOH has plans to scale up the number of HSAs, these health workers will not be able to carry out all components of the CMAM services, and therefore will still have to rely on nurses for certain responsibilities. The MOH may need to consider developing a simplified CMAM treatment protocol with shared roles and responsibilities for nurses and HSAs in outpatient treatment.

Regardless of the strength of community involvement, the sustainability of the current Malawi CMAM services is doubtful. Good practices in community outreach are threatened by insufficient resources available to DHOs in the absence of an NGO. The MOH plans to replace volunteers with HSAs, which in principle, is a more sustainable strategy, as HSAs are a part of the national health system whereas volunteers are not. However, motivated volunteers ensure early detection and referral of SAM cases and community involvement. Not involving them would, therefore, jeopardize the quality and sustainability of CMAM services.

Another concern is the lack of involvement of traditional healers and religious leaders who can play a very important and influential role in CMAM referral. The health-care-seeking behavior, with respect to acute malnutrition in particular, strongly relies on the informal health system. Moreover, traditional feeding and caring practices must be considered and addressed through appropriate BCC strategies and messages. CMAM NGO partners and others have recognized this but have not yet found a feasible strategy to integrate traditional healers and address traditional practices in the CMAM activities.

3. Access to CMAM supplies

To date, Malawi CMAM programs have had reasonable access to supplies through NGOs and UNICEF. As one donor has stepped forward to cover the cost of RUTF for the current fiscal year, the availability of RUTF has encouraged districts to expand CMAM services. Two local producers will soon gain UNICEF accreditation and will be able to meet national needs for RUTF.

As in other countries, the budgeting of expensive RUTF is the main challenge to the sustainability of CMAM activities in an integrated system. There is no strategy for long-term provision of RUTF. Finding effective, long-term solutions is likely to be quite difficult if districts are left to their own resources. Since this is likely true for all districts, the budgeting problem for RUTF becomes essentially a national rather than a district problem. The MOH will be challenged to deal with this.

4. Quality of CMAM services

Overall, the quality of CMAM services in Malawi is good. The MOH, the CAS, NGOs and UNICEF have played a major role in developing systems and procedures for quality programs and for promoting integration. It was observed that several of the newer CMAM programs that had been set up with minimal external technical support were of good quality and well integrated into the DHO health delivery system.

On the other hand, there are still a number of important CMAM managerial aspects that have not been taken on by the MOH, and that will need to be addressed to enhance integration and sustainability of CMAM services over time. Some of the weaknesses are described below.

The existence of numerous SAM treatment protocols and monitoring tools leads to confusion and inconsistent care. As CMAM services are further scaled up, NRUs will increasingly have access to outpatient services; therefore, the NRU treatment protocol should be updated and practices changed. NRU sites without outpatient care components should discontinue treating SAM without complications or treating stabilized SAM cases in inpatient care, as this burdens the inpatient services. Rather, outpatient care components should be set up in the outpatient department of the hospital, with access to RUTF. Inconsistent and incorrect applications of the national treatment protocol were frequently observed, including incorrect diagnosis of edema, admission to inpatient care of SAM cases without complications, and delayed discharge from inpatient care. This emphasizes the importance of continuous training and technical supervision.

Supervision is very much focused on administrative issues and not on program and staff performance. Integrated CMAM supervision tools are lacking. Districts that are divided into supervision zones seem to have better supervision systems with more evenly distributed workloads and a horizontal approach. Poorly managed patient flow was observed at numerous sites, leading to congestion and interfering with the quality of the services. This can easily be corrected with supervision and guidance. One can learn from the good examples at some outpatient treatment sites.

The excessive reliance on performance indicators to evaluate the quality of CMAM services risks missing important aspects of their operation. In fact, the current registration and reporting system is not harmonized and does not allow assessment of the quality and performance of CMAM services. Moreover, inpatient and outpatient care data are reported separately; consequently it is not possible to easily assess the quality of the program and mismanagement will go unnoticed. The system would as well benefit from a national CMAM data repository.

The presence of SFPs in food-secure areas is surprising. WFP plans to scale up coverage in 2007 and 2008 without discussing or investigating more appropriate strategies for the prevention of acute malnutrition in a food-secure environment. SFPs can unnecessarily increase the workload of health workers and DHO staff, have added opportunity costs for other health services, and can negatively impact health center service quality. This important issue seemingly has not been taken into consideration in Malawi.

