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FOOD AND NUTRITION
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**Review of Community-Based
Management of Acute Malnutrition
Implementation in Niger**

October 13–28, 2010

Hedwig Deconinck
Paluku Bahwere
Pierre Adou

January 2011



Food and Nutrition Technical Assistance II Project (FANTA)

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Acronyms

ACH/E	Acción contra el Hambre - España
BEFEN	Bien être de la femme et de l'enfant au Niger
CBO	community-based organization
CCA	Cellule de Crises Alimentaires (Food Crisis Task Force)
CHW	community health worker
CIC	Centre d'Information et de Communication (Information and Communication Center)
cm	centimeter(s)
CMAM	Community-Based Management of Acute Malnutrition
CMC	Comité mixte de concertation entre l'État et les donateurs (Mixed Committee for Consultation between the State and Donors)
CNSAP	Comité National du Système d'Alerte Précoce et de Gestion des Catastrophes (National Committee for Early Warning and Disaster Management)
COGES	Comité de gestion (Health Management Committee)
CRC	Comité restreint de concertation (Select Committee for Consultation)
CRENAM	centre de réhabilitation et de l'éducation nutritionnelle pour la malnutrition aiguë modérée (site for the management of MAM)
CRENAS	centre de récupération et d'éducation nutritionnelle pour la malnutrition aiguë sévère (site for the management of SAM in outpatient care)
CREN	<i>centre de rééducation nutritionnelle</i> (nutrition rehabilitation or feeding center)
CRENI	centre de récupération et d'éducation nutritionnelle intensive (site for the management of SAM in inpatient care)
CRF	Croix-Rouge française
CS	case de santé (Health Post)
CSA	Commissariat de sécurité alimentaire (Food Security Commission)
CSB	corn-soy blend
CSI	centre de santé intégré (health center)
DCHA/OFDA	USAID Bureau for Democracy, Conflict, and Humanitarian Assistance Office of U.S. Foreign Disaster Assistance
DN	Direction de Nutrition (Directorate of Nutrition)
DNPGCA	Dispositif National de Prévention et de Gestion des Crises Alimentaires (National Body for the Prevention and Management of Food Crises)
DH	district hospital
DRSP	Direction régionale de la santé publique (Regional Public Health Directorate)
ECD	Équipe Cadre du District (District Health Team)
ENA	Essential Nutrition Actions
EFP	Essential Family Practices
FANTA-2	Food and Nutrition Technical Assistance II Project
FORSANI	Forum Santé Niger
FEWS NET	Famine Early Warning Systems Network (USAID)
GAM	global acute malnutrition
GON	Government of Niger
HKI	Helen Keller International
HIV	human immunodeficiency virus
IMCI	Integrated Management of Childhood Illness
INS	Institut national de la statistique (National Institute of Statistics)
ISP	Institut de Santé Publique (Institute of Public Health)
IP	implementing partner
IYCF	infant and young child feeding
M-MAM	Management of Moderate Acute Malnutrition
M-SAM	Management of Severe Acute Malnutrition
M&E	monitoring and evaluation
MAM	moderate acute malnutrition
MDM	Médecins du Monde

MDO	maladie à déclaration obligatoire (notifiable disease)
MOH	Ministry of Health
MSF	Médecins Sans Frontières
MUAC	mid-upper arm circumference
NGO	nongovernmental organization
ONPPC	Office National des Produits Pharmaceutique et Chimique (National Office for Pharmaceutical and Chemical Products)
PCAC	promotion de la croissance à assise communautaire (community-based growth monitoring)
PDPDR	Principes directeurs pour une politique de développement rural pour le Niger (Orientation Principles for Rural Development in Niger)
PLW	pregnant and lactating women
PNAN	Plan national d'action pour la nutrition (2007–2015)
PSP	Programme Spécial du Président (President's Special Program)
QI	quality improvement
RUTF	ready-to-use therapeutic food
SAM	severe acute malnutrition
SBC	social and behavior change communication
SDRP	Stratégie de développement accéléré et de réduction de la pauvreté (Strategy for Accelerated Development and Poverty Reduction)
SNIS	Système national de l'information sanitaire (National Health Information System)
SNS	Stock National de Sécurité (National Food Stock)
SPIS	Service de programmation et d'information sanitaire (Regional Health Information System)
TA	technical assistance
U.N.	United Nations
URC	University Research Corporation
USAID	United States Agency for International Development
WFH	weight-for-height
WFP	World Food Programme
WHO	World Health Organization

1 Introduction

The United States Agency for International Development (USAID) Bureau for Democracy, Conflict, and Humanitarian Assistance Office of U.S. Foreign Disaster Assistance (DCHA/OFDA) requested Food and Nutrition Technical Assistance II Project/ FHI 360 (FANTA-2) assistance to review the state of Community-Based Management of Acute Malnutrition (CMAM) in four West African countries (Burkina Faso, Mali, Mauritania, and Niger) to help identify DCHA/OFDA 2010 and 2011 program priorities, including those where DCHA/OFDA investments should be directed to support CMAM. The goal was to review CMAM program implementation and its integration into national health systems to provide DCHA/OFDA with a status report for each country; draw lessons learned; and make recommendations on challenges to overcome, best practices, gaps, and priority areas for DCHA/OFDA support during 2010 and 2011. The review was intended to provide DCHA/OFDA with information for its program planning processes and potentially as an advocacy tool to guide other donors in planning CMAM support in the region. After all four countries have been reviewed FANTA-2 will develop a synthesis report. This summary report discusses the management of acute malnutrition only in Niger. The report describes the situation as observed during the time of the review (October 13–28, 2010). However, the review team recognizes that tremendous progress has been made in Niger since 2005, particularly in strengthening the nutrition coordination system; strengthening mechanisms for emergency nutrition response; integrating the management of severe acute malnutrition (SAM) into the national health system; standardizing protocols; strengthening capacities of health care providers; increasing geographical and financial accessibility; improving access to therapeutic supplies, including integrating therapeutic food into the list of essential drugs and supplies; strengthening the supply chain; and strengthening the monitoring and reporting system. The report should be read with those improvements in mind.

In December 2009, the Government of Niger (GON) raised concern when its *Enquête sur la sécurité alimentaire des ménages au Niger*¹ (Niger Household Food Security Survey) found that 7.8 million people—58.2 percent of the population—were at risk of food insecurity. As a consequence, in March 2010, the GON appealed to the international community for support. The present review also assesses the GON and partners' response to this crisis and draws lessons for future responses to similar crises and for strengthening current food security systems.

1.1 OBJECTIVES

The West African review had the following objectives:

- a) Review the overall status of CMAM implementation in Burkina Faso and Mali, and, if the political situation on the ground allows, Niger and Mauritania, and provide a status report of CMAM efforts in each country
- b) Review the performance and effectiveness of CMAM programs; if sufficient data are unavailable, develop recommendations for strengthening monitoring and reporting systems
- c) Analyze the relevance of DCHA/OFDA-funded activities and the extent that they are contributing to viable national health systems
- d) Identify challenges, opportunities, gaps, best practices, and lessons learned in CMAM implementation in each country
- e) Make recommendations to DCHA/OFDA on how to address challenges, pursue opportunities, and fill identified gaps; on best practices that should be incorporated into other programs; and on how to build on lessons learned in the region and globally
- f) In addition for Niger, review the strengthened support to CMAM in the response to the 2010 nutrition crisis

1.2 METHODS

CMAM is the approach that includes Management of Severe Acute Malnutrition (M-SAM) in outpatient care for children 6–59 months with SAM without medical complications, M-SAM in inpatient care for

¹ Institut national de la statistique (INS), Niger, 2010, *Enquête sur la sécurité alimentaire des ménages au Niger, Décembre 2009*.

children 6–59 months with SAM and medical complications and children under 6 months of age with acute malnutrition, Management of Moderate Acute Malnutrition (M-MAM) for children 6–59 months with moderate acute malnutrition (MAM), and community outreach for community mobilization and active community screening for early detection and referral of cases of acute malnutrition. An examination of existing nutrition policy and strategy papers, national protocols, and performance information from selected programs was conducted to understand the CMAM program context, structure, and performance.

A FANTA-2 team (Hedwig Deconinck, Senior CMAM and Emergency Nutrition Advisor; Paluku Bahwere, CMAM and HIV Advisor; and Pierre Adou, HIV and Nutrition Advisor) visited Niger from October 13 to October 28, 2010. During the visit, the team reviewed CMAM implementation at the national, regional, and district levels, with the aim of documenting how CMAM implementation was taking place in terms of access to services and supplies, quality of services, and health staff competencies, including a basic understanding of procedures to identify acute malnutrition and of implementation of the national protocol. The team also looked into how CMAM was being integrated into the health system at all levels, the extent of the enabling environment for such integration, and the strategy and implementation of the scale-up of nutrition programs during the April–October lean period.

The review team conducted site visits for observation and held meetings and interviews at the national, regional, and district levels with representatives from the *Ministère de la santé publique* (Ministry of Health) (MOH), UNICEF, the World Health Organization (WHO), the World Food Programme (WFP), USAID, international and national nongovernmental organizations (NGOs), and one teaching hospital.

Sites were selected based on convenience and were prioritized based on coverage of all priority regions and the greatest number of implementing partners providing technical assistance (TA) to the health system for CMAM. The review team visited CMAM sites in seven of the country's eight regions: Niamey, Dosso, Tilaberi, Tahoua, Diffa, Zinder, and Maradi. The team matched observation visits of health facilities to sites that did and did not receive specific NGO support.

The team conducted site observations, key informant interviews, and focus group discussions with health managers, health care providers, community outreach coordinators and workers, beneficiaries (mothers and caregivers), community and opinion leaders, and community members. Key questions on CMAM implementation and integration for the review of programs and services at the national, subnational, district, and community levels were prepared and adapted for different informants. Interview questions followed themes taken from the CMAM analytical framework, developed by FANTA (FANTA-2's predecessor program) during a 2007 three-country review of CMAM integration. The CMAM analytical framework includes five categories that are critical to successful CMAM implementation:

- The enabling environment for CMAM
- Competencies for CMAM
- Access to CMAM services
- Access to CMAM supplies
- Quality of CMAM services

To complement the information obtained from key informants and the field visits, the team conducted a desk review of policy documents and program data and documents. However, this exercise was handicapped by the fact that not all requested documents and data were obtained by the end of the review.

1.3 COUNTRY BACKGROUND

Niger is a landlocked Sahelian country that is ranked third from the last on the 2010 Human Development Index list of 169 countries,² with 69 percent of its population living below the poverty line.³ Like the rest of the Sahel, Niger has a long history of endemic hunger characterized by seasonal fluctuations and geographic variation. The agro-pastoralist regions in the south of the country—in Maradi, Zinder, and

² UNDP, 2009, <http://hdr.undp.org/en/statistics>.

³ <http://hdrstats.undp.org/en/countries/profiles/NER.html>.

Tahoua regions in particular—show consistently higher rates of malnutrition. With the country's arid climate and recurrent drought, agricultural production is challenging, leaving Niger in a permanent food deficit, with diets that lack diversity. Access to basic services, such as primary health care, sanitation, and clean water, is limited. Adult literacy rate is only 30 percent. Infant and young child feeding and care are inadequate. Only 4.4 percent, 9.9 percent, and 26.0 percent of infants under 6 months were exclusively breastfed in 2008, 2009, and 2010, respectively.⁴ The 2010 survey revealed a significant increase of exclusive breastfeeding compared to 2009. Access to and utilization of health services for children under 5 years of age have improved since 2006, when the GON declared free health care for pregnant women and children under 5. At 1 year of age, 80 percent of the infants have completed the recommended vaccinations schedule. However, regular outbreaks of vaccine-preventable diseases (e.g., measles, meningitis) are commonly reported, and the incidence of water-borne diseases (e.g., cholera, shigellosis, typhoid) is high. Acute respiratory infections and malaria are also important public health problems in the country.^{5, 6}

In November 2009, in response to rapidly increasing food insecurity and elevated global acute malnutrition (GAM) rates^{7, 8} throughout the Sahel, the United Nations (U.N.) launched a humanitarian appeal for the region, including Niger. In December 2009, the GON raised concern when the Household Food Security Survey report⁹ found that 7.8 million people—58.2 percent of the population—were at risk of food insecurity. As a consequence, in March 2010, the GON appealed to the international community for support. In April 2010, as part of the Sahel humanitarian appeal, the U.N. released the Niger Emergency Humanitarian Action Plan, under which the Nutrition Cluster plans to strengthen capacity to manage SAM, with a specific outcome of “strengthened capacity of health service providers to adequately manage cases of acute malnutrition, and to generate, compile and disseminate information related to the management of acute malnutrition among children and pregnant and lactating women (PLW).” M-MAM of PLW is not discussed in this review.

The 2010 level of severe food insecurity echoed the 2005 nutrition crisis, during which GAM rates soared far above WHO's emergency threshold of 15 percent in many parts of the country. The USAID Famine Early Warning Systems Network (FEWS NET) forecast that approximately 2.7 million people would be highly or extremely food insecure and an additional 5.1 million would be likely to become moderately food insecure through September 2010. Because of inadequate rainfalls and widespread crop failure, FEWS NET estimated that the 2009/10 per capita gross cereal production would probably be the lowest in two decades. More than half of the departments were expected to face production deficits greater than or similar to those in 2004, which was a contributing factor to the 2005 nutrition crisis.¹⁰ Moreover, since 2008, poor crop production had led to a steady increase in grain prices, making staples less accessible to the most vulnerable households. Pasturelands and watering areas were also suffering from dry conditions, which negatively affected the country's livestock. The 2009/10 food and fodder crop outcomes were more than 40 percent below average production levels. The vulnerability analysis in the Household Food Security Survey report of May 2010¹¹ found on average that more than 40 percent of households were severely and moderately food insecure in the different regions of Niger. Coping mechanisms were appraised as more drastic than during the 2005 crisis and showed signs of higher levels of vulnerability: herds vaccinated and moved earlier, entire families emigrating instead of only one family member, considerable population displacement to semi-urban areas, and increased beggars in Niger's streets.

⁴ <http://www.who.int/nutrition/databases/infantfeeding/countries/ner.pdf>.

⁵ http://www.unicef.org/infobycountry/niger_statistics.html.

⁶ Countdown to 2015, 2010 Report, “Maternal, Newborn & Child Survival,” <http://www.countdown2015mnch.org/documents/2010report/Profile-Niger.pdf>.

⁷ All prevalence rates of acute malnutrition of children under 5 in this report are expressed in weight-for-height (WFH) z-score and presence of bilateral edema by the WHO 2006 child growth standards.

⁸ INS, Niger, 2009, *Rapport de l'enquête nutrition et survie des enfants de 6 à 59 mois, mai-juin 2009*.

⁹ INS, Niger, 2010, *Rapport de l'enquête sur la vulnérabilité à l'insécurité alimentaire des ménages, Décembre 2009*.

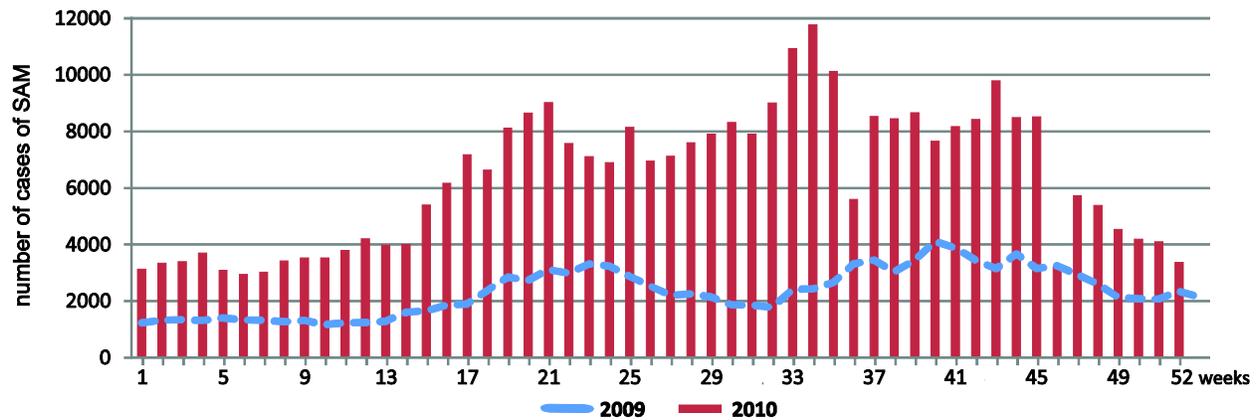
¹⁰ Famine Early Warning Systems Network, 2010, “Niger Enhanced Food Security Monitoring,” http://www.fews.net/docs/Publications/Niger_dekadal_2010_03_1.pdf.

¹¹ INS, Niger, 2010, *Enquête sur la sécurité alimentaire des ménages au Niger, mai 2010*.

The June 2010 *Rapport de l'enquête nutrition et survie des enfants de 6 à 59 mois*¹² (Nutrition and Child Survival Survey Report) results listed national GAM and SAM prevalence rates among children 6–59 months of age of 16.7 (15.6–17.9) percent and 3.2 (2.7–3.7) percent, respectively. The November 2010 nutrition survey results showed the nutrition situation improving slightly but not significantly, with national GAM and SAM prevalence rates among children 6–59 months of age of 15.5 (14.2–16.8) percent and 3.2 (2.7–3.8) percent, respectively.¹³ Both June and November 2010 results show a significant increase over the May 2009 national GAM and SAM prevalence rates of 12.3 (11.2–13.4) percent and 2.1 (1.7–2.5) percent, respectively. In June 2010 the Diffa, Maradi, Tahoua, and Zinder regions had GAM prevalence rates above WHO's 15 percent emergency threshold, at 22.1 percent, 19.7 percent, 15.8 percent, and 17.8 percent, respectively. In November 2010, the Maradi, Tahoua, and Zinder regions still had GAM prevalence rates above WHO's 15 percent emergency threshold, at 15.5 percent, 16.5 percent, and 17.9 percent, respectively.

The nutrition information system *Scaling Up* that is set up to monitor weekly trends in admissions for the management of SAM counted a total of 330,448 children with SAM admitted for treatment in 2010 by the end of October (Week 43). Figure 1 illustrates the weekly admission trend of children with SAM and shows the caseload more than doubling compared to the same period in 2009.

Figure 1: Weekly Admissions for Management of SAM (January–December 2010)



¹² INS, Niger, 2010, *Rapport de l'enquête nutrition et survie des enfants de 6 à 59 mois, mai-juin 2010*.

¹³ INS, Niger, 2010, *Rapport de l'enquête nutrition et survie des enfants de 6 à 59 mois, octobre-novembre 2010*.

2 Review Findings

2.1 ENABLING ENVIRONMENT FOR CMAM

2.1.1 Government and Ministry of Health Leadership

Food security and nutrition are politically sensitive subjects in Niger, and the environment for nutrition policies, strategies, and interventions has varied from favorable to challenging, depending on the political situation. However, the review of existing documents suggests that food security and nutrition have been among the priorities of the country since the 1970s, when it was recognized that the food insecurity and nutrition crisis had both structural and interrelated dimensions. Policy documents and strategies have been developed; some of the most important ones are the *Principes directeurs pour une politique de développement rural pour le Niger* (PDPDR) (Orientation Principles for Rural Development in Niger) (1992), *Stratégie opérationnelle pour la sécurité alimentaire* (Operational Strategy for Food Security) (2000), *Programme national global de sécurité alimentaire* (Comprehensive National Program for Food Security) (2000), *Stratégie nationale de sécurité alimentaire* (National Strategy for Food Security) (2001), *Stratégie de réduction de la pauvreté* (Strategy for the Reduction of Poverty) (2002), *Stratégie de développement rural* (Strategy for Rural Development) (2003), *Plan national d'action pour la nutrition 2007–2015* (PNAN) (National Action Plan for Nutrition) (2006), *Stratégie de développement accéléré et de réduction de la pauvreté* (SDRP) (Strategy for Accelerated Development and Poverty Reduction) (2007), and *Plan national de contingence, volet sécurité alimentaire et/ou nutritionnel* (National Contingency Plan, Section on Food Security and/or Nutrition Security) (2008). Most of these policy and strategic documents are not yet formally adopted or the action activated; thus, their implementation has not yet started.