5. Competencies for CMAM

A great strength in Malawi is that a large base of MOH and NGO staff has developed skills in CMAM through training and extensive work experience. This pool of qualified front-line health workers is beneficial for the Malawi health system. Learning opportunities are plentiful and MOH and NGOs have taken advantage of these. Stakeholders at the national level have benefited the most, as strong systems of coordination and information-sharing have been put into place.

The weakness of the system that will hinder integration is that CMAM delivery services have not always been planned, managed, supervised or implemented by MOH staff, with NGOs filling staff gaps. Moreover, the strong systems of information and good practices have not benefited all levels of partners equally in Malawi. Because of the limited engagement of district-based service providers, the quality of CMAM programs (e.g., knowledge, skills) has not been developed uniformly.

CMAM is not yet integrated into the training curricula for all health workers and will need to be developed in line with the updated CMAM guidelines. This is especially important given the significant staff turnover and overall staff shortages within the health care system. Training of volunteers is still NGO-dependent and will need to be handed over to the MCH Coordinator and HSAs. This can only become institutionalized if CMAM is incorporated into health worker job descriptions. While there is strong motivation to provide CMAM services, it is important that these tasks be included explicitly in job descriptions to be used as criteria in the health worker performance assessment.

VI. CONCLUSIONS

MOH engagement and DHO motivation have been significant keys for success of CMAM programs in Malawi. The MOH was engaged in CMAM from the start, informed by the evidence of the pilot programs. Moreover, the MOH had access to CMAM technical assistance through significant NGO support, which later was institutionalized by creating the CAS. During the 2005 emergency, the MOH skillfully took the lead role in guiding the gradual expansion of NGO-led CMAM programs and encouraged involvement of DHO managers and staff. As such, MOH and DHO staff have been facilitators, supervisors, and therefore key partners, in addition to students, of the CMAM programs. The early recognition of a need for a technical support unit seconded to the MOH has been beneficial for CMAM scale up and will be the important for sustainability.

Malawi CMAM programs serve as important national as well as international learning sites for CMAM good practices and integration of services. There are a variety of experiences and strategies employed by the NGOs in transitioning CMAM programs into the health service delivery system. One NGO in particular, with specific skills in strengthening the health services, has been very successful in integrating CMAM programs initiated during the emergency into the existing health system in the post-emergency phase.

The MOH is planning to scale up services through MOH and CAS support. The opportunity to compare and document the integration experiences of existing NGO-supported programs versus MOH-initiated services will be invaluable and will inform both the national and the international communities.

VII. RECOMMENDATIONS

Key recommendations for improved integration of CMAM service in Malawi are:

1. Review and document lessons learned on integration of CMAM services into the health system: for programs started during emergency and post-emergency periods; for programs initiated and conducted with minimal external support; and for the pilot on integration of CMAM into Community-IMCI.

2. Consider adapting the outpatient treatment protocol for SAM without complications to allow for shared roles and responsibilities by nurses and HSAs, and adapt the training for HSAs accordingly.

3. Review and document the impact of CMAM program activities on essential health and nutrition services.

4. Review the current CMAM strategy, training package, and monitoring tools and adapt them to the non-emergency context. Integrate them into the existing health strategy and training and information systems.

Annex 1: Framework for CMAM Services

Elements of CMAM Services

1. **Enabling environment for CMAM**

- 1.1 Leadership, roles, and responsibilities for CMAM
- 1.2 National health and nutrition policies reflecting CMAM
- 1.3 National CMAM guidelines
- 1.4 Stakeholder participation in CMAM
- 1.5 Coordination of CMAM activities
- 1.6 Information, documentation and research for CMAM
- 1.7 Funding availability for CMAM services and supplies

2. Access to CMAM services

- 2.1 Inpatient and outpatient care
- 2.2 Community outreach
- 2.3 Health and nutrition staff for CMAM
- 2.4 Referral system and transportation of referred cases
- 2.5 Links with informal health systems
- 2.6 Links with health and nutrition programs
- 2.7 Links with food security and livelihoods programs

3. Access to CMAM supplies

- 3.1 Supply system
- 3.2 Supply transportation and management
- 3.3 Local production of RUTF