Institutions to manage food security initiatives were created at the same time as these strategies and programs. In 1989, the GON launched the *Comité National du Système d'Alerte Précoce et de Gestion des Catastrophes* (CNSAP) (National Committee for Early Warning and Disaster Management). In 1990, a Permanent Secretary of the CNSAP was established. In 2002, the CNSAP became the *Dispositif National de Prévention et de Gestion des Crises Alimentaires* (DNP-GCA) (National Body for the Prevention and Management of Food Crises).¹⁴ The DNP-GCA is managed and supervised by the *Commission mixte de concertation entre l'État et les donateurs* (CMC) (Mixed Committee for Consultation between the State and Donors), which provides coordination of food security measures at the political level. Besides heading the CMC, the prime minister also heads the *Comité restreint de concertation* (CRC) (Select Committee for Consultation), which handles the technical aspects of food security. The CMC comprises two operational entities: the *Cellule de Crises Alimentaires* (CCA) (Food Crisis Task Force), which operates as the secretariat of the DNP-GCA, and the *Cellule de Coordination du Système d'Alerte Précoce* (Early Warning System Coordination Unit). In 2008, a third entity, the *Centre d'Information et de Communication* (CIC) (Information and Communication Center) was created and given the mandate to advise the CMC; to formulate and implement information, communication, and advocacy strategies; and to compile and disseminate information on food security and nutrition. The DNP-GCA includes the *Office des Produits Vivriers au Niger* (Office of Food Stocks in Niger), which manages the *Stock National de Sécurité* (SNS) (National Food Stock), which is used in times of severe food security crises. The SNS consists of 110,000 tons of food, of which 50,000 tons are sorghum and millet, and financial reserves sufficient to purchase an additional 60,000 tons. Although there is general recognition that these coordinating institutions are well established, they are not always active. Nonetheless, in response to the 2010 food security and nutrition crisis, the CRC and the CMC were actively involved in the comprehensive support plan implemented by the CCA. The review could not make a judgment about the efficiency of the institutional framework for food security. It was felt that the GON addressed food security more than nutrition, and hence the linkage of coordination systems between food security and nutrition did not materialize.

In 2007, the GON adopted a second version of the SDRP to better align with the Millennium Development Goals specified in the 2007 SDRP. This document included special regional poverty reduction strategies.

¹⁴ The DNP-GCA consists of 14 representatives of government, donors, and U.N. agencies. Its role is to facilitate consultation and coordination between the government and its principal partners and to organize and provide early response to food crises before any international response.

Hence, the SDRP serves as a reference policy document covering all development strategies, including food security and nutrition strategies. The 2008–2012 SDRP includes strategies to implement the components of CMAM (M-SAM, M-MAM, and community outreach) that set clear targets on the integration and accessibility of CMAM. The SDRP also includes the *Programme Spécial du Président* (PSP) (President's Special Program), whose objective is to increase access to basic services for people leaving in rural areas. The PSP allowed for a rapid increase in the number and coverage of *cases de santé* (CSs) (health posts). The PSP also includes a free health care for children under 5 and PLW scheme (piloted and operating since 2006) that encourages CMAM implementation and scale-up. Despite the difficulties the health system faces in the implementation of this scheme, children admitted to CMAM are receiving free care.

The *Direction de Nutrition* (DN) (Directorate of Nutrition) is one of the technical bodies participating in the implementation of the SDRP.

2.1.2 Coordination, Collaboration, and Technical Leadership Role for CMAM

Beginning after the 2005 nutrition crisis, the MOH's coordination role for CMAM was strengthened, and, in 2007, its role was further strengthened as a result of the *Service de la Nutrition* (Nutrition Service) being raised to the level of directorate (the DN).

In partnership with UNICEF, WHO, WFP, and health and nutrition implementing partners (IPs) and NGOs, the DN has developed and disseminated national guidelines for CMAM and has strengthened institutional capacity of nutrition, including CMAM, in the country. Since 2007, the DN has played an increasingly important role in ensuring the implementation of the MOH's recommendations to integrate CMAM into the national health system. The DN, in close collaboration with UNICEF, WHO, and WFP, is also leading the coordination, planning, and implementation of CMAM activities, including strengthening capacity and monitoring and evaluation (M&E). The members of the DN are part of the national CMAM training team, and together with UNICEF, the DN co-chairs the Nutrition Cluster.

The nutrition focal points at the regional and district levels are not directly linked administratively to the DN and are not part of the decision-making body at the *Direction régionale de la santé publique* (DRSP) (Regional Public Health Directorate) or the *Equipe Cadre du District* (ECD) (District Health Team). Thus, since regional and district nutrition activities fall under the Reproductive Health section, nutrition focal points have limited autonomy and capacity to influence planning (prioritization) and implementation of activities, and the DN's oversight is limited. This situation is understood, and regarded as a challenge by the key stakeholders. Different approaches to overcoming the challenge, including creating a national program for nutrition that will allow and establish operational teams at the national, regional, and district levels, are being considered. In the meantime, the absence of the DN's direct link to the regional and district nutrition focal points weakens the DN's capacity to fully implement its nutrition strategies and plans.

The role that the MOH and DRSP have played in coordinating CMAM has varied—from weak to strong—over time and from one region to another. Priority regions were strengthened by additional support from the MOH and UNICEF on supervisory visits, nutrition expertise, and logistics management. In all instances, this support was considered valuable and essential in addressing the 2010 nutrition crisis, which resulted in a tripling of the normal caseload. In all regions, the DRSPs invited IPs to participate in regular coordination meetings, which were mainly organized for coordination and planning and which were rarely used to share information and experience in CMAM implementation. Oddly enough, ECD members rarely attended these coordination meetings. A system to formally share information with ECDs or nutrition focal points was not in place. At the ECD level, coordination and leadership depended in large part on the expertise and/or motivation of the medical chief and his/her collaboration with the supporting NGO and the quantity and/or quality of its support.

Well before the start of the 2010 nutrition crisis, UNICEF had taken a lead role in the response to the nutrition situation, in collaboration with the MOH, WHO, WFP, and NGOs.

For M-SAM, UNICEF organized strengthened support to the network of *centre de récupération et d'éducation nutritionnelle intensive* (CRENI) (site for the management of SAM in inpatient care) and *centre de récupération et d'éducation nutritionnelle pour la malnutrition aiguë sévère* (CRENAS) (site for the management of SAM in outpatient care). As preparedness for the 2010 nutrition emergency, UNICEF as Nutrition Cluster lead and provider of last resort swiftly expanded its scope by:

- Strengthening its regular team in Niamey with an M&E officer and another nutrition officer
- Positioning nutritionists to support its activities in three regions: Maradi, Tahoua, and Zinder (Agadez is planned for, but a nutritionist has not yet been placed there)
- Positioning three logisticians in Maradi, Tahoua, and Zinder to support DRSPs and ECDs with supply management to help prevent the stock outages of therapeutic supplies
- Co-leading coordination of the Nutrition Cluster at national and regional levels and temporarily adding a communications officer and data manager.
- Putting in place the minimum package of NGO support to strengthen CMAM and improve the quality of services
- Strengthening the nutrition information system
- Contributing to expanding the capacity of treatment of MAM with introduction of ready-to-use supplementary food
- Supplying therapeutic food (ready-to-use therapeutic food [RUTF], F-75, F-100, essential drugs)
- Strengthening the surge capacity (additional human resources in Maradi, Zinder, and Tahoua)
- Strengthening capacities of inpatient care
- Improving logistics to ensure timely availability of therapeutic food at the *centre de santé intégré* (CSI) (health center) level, based on the need expressed by districts

WHO participated in the nutrition response by providing essential drugs for M-SAM, improving the quality of M-SAM in CRENI, and strengthening the *Système national de l'information sanitaire* (SNIS) (National Health Information System) and the *Service de programmation et d'information sanitaire* (SPIS) (Regional Health Information Service).

WFP and UNICEF, in collaboration with the *Commissariat de sécurité alimentaire* (CSA) (Food Security Commission), provided support for the blanket feeding implementation, including identification of beneficiaries, conducting a census, screening for acute malnutrition, training of health care providers, and mobilizing the community. WFP provided blanket feeding rations for children under 3 and family rations targeting vulnerable populations. WFP also provided supplies for M-MAM in the network of *centre de réhabilitation et de l'éducation nutritionnelle pour la malnutrition aiguë modérée* (CRENAM) (site for the management of MAM) with support from national and international NGOs. In a few areas, the WFP/CSA collaboration also supported selective M-MAM at CRENAM directly with the DRSP or ECD.

The Nutrition Cluster Coordination system, which includes more than 40 IPs, was activated in February 2010 and is co-led by the DN and UNICEF. The Nutrition Cluster meets regularly, and technical working groups on the mapping of nutrition interventions and support, new food products, and nutrition response implementation quality have been established.

In 2010, Niger had more than 20 international and national NGOs supporting M-SAM and more than 40 participating in the overall nutrition response. The strongest support is in the Diffa, Maradi, Tahoua, and Zinder regions. The principal NGO partners in M-SAM are Acción contra el Hambre - España (ACH/E), Bien être de la femme et de l'enfant au Niger (BEFEN), Croix-Rouge française (CRF), Forsani, Helen Keller International (HKI), HELP, Médecins du Monde (MDM) France, Médecins Sans Frontières (MSF) Belgium/Switzerland/Spain, Save the Children, and World Vision International. Some NGOs are supporting CMAM and some support only M-SAM or M-MAM or are involved in the blanket feeding and family ration distributions. Some NGOs are testing different strategies for a strengthened nutrition emergency response that includes different forms of cash and food transfers.

Many NGOs expanded the areas of their support early on in the response to the 2010 nutrition crisis, while others expanded their support much later. The areas of support provided by the NGOs vary, but, in general, they complement DRSP, ECD, and UNICEF support. A minimum support package to the network

of CRENI, CRENAS, and CRENAM has been developed that includes support for logistics management for M-SAM and M-MAM supplies (food, equipment, and medicines), transportation to and from CRENI, training, supervision, human resources, community outreach, management of cost reimbursement, and monitoring and reporting. While the areas of NGO support are very similar, resources and expertise differ greatly. Thus, there is significant difference in the scale of support among NGOs and even within the same NGO, depending on type and scale of program and/or the individual expert in charge. Even if integration of M-SAM (not yet for M-MAM; see later in the discussion of the findings) in the routine health service is effective, the level of success in the implementation of these strategies varies, because of the difference in technical and financial support.

UNICEF has successfully reached out to the MOH and NGOs to get their participation, and good attendance is secured during the meetings. However, few NGOs, or actually individuals from NGOs, have the capacity to effectively participate in the strategic and technical discussions regarding nutrition interventions. Moreover, despite long years of learning about M-SAM and M-MAM in Niger, the technical expertise in-country remains mostly restricted to treatment, while there has been little emphasis on strategic planning for sustainable capacity strengthening. While NGOs receive influential, vigorous technical support for CMAM from their headquarters, the know-how and learning is not always well translated or transferred in-country, which will have important consequences on the sustainability of competency in CMAM in Niger.

Despite the extensive national and regional coordination system on food security the nutrition coordination system has not yet been successful in linking with the relevant national multi-sectoral agencies and bodies. Moreover, and likely because of the focus on the 2010 nutrition emergency on life-saving activities, the national and regional nutrition cluster coordination system has not yet been successful, or has not yet had the opportunity to interact with the wider nutrition community, merging emergencies with development and its respective partners, including academic, training, and research institutions.

2.1.3 CMAM Integration into National Health and Nutrition Policies and Strategic Plans

As mentioned above, CMAM has been included in Niger's main policy and strategic documents, including in the SDRP 2008–2012 and the PNAN 2007–2015. CMAM is also integrated into the *paquet minimum d'activités de santé* (minimum health activity packet) of the MOH. However, also as mentioned above, the level of integration and the components that are integrated vary. All CMAM activities, including CRENI, CRENAS, CRENAM, and community outreach (community mobilization, and community screening and referral) fall under the MOH's mandate. In most sites visited by the review team, M-SAM was being effectively integrated into mainstream MOH operational plans at national (DN and national hospitals), regional (DRSP and regional hospitals), district (ECD, district hospitals [DHs], CSIs), and CS levels. In some regions, WFP/CSA has started implementing M-MAM in direct collaboration with the DRSP and/or the ECD, but it is much more common to have M-MAM as an NGO-led activity. Community outreach is not integrated into the MOH's national health system because it is mostly an NGO-led activity.

The integration of CMAM in the national health system is ultimately contributing to sustainability because many health care providers have been trained and are enabled in the provision of CMAM as part of a national scale up. The adoption of CMAM, where most children with SAM without medical complications are treated in decentralized health facilities as outpatients and the community, facilitated the national scale-up.

The following local initiatives highlight how local authorities and communities have the potential to contribute to the success and sustainability of CMAM integration.

- In some districts and CSIs, the community has instituted a local pay system to cover the transportation cost for referral for CMAM by adding a tax to the normal consultation fees (called "additional cents"). Hence, the community entirely funds and manages transportation for all children with SAM that need referral to the CRENI in the hospital, which is usually at some distance from the community.
- Some local authorities (mayors) are using the PSP to reinforce human resources at the CSI and CS levels to compensate for the fact that the MOH has stopped recruiting for new health care

providers. These funds are also being used to post nurses to CSs. The positioning of nurses at the CS level will allow further decentralization of M-SAM outpatient care; will reduce the SAM caseload at the CSI level; and will encourage earlier presentation and treatment, thereby reducing the number of fatalities and referrals to the CRENI.

- Financial barriers to access CMAM services are being reduced by improved adherence to the free health care for children under 5 scheme that is being promoted by the GON and by putting in place systems for covering transportation costs.

The process of integrating CMAM into the national health system has run into some major challenges, including the following.

- The political stand of some previous governments has had a negative impact on CMAM implementation. The GON has not officially endorsed all the nutrition policy and strategy documents and, as a result, recent progress in the nutrition sector risks being lost.
- Most health facilities are understaffed and unable to cope with their high SAM caseload. During the current nutrition crisis, U.N. agencies and NGOs relied on fixed-term nurses and nutrition assistants who were hired for 6–12 months to support the nutrition response to the emergency. (Despite the understaffing, most temporary hired staff integrated well into the system and contributed positively to the improved access and quality of care provided in the health facilities.)
- The high caseload and free care of children under 5 with SAM have increased the vulnerability of the national health system that is based on a weak cost recovery system. Development partners, including U.N. agencies and NGOs, currently compensate for this weak system by supplying free drugs as part of the response to the current food security and nutrition crisis. It is unlikely that the free care of children under 5 with SAM scheme will be sustainable when this support ends.
- Some NGOs established a unsustainable referral and counter-referral system for M-SAM by providing monetary incentives, setting unfortunate precedents that may be difficult to replace with the more sustainable approach in which communities use their own resources to cover transportation costs (as described above).
- The absence of a formal network of community health workers (CHWs) for active case-findings and referral puts CMAM integration at risk because it will increase the number of children with SAM who present late and require inpatient care, increasing the workload of already overstretched health facility staff. The absence of CHWs also limits the capacity to provide support for tracing absentees and defaulters and for the follow-up of problem cases (e.g., children with SAM who are not responding well to treatment), thus increasing defaulting rates.
- The difference in data collection for *Scaling Up*, a national nutrition surveillance system to monitor weekly CMAM admission trends and caseloads, and *maladies à déclaration obligatoire* (MDOs) (notifiable diseases), a system to monitor weekly acute malnutrition incidence, hampers quality (e.g., accuracy of reporting, understanding the difference in variables), coverage, and integration of the two systems.
- A serious element of concern in Niger is that children with SAM are getting RUTF as treatment, but, instead of eating it, it is being sold as a way to increase household income. As a result, children with SAM are unwittingly becoming breadwinners. If this phenomenon is not controlled, donor confidence, as well as CMAM performance, may be affected, leading to supply outages, treatment denial to malnourished children, and inflation of health statistics. The review team heard anecdotal stories illustrating these risks.

2.1.4 Advocacy for CMAM

Recurrent food security and nutrition crises in Niger underscored the need for increased resources for CMAM and hence contributed to increased interest and support for CMAM. With the high visibility of the 2010 crisis, the openness of the current government, and the strong support of IPs, the GON's chances to succeed in adopting the draft policies and strategic plans and officially launch them are high.

2.1.5 National Guidelines for CMAM

In 2000, the MOH, in collaboration with international experts, developed the first *Protocol national de prise en charge de la malnutrition (National Guidelines on the Management of Acute Malnutrition)*, hereafter referred to as the national guidelines), based on the WHO 1999 protocol. However, the management of acute malnutrition in health facilities in Niger was not standardized and therapeutic supplies were not systematically available until 2005. In 2005, stimulated by the nutrition crisis, the MOH, with the support from UNICEF, WFP, WHO, nutrition NGOs operating in the country, and international experts, developed new national guidelines that reflected new evidence and promoted improved practices. The 2005 national guidelines proposed two approaches for M-SAM: 1) inpatient care for the management of all SAM cases until full recovery and 2) the CMAM approach (in case of NGOs with access to RUTF and appropriate competencies available). The national guidelines became a reference document for implementation and training in Niger as well as in the neighboring West African Francophone region. The MOH guidance for inpatient care was more developed and hence more effectively promoted. Thus, until 2007, outpatient care was implemented only in NGO-supported programs that had expertise in CMAM; these programs were most commonly set up in parallel with the national health system.

The national guidelines were revised in August 2007 and again in June 2009 to, among other things, reflect a transition to the new WHO 2006 child growth standards (WHO standards) and the U.N. agencies' joint statement,¹⁵ to specify where, when, and how to treat different types of acute malnutrition. In addition, the revised national guidelines allowed the GON-enforced integration of CMAM into the national health system, requesting immediate country-wide rollout of CMAM in all hospitals and CSIs. Some of the revisions were done rather hastily and some essential points were not addressed, but these drawbacks have been identified through implementation; to address these drawbacks, a revision of the national guidelines is planned for 2011. Weaknesses in the current version of the national guidelines include:

- Mid-upper arm circumference (MUAC) is recognized but not well promoted as an independent indicator of acute malnutrition for admission. A letter from the DN dated August 2010 tried to correct this, but the guidance was incomplete and/or not well understood at the implementation level.
- All cases with mild and moderate edema are referred for inpatient care regardless if the child is clinically well and alert and/or passing the appetite test.
- Height cutoff of 65 cm is used as proxy for age for admission and use of MUAC, instead of using the age standard of 6 months. This excludes short infants over 6 months from easy access to treatment. Besides, the age cutoff of 6 months is an essential benchmark for the optimal care of infants for exclusive breastfeeding promotion and support, vitamin A administration, introduction of nutrient-dense complementary foods, and matured swallowing of semisolid foods (e.g., RUTF).
- Timely referral to outpatient care after stabilization is not encouraged, and will increase adverse outcomes of treatment (e.g., increasing risk of nosocomial infections, maintaining high caseload and thus high workload, risking loss in quality care in inpatient care).
- Discharge criteria for the end of treatment of SAM where there is a service providing M-MAM are incorrect and will certainly increase adverse outcomes of treatment (relapse or death).
- The importance of community mobilization and early and massive community screening for acute malnutrition is highlighted, but guidance on a strategy for strengthening the support to the community outreach system is insufficient.
- There is no section on monitoring and reporting.
- There are no standardized comprehensive job aids.