4. Quality of CMAM services

- 4.1 Adherence to CMAM treatment protocol
- 4.2 Implementation of services: organization, supervision, coordination, and support
- 4.3 Monitoring of cases
- 4.4 Monitoring of services
- 4.5 Surveillance
- 4.6 Evaluation of coverage of services

5. Competencies for CMAM

- 5.1 Pre-service training
- 5.2 In-service training
- 5.3 Peer information exchange
- 5.4 Research
- 5.5 Attitudes

Annex 2: Itinerary (May 20 – June 2)

May 20th	Arrive Lilongwe
May 21st	Meeting with USAID, Mark Visocky Meeting with UNICEF, Stanley Chitekwe and Violette X Meeting with MOH Nutrition Unit, Tapiwa Nguluwe, Felix Phiri and Benton Kazembe Meeting with OPC, Catherine Mkangama
May 22nd	Meeting with Management Sciences for Health, Rudi Thetard, NjuruNganga, Margaret Khonje, Linley Luwayo Meeting with Concern Worldwide, Fiona Edwards, Shahnewaz Alam Khan, Gwyneth Hogley Cotes Meeting with USAID, Alisa Cameron, Mark Visocky Meeting with Save the Children USA, Jeanne Russell, Joseph Ulaya
May 23rd	Meeting with Valid International, Theresa Banda, Gertrude Nyirenda Meeting with Action Against Hunger, Amir Hassein Yarparvar Meeting with WFP, Hazel Mowbray Meeting with Targeted Nutrition Program team: MOH, Management Sciences for Health,, FHI, Concern Universal, UNICEF
May 24th	Visit Area 18 Health Center, Lilongwe Visit NRU Mazuzu Central Hospital Visit Pre-service Training CAS/CWW DHO staff, Lilongwe expansion
May 25th	Visit Chakhaza Health Center, Dowa Visit NRU CHAM Mondisi Hospital
May 26th	Travel to Mangochi
May 28th	Visit OTP and NRU, Malindi CHAM Hospital and NRU Mangochi District Hospital, Mangochi Meeting with DHO Mangochi Travel to Blantyre
May 29th	Visit OTP Chambe Health Center and NRU Musanje Meeting with DHO and MCH Coordinator Visit NRU, Thyolo, Doctors without Borders-Belgium
May 30th	Visit OTP and District hospital NRU, Nsanje Meeting with DHO and MCH Coordinator, Nsanje Meeting with College of Medicine, Blantyre, James Bunn and Marco Kerac
May 31st	Visit Moyo House, NRU at Queen Elisabeth hospital, Blantyre Travel to Lilongwe
June 1st	Debriefing USAID Meeting with CAS team, Concern
June 2nd	Depart Lilongwe

Annex 3: List of People Contacted

	Name	Affiliation
Action Against Hunger	AmirHassein Yarparvar	Nutrition Program Coordinator
CTC Advisory Services	Gwyneth Hogley Cotes	Health and Nutrition Advisor
CHAM	Home Craft Worker, Marieke Bos Health staff, HSA, HCW	NRU Mondisi Hospital, Dowa Medical Director, CHAM Malindi hospital CHAM Malindi hospital
College of Medicine, Blantyre	James Bunn Marko Kerac	Professor Pediatrics and Community Medicine Registrar
Concern Worldwide	Fiona Edwards Dr Shahnewaz Alam Khan Alice Konjio Fanny Ronald Chirwa Leiah Mabulie Victor Jonas	Country Director Assistant Country Director CTC Program Manager CTC Supervisor CTC Program Advisor, Dowa CTC Coordinator, Nsanje Community development supervisor
District Health Office	Rose Health staff, HSA and volunteers X Health staff, HSA and volunteers Dr Frank Finyiza Lucian Abraham Mr. Martin Magunga Evelyne Health staff Medson M. Semba Kenneth Ndau Health staff, HSA Health staff, HSA	MCH Coordinator, Lilongwe Area 18 HC, Lilongwe MCH Coordinator, Dowa Chakhaza HC, Dowa DHO Mangochi Zone Coordinator Mangochi DHO Mulanje MCH Coordinator Mulanje NRU District hospital, Tyolo DHO Nsanje MCH Coordinator, Nsanje Tengani Health Center, Nsanje NRU District hospital, Nsanje
Doctors without Borders Belgium	Grace Kaliwo	Nutrition Coordinator
Family Health International	Charlotte Walford	Senior Technical officer – Nutrition
Kamuzu Central Hospital	Sister Beatrice	Matron NRU
MOH Nutrition Unit	Tapiwa Nguluwe Felix Pensuko-Phiri Benton Kazembe	
Management Sciences for Health	Rudi Thetard Njuru Nganga Margaret Khonje Linley Luwayo Doreen Machinjili	Chief of Party Deputy Chief of Party District Coordinator Mulanje
Save the Children USA	Jeanne Russell	Deputy Director Programs