2.1.6 National Repository for CMAM

Since 2005, the MOH has acute malnutrition information integrated in its weekly national health surveillance system by incorporating acute malnutrition into the list of MDOs. Every week, each health facility submits an MDO report that includes information on the number of cases of MAM and SAM

¹⁵ WHO and UNICEF, 2009, —WHO child growth standards and the identification of severe acute malnutrition in infants and children: A Joint Statement by the World Health Organization and the United Nations Children's Fund," http://www.unicef.org/nutrition/files/stmt_child_growth_sam_final.pdf.

diagnosed and the number of fatalities (that is, the number of deaths from MAM and SAM). SNIS and SPIS, which is decentralized down to the ECD level, together manage the MDOs.

In addition to SNIS and SPIS, there are two other systems used specifically for reporting on SAM: *Scaling Up*, which was established in 2007, and a monthly CMAM monitoring and reporting system, which was established in 2005. *Scaling Up* provides weekly information on SAM caseloads, which makes it a great tool for evaluating trends in prevalence and incidence and for resource planning, especially during lean periods and/or nutrition crises, when the number of cases can fluctuate dramatically. The monthly CMAM statistical reports provide indications on quality of and performance on M-SAM and M-MAM. There is also a national monitoring and reporting system for M-MAM, but since geographical coverage and supervision support of M-MAM is very limited, the quality of reporting is biased and was not checked by the review team.

2.1.7 CMAM Technical Support

While there is a great deal of technical expertise in M-SAM and M-MAM in Niger, there is no specific CMAM technical expert system that consolidates or makes available this expertise to continuously strengthen institutional capacity, improve the quality of M-SAM and M-MAM, absorb and institutionalize country-specific learning, provide operational evidence, and/or guide strategy adaptations and decision making. There are technical teams of trainers at national, regional, and district levels, but none of the trainers has received specific training on facilitation of CMAM training and many do not even have expertise in organization, implementation, or case management of SAM, thus are weak in problem solving.

2.1.8 Accountability for Health Care Providers

At the time of the review, there was no formal system for assessing staff performance, including those of direct health care providers and their managers. However, the review team met with some very motivated doctors and nurses. When interviewed, these professionals stated that rapid and significant improvement in the health and nutrition condition of the majority of children treated was the main motivating factor.

2.1.9 Sustainability of Funding

The GON strategy to ensure funding for nutrition now and into the future was unclear. Despite the fact that the PNAN, the main strategic and advocacy document of the GON, budgeted US\$3.37 million for 9 years (2007–2015) for all CMAM-related activities (including community outreach and CHW and volunteer training), there is no evidence that the GON proactively made efforts to obtain funding or allocate funding for the PNAN. The significant underestimation of resources for CMAM-related activities will leave a major gap. Except from the salaries of MOH employees (DN staff and regional and district focal points), current CMAM funding is entirely dependent on external donors. The review team learned that, although next year's national budget includes an allocation for some funding of DN activities, it will only cover some essential nutrition supplies.

U.N. agencies and NGOs have been able to mobilize sufficient funding to respond to the current nutrition crisis and to scale up CMAM activities, including purchasing enough therapeutic food for treatment and supplementary food for blanket feeding, scaling up nutritional surveillance and monitoring systems, employing temporary health care providers to boost human resources capacities, scaling up capacity strengthening of newly hired health care providers on the use of the national guidelines, and setting up networks for community outreach (community mobilization and active case-finding and referral).

2.1.10 Free Treatment for Children with SAM

Health care for children under 5 and pregnant women is free in Niger. Otherwise, the Bamako Initiative cost recovery system is in effect, and family members have to participate in the cost of health care. However, the free care for children under 5 scheme does not work well. For instance, since 2009, cost refunds for only 2 months of services were received from the cost-refund system for vulnerable

populations. Basically, at the time of the review, free treatment for SAM and MAM depended mainly on support from UNICEF, WHO, and NGOs that made RUTF and drugs for systematic treatment available for free through a parallel supply system. On several occasions it was reported that because of drug outages or delays in the supply of certain drugs, e.g., antimalarial drugs, they had to be obtained from private pharmacies and paid for by the caregivers. The situation regarding access to supplies in districts where there is no NGO support and where UNICEF provides supplies directly to the ECD was not well known, but several instances highlighted weaknesses in the supply flow, resulting in regular outages, even during the lean period crisis of 2010.

2.2 COMPETENCIES FOR CMAM

2.2.1 In-Service Training and Mentoring

Before 2007, experience in CMAM was limited to national and international health managers and health care providers working with a few NGOs in confined locations. Thus, the expertise remained limited and basically outside of the national health system. This situation changed in 2007, when a cascaded training was conducted and followed up, in 2009, with refresher training on the revised national guidelines. The initial training sessions targeted mostly senior clinicians from the MOH and scientists, restricting the training to a transfer of highly specialized knowledge on M-SAM, focusing on the patho-physiology of SAM and the treatment of medical complications, and reinforcing neither treatment skills nor training skills. Subsequently, a team of core facilitators was established per region and district including the senior clinicians and nutrition focal points. The national guidelines were their main training tool. This core group of trainers was then tasked to conduct further training of clinicians at the periphery without having standardized training tools, without having been qualified as experienced clinicians or health managers in M-SAM and/or M-MAM, and without the use of training-of-trainers methodologies or tools.

The cascaded training approach allowed for the training of many health and nutrition managers and health care providers at a reasonable cost and increased MOH ownership of the training process. The established teams of core facilitators for teaching have a very limited focus on M-MAM. Few facilitators are from medical or health teaching institutions. Despite doubts about its effectiveness, a large base of facilitators, supervisors, and health care providers was trained. While the effectiveness of the cascaded training approach has not yet been evaluated, health care providers emphasized the importance of the continuous support and supervision and the on-the-job mentoring, which they felt was done, although not systematically or of adequate quality or tailored to their needs.

The review team did not find evidence of a comprehensive strategy for capacity development. However, refresher training sessions are part of the annual DRSP, ECD, and UNICEF 2010 action plan, and training sessions appear to be scheduled and ongoing. Follow-up with trainees and on-the-job mentoring was not part of past and is not part of current training plans, except for the areas supported by NGOs. Also, in all the years that training has been conducted, it has not used standardized job aids and training materials and has not yet been adapted to the different levels of health professionals and their specific function in M-SAM or M-MAM. Moreover, according to interviewed health care providers, refresher training sessions were not systematically conducted after revisions of the national guidelines, which caused inconsistency in the application of the changes and affected the quality of care and adherence to subsequent revisions of the national guidelines.

Interviewed health care providers expressed the need for follow-up support and indicated that the current *supervision formative* (supportive supervision) is insufficient. The difference in quality of care provided in NGO-supported sites and the other sites confirmed this need. Moreover, the limited practical implementation skills and management experience of the facilitators in CMAM means that they are very limited in their ability to manage resolution of nutrition-related problems. Problem-solving skills are crucial for effective, continuous mentoring and supportive supervision.

Coverage of in-service training was good in the NGO-supported sites that were visited by the review team. The majority of health care providers had received one or more trainings. In some sites, newly employed nurses involved in M-SAM received on-the-job training from their trained colleagues. At other sites, the

training had been limited to a few health care providers of the health facility, thus limiting the possibility for the rotation of staff and increasing the risk of disruption of CMAM services if the trained staff members are absent or leave. This risk is most important in areas where there has been only limited integration of CMAM into the health care system and where CMAM is implemented by temporarily employed nurses.

Because of the high caseload and understaffing of most CRENAs at the CSIs, nutrition assistants and community volunteers were implementing activities for which they had not received formal training, including interpreting the weight-for-height (WFH) z-score and classifying acute malnutrition.

2.2.2 Pre-Service Training

Nutrition in general is not well covered in the health professionals' education curriculum. For M-SAM, most training institutions provide a limited, 4-hour theoretic lesson on the management of acute malnutrition without practical sessions or internships. But the situation is improving, as some training institutions either have recently included or are planning to include M-SAM in their curricula. For instance, nutritionists who recently graduated from the *Institut de Santé Publique* (ISP) (Institute of Public Health) testified that they had a 60-hour module on the management of acute malnutrition. There is a plan to review the curriculum for health professionals and, as a first step, the MOH/DN, with support from partners, including WHO, UNICEF, HKI, and training institutions, has revived the working group on curricula and training modules development. The working group will guide the process of integrating nutrition into the curricula of teachers, medical doctors, nurses, midwives, and nutritionists. However, there is no plan to consult international experts in the region or to learn lessons from countries in the region that are also involved in similar exercises, e.g., Mauritania, or to build on and strengthen similar ongoing activities.

Because of the insufficient pre-service training, one NGO that had specific earmarked donor funding decided to organize a stand-alone training course on M-SAM for 15 newly graduated unemployed medical doctors. The course comprised a 2-week classroom session on M-SAM theory followed by 2 months of practical training and mentoring in M-SAM in inpatient care at a CRENI providing quality care. All 15 doctors who completed the training were immediately employed by the NGO. This shows that there is a pool of unemployed and/or underemployed medical doctors who value the additional M-SAM training and that there is a need to reinforce pre-service training on M-SAM.

2.2.3 Sites for Advanced Learning, Learning Visits, and Internships

Some NGOs and MOH health care providers—clinicians or nutritionists with WHO, UNICEF, or NGO funding—participated in a 1- to 2-week internship at the CRENI in Zinder, supported by MSF/Switzerland. Both centers can be considered national centers of excellence for inpatient care. These CRENI have established a continuous education system with experienced staff to mentor and provide on-the-job training of interns with various backgrounds. This system focuses on strengthening M-SAM clinical skills and organizational skills for the management of the CRENI.

It is uncertain whether these CRENI will continue to function as learning sites in the long term, as they are highly resource intensive and are set up in parallel to the health system. (Although these CRENI have shown to be outstanding learning sites for improving clinical skills, this setup is unsustainable and therefore unrealistic, and may be confusing for trainees). The MOH had no plans to make these CRENI formal learning sites. In addition, the MOH had no plans to identify learning sites for in-service training and mentoring on M-SAM in outpatient care, M-MAM, or community outreach. However, the review team did identify several sites that could qualify as learning sites.

2.2.4 Peer-Exchange of Information and Interactive Learning Forums

There was no plan for accessing opportunities for the MOH health and nutrition facilitators and managers to learn from the experiences of other countries in integrating and scaling up CMAM within their national health systems. Some senior MOH staff will participate in a planned December 2010 West Africa regional review meeting. Other learning opportunities remain limited to national-level MOH and NGO staff who

participate in national coordination and technical review meetings. However, it is not clear that these meetings will yield any important results.

Apart from the use of the CRENI in Zinder as learning sites, opportunities for sharing expertise and experience among IPs have been underutilized. There are regularly held regional coordination meetings that have proven to be great opportunities to bring IPs together to discuss activities and their performance. But they are not being used for strengthening knowledge or exchanging experience and lessons. Ad hoc technical working groups exist at the national level through the Nutrition Cluster that, because of its mandate, tends to limit its focus to emergencies. Hence, some information sharing exists between Nutrition Cluster partners, but there is no formalized information or documentation repository on CMAM.

Most MOH health managers, health care providers, and regional and district nutrition focal points have limited or no access to CMAM-related information and publications that could inform them on evidence, new developments, promising practices, problem solving, or lessons learned from other countries. In fact, some key implementers were unaware of the international guidance on the use of MUAC as per the WHO Joint Statements 2007 and 2009,^{16, 17} informative websites and interactive discussion groups (e.g., the International Malnutrition Task Force [<http://imtf.org>], EN-Net [<http://www.en-net.org.uk>]), or journals (e.g., *Field Exchange* [<http://www.enonline.net/fex>]) that offer a wide range of technical support to CMAM field implementers. (Note: Most of this information is available only in English.)

2.2.5 Operational Research

There were several operational research projects ongoing at the time of the review visit. The operational research focused on the impact of blanket feeding with Plumpy'doz[®] or an improved corn-soy blend (CSB+), which is enriched with improved micronutrients) during the food crisis for children 6–35 months on the incidence of acute malnutrition, and the role of cash transfers, cash for work, and targeted family rations on the incidence of acute malnutrition in children. The review team identified several other opportunities for operational research (see Section 3, Conclusions).

2.2.6 Development of National, High-Level Expertise

As mentioned in Section 2.2.1, the national expertise in M-SAM in Niger is rapidly expanding, and the country has several experienced trainers and many experienced implementers. However, many of the trainers, managers, and implementers, while recognizing that they have reached a certain level of expertise, still expressed the need for additional support and training. They felt that they had mainly acquired practical experience in either training or implementation of CMAM, but that they still needed to learn more to achieve “world-class” expertise in management, supervision, and mentoring. The areas for competency reinforcement included general nutrition knowledge for a better understanding of prevention and treatment principles that they considered prerequisites for identifying the strengths and limitations of programs and for proposing design changes to tailor treatment and prevention programs to the Niger context. They also saw learning more about prevention and treatment as a prerequisite for ensuring quality supportive supervision.

They also expressed the need to access scholarships to Nutrition Master Programs in African institutions. Unfortunately, the duration of the review did not allow the review team the time to interact with all the stakeholders or to get a comprehensive picture of the local expertise in M-SAM. Still, the review team believed that the country would benefit from additional and external support to strengthen its capacity to confidently manage core tasks to strengthen the enabling environment, competencies, and quality of CMAM, e.g., guidelines revision, pre-service and in-service training module development or revision, monitoring and reporting system revision, and quality improvement (QI) system design.

¹⁶ WHO/United Nations System Standing Committee on Nutrition/UNICEF, 2007, —Community-Based Management of Severe Acute Malnutrition,” http://www.who.int/nutrition/topics/Statement_community_based_man_sev_acute_mal_eng.pdf.

¹⁷ WHO/UNICEF, 2009, —WHO child growth standards and the identification of severe acute malnutrition in infants and children,” http://www.unicef.org/nutrition/files/stmt_child_growth_sam_final.pdf.

2.3 ACCESS TO CMAM SERVICES

2.3.1 Initial Implementation and Scale-Up of CMAM Services

The CMAM approach was first piloted on a small scale by an international NGO in the Maradi region. In response to the 2005 nutrition crisis, some NGOs introduced CMAM, while others implemented the health facility-based approach, which involves inpatient care until full recovery. Also, the MOH with support from UNICEF first focused on integrating and gradual scaling up CRENI for inpatient care until full recovery in its hospitals. The first national guidelines for M-SAM that were developed in 2005 and endorsed by the MOH in 2006 reflect the promotion of health facility-based M-SAM.

In 2006, Niger had 330 CRENI/CRENAS and 619 CRENAM, all NGO-supported. In May 2010, at the start of the nutrition crisis, there were 50 CRENI and 762 CRENAS, of which about 40 percent were supported by NGOs, and 450 CRENAM. These numbers will increase as more districts and IPs are decentralizing the CRENAS network to the CS level. While the number of CRENAS will increase, there is no plan to strengthen the capacity of the national, regional, and district health and nutrition management systems to ensure supportive supervision and to maintain or improve the quality of M-SAM.

Starting in 2007, the MOH, with support from UNICEF and NGOs, expanded M-SAM to integrate CRENAS for outpatient M-SAM care at the CSI level. The expansion benefited from substantial NGO support that had accumulated expertise and experience in CMAM in other countries. Prior to the 2007 drive for integration of M-SAM and M-MAM into the national health system, NGOs ran most M-SAM through the two approaches that were implemented in parallel with the health system.¹⁸

Overall in 2010, the geographic coverage of M-SAM in CRENI and CRENAS is good and of M-MAM in CRENAM is weak. The number of partners to support M-SAM and M-MAM is relatively limited to cover the entire country's needs, with roughly half of the health facilities covered with specific technical and logistical NGO support, while the MOH and CSA, with considerable support from UNICEF and WFP, have temporarily put in place a strengthened support system during the lean period of 2010 that they fortunately plan to extend into 2011.

In 2010, all regional and district hospitals could offer CRENI or inpatient care for SAM with medical complications, including all edema cases, and all CSIs could offer CRENAS or outpatient care for SAM without medical complications and, in some instances, CRENAM or M-MAM. CSs could offer CRENAM or M-MAM services and could also offer CRENAS or outpatient care for SAM without medical complications if a trained nurse or CHW was present and therapeutic supplies were ensured. CSs could actively and routinely screen children for acute malnutrition through their routine health and outreach services in the communities. The involvement of the CSs in CMAM activities (CRENAS, CRENAM, and active and routine community screening) varies greatly and depends almost entirely on NGO support. The MOH's approval for decentralization of CRENAS to the CS level in 2010 is a good strategy if supplies to more than 2,000 CSs in the country can be guaranteed.

2.3.2 Community Outreach for Community Assessment and Mobilization, Active Case-Finding, and Referral

The DRSPs and ECDs have a health communication and sensitization service (*communicateurs*) responsible for health and nutrition education and social and behavior change communication (SBCC), but the service does not have an impact in the communities. Thus, activities for early identification of acute malnutrition and referral for treatment and follow-up of nonresponders, absentees, and defaulters in their home is done either using a parallel network of *relais communautaires* (community volunteers), who are volunteers who usually receive an incentive or periodic/temporary daily wage, put into place by NGOs, or through periodic active case-finding during health activities, such as campaigns.

¹⁸ H. Deconinck et al., 2008, *Review of Community-based Management of Acute Malnutrition (CMAM) in the Post-emergency Context: Synthesis of Lessons on Integration of CMAM into National Health Systems*, Washington, DC: FHI 360/FANTA, http://www.fantaproject.org/downloads/pdfs/CMAM_Synthesis_Apr08_v2.pdf.

The lowest level of routine implementation of CMAM at the community level is limited and implies the provision of active and routine screening for acute malnutrition and, in some cases, curative care provided at the CS level. CSs are usually staffed by a trained CHW who receives 6–12 months of basic health training. In practice, CSs are functioning as advanced CSIs and are curative care based, which is why, in many of them, the CHWs are being replaced by nurses. Thus, at the time of the review, implementation of the community outreach component of CMAM was challenging, except for IPs with a strong institutional capacity of interacting with the community and working with health outreach systems through CHWs and/or volunteers.

At the time of the review, only a few CMAM programs had a network of community outreach workers (CHWs or volunteers) involved in continuous community mobilization, case-finding, and referral, although many had members of the *Comité de gestion* (COGES) (Health Management Committee) providing some support to the nurses at the CSIs and CSs. In addition, some of those who had a network of community outreach workers had only activated or set up that network during the period of the nutrition crisis, linking the need for the outreach component to the nutrition crisis. This link could lead to some decision making and practices that can jeopardize long-term MOH- or NGO-run health outreach programs, such as:

- Setup of a parallel network of community outreach workers for CMAM in areas where there is a network of CHWs involved in long-term health outreach programs
- Monetary incentives allowing the parallel network of community outreach workers for CMAM to earn more than the CHWs involved in long-term health outreach programs
- Recruitment of a parallel network of community outreach workers outside of the communities to be served

For the ongoing 2010 nutrition crisis, the absence of a national community outreach strategy for acute malnutrition is temporally mitigated using different context- and organization-specific strategies for active case-finding. The strategies employed by the NGOs include:

- Organizing case-finding by temporarily establishing mobile teams that conduct active case-finding at regular intervals; the intervals vary from every fortnight to every 2 months
- Linking case-finding during the census of children 6–35 months with eligibility for blanket feeding
- Linking case-finding with blanket feeding distributions
- Linking case-finding with any community-based work in partnership with a local community-based organization (CBO)
- Linking case-finding with health campaigns, e.g., national immunization days, vaccination campaigns, or child health weeks

Community sensitization and home visits to follow up on problem cases are essential to correct harmful care and feeding practices and to promote behavior change, or prevent incorrect social behavior. For instance, many stories surfaced that caregivers of children sell Plumpy'nut[®] (used for treating SAM), Supplementary Plumpy[®] and CSB+ (used for treating MAM), and Plumpy'doz[®] (used for preventing acute malnutrition), which can sometimes have fatal consequences for the child who is deprived of or has reduced access to essential nutrients during a certain time. Moreover, household sharing of these products is too common during nutrition and food crises, when solidarity within and among households to share food is an essential coping mechanism for survival. Instances of multiple registrations in different sites were also shared.