	Joseph Ulaya	CTC Coordinator
	Ken Shasanga	CTC community mobilizer
	Ida Munthali	CTC Supervisor
Office of President and Cabinet, Department of Nutrition, HIV and AIDS	Mary Shawa	Principal Secretary
	Catherine Mkangama	Deputy Director Nutrition
UNICEF	Stanley Chitekwe	Nutrition Focal Point
USAID	Alisa Cameron	Team Leader Health
	Mark Visocky	Team Leader- Economic Growth
Valid International	Theresa Banda	
	Gertude Nyirenda	CTC Program Manager
	Paluku Bahwere	
WFP	Hazel Mowbray	Program Assistant – Nutrition

Annex 4: List of Documents Consulted

MINISTRY OF HEALTH

1. Nutrition Strategic Plan, OPC, January 2007
2. National Nutrition Policy, OPC, January 2007
3. National Nutrition Program, OPC, January 2007
4. Guidelines for the management of severe acute malnutrition, MOH, 2003
5. Interim guidelines for the management of acute malnutrition through community-based therapeutic care, MOH, 2006
6. Handbook and guide for health providers on the essential health package in Malawi, Planning Department MOH, November 2004
7. HIV/AIDS and Nutrition guideline
8. MOH Terms of Reference for the CAS
9. DIP programs and subprograms

CTC ADVISORY SERVICE

1. Progress review CTC Advisory Services (Caroline Tanner)
2. Assessment of non-technological challenges in the institutionalization of CTC (Nick Hill and Celia Swann for Development Management Associates)
3. CTC training manual (draft)
4. CAS brochure
5. CTC review workshop
6. Standard list of activities in DIP (draft)
7. CTC Learning Forum – reports

OTHER

1. Bringing essential services closer to the poor, D. Gwatkin
2. Various NGO and UN program proposals and activity reports, Famine Early Warning System Network reports, nutritional surveys and other background information from the country.
3. Various publications on CTC and acute malnutrition published in the international scientific literature.

Annex 5: Map of Malawi

Areas visited by the FANTA team are circled.

Annex 6: Local Production of RUTF Information

Project Peanut Butter, Nutriset franchise

1	Location of plant	Blantyre
2	Start date of production	2005
3	Total production capacity	80 metric tons per month (24 hour/day production)
4	Current monthly production capacity	40 metric tons per month
5	Purchasers of RUTF	UNICEF, Clinton Foundation, NGOs, Project Peanut Butter
6	Recipe base	Peanut
7	Ingredients purchased locally	Sugar, peanuts, and oil
8	Ingredients imported	Vitamins and minerals complex and milk powder
9	Tax exemptions on imported ingredients?	Yes
10	Packaging type	Plastic bottles
11	Shelf life	6 months
12	UNICEF accreditation	Yes

Valid Nutrition

1	Location of plant	Lilongwe
2	Start date of production	2005
3	Total production capacity	60 metric tons per month
4	Current monthly production capacity	15 to 20 metric tons per month
5	Purchasers of RUTF	NGOs and Private Hospitals
6	Recipe base	1) Peanut: Peanut butter, milk powder, cooking oil, vitamin & mineral complex, icing sugar 2) Chickpea: Chickpea, sesame seed, milk powder, cooking oil, vitamin & mineral complex, icing sugar
7	Ingredients purchased locally	Peanut butter, cooking oil, chickpeas, sesame seeds, icing sugar
8	Ingredients imported	Milk powder, vitamin and mineral complex
9	Tax exemptions on imported ingredients?	No (Application under review)
10	Packaging type	1) 250 gram Pots 2) 100 gram Sachets
11	Shelf life	1) Pots = 6 months 2) Sachets = 12 months
12	UNICEF accreditation	1) Peanut-base: Under UNICEF prequalification process 2) Chickpea-base: UNICEF-audited