Without a network of community outreach workers for CMAM with a wide impact on and link to the community, it will be difficult to tackle these challenges. The absence of such network also reduces the chances for following nonresponders, absentees, and defaulters in their homes, which will affect the quality of program performance because of the uncertainty of the final outcome of cases who are declared as defaulters.

2.3.3 M-MAM

M-MAM is not perceived as a routine health service; therefore, it was not part of the nationwide integration and scale-up, as M-SAM was. The CSA, in collaboration with WFP and NGOs, is responsible for M-MAM.

M-MAM is established in districts with the highest food insecurity levels based on a vulnerability assessment. These districts are not always the same as those where M-SAM is being implemented, where the nutrition surveys show that there are high prevalence rates of GAM and/or SAM. In principle, all CSs should have CREMAM, but this is not the case because the logistics and support systems are not in place. The very limited geographic coverage of CREMAM is especially of concern, because blanket feeding for children 6–35 months to prevent acute malnutrition is only planned for the lean period.

The M-MAM system was weak before the crisis and was well managed only in places where selective NGOs supported the health facilities and/or communities for M-MAM. It was originally planned to have improved CSBs, i.e., CSB++ (enriched with milk powder, micronutrients, and sugar) for blanket feeding of all children 6–23 months (later augmented to up to 35 months) and CSB+ (enriched with improved micronutrients) and oil and sugar for M-MAM of children 6–59 months. Because of certain pipeline problems, some international NGOs covered the gap in WFP's food supply for blanket feeding and M-MAM and complemented the response by importing their own supplementary and complementary food. As a result, different strategies were put into place, often running into early major delays, and different food supplements were used.

The lower number of CREMAM, compared to the number of CRENI and CRENAS, was caused by several facts, including the following.

- The nutrition emergency response strategies for 2010 favored blanket feeding for children under 3 and PLW and under-targeted M-MAM for children under 5.
- Supplies for M-MAM were targeted for regions and districts that were more affected by the food security crisis (areas identified by household food security indicators), and expansion to regions and districts affected by the nutrition crisis (areas identified by high prevalence rate of GAM and SAM) was delayed.
- There is a widely shared opinion that M-MAM should be made available only in case of a nutrition crisis. (Since the transition to the 2006 WHO child growth standards, children previously identified with MAM with the highest risk of death, that is, most serious or vulnerable cases of MAM, are now categorized as SAM and have early access to M-SAM).
- Logistical problems with the use of CSB+, plus the doubt about the effectiveness of CSB+ for M-MAM shield IPs away from being involved (The unpopularity of CSB+ resulted in favoring the introduction of Supplementary Plumpy[®] for M-MAM, which is preferred over the use of CSBs, because it simplifies organizational management of CREMAM. However, evidence on its effectiveness is still limited).
- There is doubt about sufficient capacity of the health system to successfully integrate M-MAM into its routine health services without NGO support. The ongoing experience where the government is implementing M-MAM without direct NGO support will provide an answer to this concern.

2.3.4 Expanded Outpatient Care in Decentralized Health Facilities

In theory, every regional and district hospital should have a CRENI and a CRENAS, and every CSI should have a CRENAS and a CREMAM. Every CS should have a CREMAM and, where there is a nurse, a CRENAS as well. Most often, staff members have been trained in M-SAM and M-MAM and could have access to supplies and, therefore, should treat MAM and SAM cases. In reality, the capacities of health facilities and of the national health system in general to manage and implement M-SAM and M-MAM are weak and, hence, it is difficult for any health facilities to offer quality care in the absence of NGO support. Therefore many CRENI, CRENAS, and CREMAM are not functional. The trend to decentralize CREMAM and CRENAS to the CS level in cases where they are staffed by nurses could partially solve a resource capacity problem by improving caseload management, offering the services closer to the community and detecting and treating cases earlier, therefore more quickly stopping the onset and minimizing the severity of the illness. But that would require the supply system to be adequately managed to reach many dispersed CSs staffed by nurses and, in a next phase, to reach more than 2,000 decentralized CSs to have appropriate access to supplies.

The review team wants to point out that continued emphasis on the use of the WFH z-score as the “gold standard” indicator for wasting is likely to affect the sustainability of the decentralization and the quality of

CMAM in view of the shortage of health and nutrition managers and health care providers and the continual high caseloads. Despite the endorsement of MUAC as an independent criterion for screening, diagnosing, and admitting cases, several organizations are still using a two-stage approach using MUAC only for screening and the presence of edema and WFH z-score criteria for admission. As a consequence, many SAM and MAM cases are denied treatment after being referred to a CRENAS or a CRENI, which is expected to have a negative impact on the uptake of the services.

2.3.5 Inpatient Care in Health Facilities with 24-Hour Care Capacity

It is understandable there are many more CRENAS than there are CRENI, but the ratio of 1 CRENI for 16 CRENAS observed in the UNICEF CRENI/CRENAS/CRENAM database in February 2010 suggests limited accessibility to inpatient care services. This was confirmed by stories of mothers being referred to CRENI located more than 100 km from their villages. The realities of the national health system in Niger—a dispersed population with low coverage of primary health care and hospitals, a limited number of hospitals, and limited resources for building and equipping more health facilities—suggest that the system will continue functioning with very few operational CRENI for many years to come. Some implementers are starting to address the problems by upgrading the CRENAS of some small, rural hospitals and well-staffed CSIs.

This situation is certainly affecting performance of the CMAM programs. Performance can be affected by the following.

- Caregivers refusing the referral to a CRENI can increase the risk of the child's death. Indeed, many implementers testified that it is common for caregivers to refuse the referral when the referred CRENI is too far away. However, many also mentioned that the rate of refusal is minimized when transport to and from the CRENI is offered and when caregivers are assured that they will be fed and will receive free health care if sick. In reality, the package for the referred child and caregiver varied from one IP to another, and some IPs added a monetary incentive, a bednet (while bednets are part of the care package at the CRENI, they are not always available through the DRSP or ECD), and clothes to the provision of transport to and from the CRENI as additional incentive. The fact that the great majority of children had grandmothers and not mothers as caregivers in the CRENI and the presence of siblings per child suggest that, despite taking care of the transport cost and other needs of caregivers, referral to very distant health facilities remains an issue.
- High case fatality among referred cases because of late referral. Many IPs highlighted this statement, but one IP in particular reported that as many as 70 percent of referred children died during referral or within a few hours of admission to the CRENI. This occurs because mothers tend to resist referral and accept it only after realizing that their child is in very critical condition.
- Infants under 6 months cannot be treated in either a CRENAS or a CRENAM. This is likely to be an important public health problem during a nutrition crisis, when a mother's nutrition condition affects their infant's growth and nutrition status.

In some health facilities the review team visited, the CRENI fell under the *service sociale* (social service) instead of being part of the pediatric ward, having the *assistant social* (social assistant) in charge and playing an important role. At least one CRENI was limited to the physician's morning rounds. The CRENI had only the *assistant social* as resident staff during both the day and night shifts. Children requiring medical surveillance were transferred to the pediatric ward for drug administration. The *service sociale* was in charge of food preparation and feeding. This arrangement was blamed on the absence of clear directives from the MOH. Moreover, this setup was probably based on the experience of old *centre de rééducation nutritionnelle* (CREN) (nutrition rehabilitation or feeding center) that were not part of pediatric wards and mainly admitted children with growth faltering.

2.3.6 Referral Systems

The review team found that the referral system between inpatient and outpatient care was not effective, except in cases where IPs established systems of verification and transportation. In general, the referral and counter-referral system of the national health system among primary, secondary, and tertiary health

care is weak and needs to be strengthened. M-SAM cannot rely on it. However, there are several innovative experiences and initiatives that show how one can improve the situation in a sustainable manner. These examples involve communities that have taken responsibility for ownership of the transport system, payment of the referral, and monitoring of adherence to the referral. For example, one IP provides a cart that is managed by the community to transport patients and for other commercial purposes. These limited activities appear to be making a big difference.

The national guidelines define the referral mechanisms between CRENAM and CRENAS or CRENI. As mentioned above, CRENAM services were available in less than 50 percent of areas with CRENAS services. In areas where all three components were implemented, there was some referral among them, but almost all the implementers complained about the weakness of the communication system between the different components.

The review team found that the referral and counter-referral system between CRENAS and CRENAM was weak or nonexistent, except in NGO-supported areas, mostly where the same NGO supported both components. Examples of weakness in communication include the absence of referral slips, despite the fact that the national guidelines contain a model of referral slip; the CRENI not having the list of CRENAS in its catchment area; the CRENAS not having a list of CRENAM in its catchment area; and the absence of a tracking system for children referred from one level to the other and vice versa. In regard to the linkage with the blanket feeding initiative, coordination of screening and referral with CRENI/CRENAS/CRENAM was not well done where the initiative was implemented by different partners.

It was noted that the national guidelines promote early discharge from CRENAS before patients are cured of SAM where there is a CRENAM (WFH > -3 z-score), which will lead to children with SAM moving back and forth between the CRENAM and CRENAS, increasing the overall risk of relapse and death. Discharging children with SAM before ensuring full recovery is harmful. In emergency situations and when referral to a CRENAM is secured, early discharge is allowable (a weight gain of 15 percent or WFH > -2 z-score).¹⁹

2.3.7 CMAM Integration into Routine Health and Nutrition Services

The integration of CMAM into routine health services occurred in the context of the GON's desire to increase its capacity of supervision and monitoring of the activities of all CMAM implementers throughout the country, including controlling communication with and providing information to national and international media regarding nutrition. Consequently, there was no other choice than to implement the policy of integration country-wide, including in regions with limited prior CMAM experience and limited coverage of primary health care and human resources. Despite that, the review team found that most stakeholders are very enthusiastic about the integration, and the early skepticism expressed by some has been replaced by great optimism on the capacity of the national health system to absorb CMAM if well supported by the GON and its IPs. Moreover, there is a general openness to integrate M-SAM and M-MAM into routine health services. The key for an effective and successful integration of CMAM will be the integration of both activities and related management of resources, while the current focus is only on integration of activities. Moreover, the integration is taking place in the context of a weak health system that affects all health initiatives, e.g., the baby-friendly hospital initiative, growth monitoring, and Integrated Management of Childhood Illness (IMCI).

Integrating CMAM in a weak health system and linking it to weak health initiatives will not have a significant payoff. However, discrete opportunities to link and strengthen health services are worth exploring. For instance, it might be beneficial to link CMAM to both the clinical and community IMCI. Also, integrating CMAM into growth monitoring might lead to mutual strengthening of both programs.

¹⁹ WHO and UNICEF, 2009. —WHO child growth standards and the identification of severe acute malnutrition in infants and children: A Joint Statement by the World Health Organization and the United Nations Children's Fund," http://www.unicef.org/nutrition/files/stmt_child_growth_sam_final.pdf.statement, suggests 15% weight gain and/or WFH > -1 z-score).

2.3.8 Prevention of Acute Malnutrition during the Lean Period: Blanket Feeding

The blanket feeding approach for children 6–23 months is a good solution for covering the lean period in a timely fashion if it is based on repeated screenings for age and open cohort. Unfortunately the one-time registration did not universally include a systematic screening for acute malnutrition; was based on a very weak community mobilization and hence was incomplete; and was done only once, often 4–8 weeks before the start of the distribution. The closed cohort was chosen because there was a major concern about not being able to meet the needs. Many more children were registered than anticipated, even though many children were missed. Blanket feeding programs also included family ration distributions, to limit household sharing and presumably to target poor households.

The delayed distribution because of the delayed arrival in-country of the commodities, caused children to have delayed access to nutrient-dense foods, but also precluded younger children from entering the distribution; they were then left out for the entire lean period. Some IPs corrected this strategy and repeated the registration on a regular interval. At the time of the review, it was not clear for most of the districts if the blanket feeding was associated with reduced incidence of acute malnutrition, as caseloads were still very high. Operational research implemented alongside this initiative is likely to clarify the issue. It could be that the delay in starting the blanket feeding, the inappropriate use and household sharing of the supplement, the closed cohort of children up to 3 months prior to the distributions, and the impact of prevailing inappropriate infant and young child feeding and care practices could be contributing factors that are limiting the impact of this intervention.

Links between Essential Family Practices (EFP) or Essential Nutrition Actions (ENA) and CMAM were not clear for the review team, with the exception of some of the sites actively supported by one of the NGOs supporting ENA and CMAM and successfully linking the approaches.

2.3.9 Qualified Health Care Providers

The government is under considerable pressure to minimize its expenses. This has a major impact on its ability to adequately deploy human resources in the health care sector. The widespread understaffing of the national health system is in stark contrast with the high rate of unemployment among doctors and nurses. Many newly graduated doctors and nurses engage in unpaid voluntary work in hospitals or CSIs in the hope of being selected when a job opportunity arises. Many nurses have even accepted the position and salary of a CHW and are posted at CSs in remote locations.

Very many doctors and nurses in Niger have in the past 5 years acquired in-depth and comprehensive clinical skills in M-SAM from working with international NGOs. Nevertheless, the country still lacks qualified health and nutrition managers and health care providers competent in CMAM implementation and management skills. For instance, many of the health care providers involved in CMAM who were interviewed had no prior CMAM experience before their current employment. This situation is likely to persist until the pre-service training on CMAM is strengthened. The recent inclusion of a 60-hour course on the management of acute malnutrition in the nutritionist curriculum at the ISP is an important step toward the strengthening of national capacity in CMAM. (The review team met two newly appointed DRSP nutrition focal points who had gone through this course.) Moreover, the review team noticed that not all health care providers involved in CMAM and even in pediatric care have been trained in CMAM. To date, the national and IPs' approach has been to train mainly staff who are directly involved in CMAM implementation. This approach doesn't take into account the high turnover of staff, the rotation of personnel within health facilities, and the negative attitudes of those who were denied training.

2.3.10 CMAM Linkages with Informal Health Systems: Traditional Healers and Traditional Birth Attendants

In Niger, despite health care providers, caregivers, and communities admitting that caregivers commonly seek care from a traditional healer as a first-line service for an acutely malnourished child, it appeared that health care providers of the MOH and NGOs do not usually collaborate with the informal health system. They do not tend to consider or recognize the important role that the informal health system can play in

influencing access to services, delaying the use of services, or inhibiting the use (and continuation) of treatment for SAM. The CMAM literature has repeatedly underscored the importance of involving the informal health system in CMAM in one way or another to break down barriers to access and improve utilization of services.

2.3.11 CMAM Linkages with Other Community Services

Integration of CMAM with other community services was very limited, with the exception of some initiatives of using self-organized CBOs for M-MAM or community mobilization. It was not possible to assess the effectiveness of this approach. The review team heard both success stories and concerns. For instance, it was mentioned that CBOs are successful in implementing preventive health and nutrition activities, including community outreach involving in regular community screening for early case-finding and referral to treatment, or M-MAM provided directly in the community. In the context of the high market value for RUTF and of a funding mechanism that is based on “number of acute malnutrition cases diagnosed” or “tons of CSB+ distributed,” there were concerns on accountability of some CBOs and their capacity to resist the social pressure that comes along with food distributions in the community.

2.4 ACCESS TO CMAM EQUIPMENT AND SUPPLIES

2.4.1 Procurement and Supply Management of CMAM Equipment and Supplies

UNICEF and WFP are the lead agencies for providing therapeutic and supplementary food supplies and equipment. UNICEF provides also routine drugs for M-SAM. In addition, some NGOs have organized their own supplies or buffer stocks to cover the risk of unexpected outages. For both M-SAM and M-MAM, the supply chain relies heavily on UNICEF and WFP for international and national purchase and for logistics. WFP usually delivers food commodities up to the distribution sites, while UNICEF usually delivers at the NGO’s warehouse in Niamey or at the DRSP warehouse, and supports the DRSP in supplying the districts. For some districts, UNICEF supplied up to the CSI level. In theory, all health facilities have access to medical and therapeutic supplies and anthropometric equipment for M-SAM. However, in reality, M-MAM equipment and supplies were available only for selected districts and only when an IP provided support. Before the lean period of 2010, stock outages were very common at both the national level and the implementation level (district and health facility).

The supply system was strengthened in the lean period of 2010, and most CMAM implementers expressed their satisfaction with the improvement of the supplies; outages were rare, despite the rapid increase and persistence of high weekly admissions. However, NGOs have mentioned that they still needed buffer stocks because outages of drugs, RUTF, and CSB still occurred. These occasional outages were mainly due to delays in the delivery of supplies or shipments that were too small possibly because of mistakes in the ordering system. In addition, health districts without IP/NGO support often had difficulties transporting supplies from the DRSP to the district warehouses and then to the CSIs, causing stock outages.

A widely shared opinion was that the outages of therapeutic supplies were due to the limited coordination and communication between the operational and the national levels. For M-SAM, the absence of outages at the national level can be explained by the fact that the estimated caseload for 1 year and the supplies required to meet that caseload was calculated by multiplying the SAM prevalence rate by a prevalence-to-incidence conversion factor first set at 6²⁰ and later revised to 4, based on the June 2010 survey. In contrast, there was no consistency in the way the supply need was calculated at the operational level, where different prevalence-to-incidence conversion factors—sometimes 1, sometimes 2, and sometimes 4—were used. Therefore, the supply needs were frequently underestimated.

Innovative stock management support systems for M-SAM are being piloted and could yield some useful information about strengthening the supply system. In collaboration with the *Office National des Produits*

²⁰ This assumes that the duration of an episode of SAM is 2 months and that, in a given community at risk, there are six cohorts new cases with SAM in a year.

Pharmaceutique et Chimique (ONPPC) (National Office for Pharmaceutical and Chemical Products) and using the Pharmacie Populaire (Popular Pharmacy) distribution system, the health department of Mayahi is testing an improved logistic supply and communication system for data and stock management using, e.g., Short Message Service. Some district nutrition focal points shared that the supply system in their districts without NGO support successfully rely on the use of local private transport instead of on the government and UNICEF transport system. This use of local transport supported by COGES was already commonly applied for drugs procurement and distribution.

The free care for children under 5 scheme was applied in all the sites visited and free treatment for SAM was guaranteed. However, the GON delay in the refund of the cost renders the system fragile. Actually, the scheme only survives because UNICEF and NGOs make therapeutic food and drug supplies for CMAM available.

Despite the breadth and impact of the malaria endemic, most health facilities had no oral antimalarial drugs available.

Niger has a national RUTF production capacity under a Nutriset franchise, but production remains costly and insufficient for national needs, therefore importation is needed which increases the risk of running out of RUTF stocks. In addition, RUTF has a high market value, and the sale of RUTF is very common. Some IPs had taken measures to try to control or limit its sale.

2.5 QUALITY OF CMAM SERVICES

2.5.1 Adherence to Standardized Treatment Protocols

Although significant progress has been made in the standardization of CMAM implementation in Niger, efforts are still needed to obtain adherence of all the IPs to the integrated model of services as defined by the MOH, the national guidelines, and the national CMAM strategy. Even if one speaks of successful integration of CMAM into the Nigerien health system, the level of integration varies considerably, depending on which IPs are supporting CMAM and/or the health facility. Under the umbrella term of “integrated CMAM,” variability in whether and how CMAM is implemented and integrated is considerable. Variation includes quasi- to no implementation in the absence of a supporting partner, implementation in parallel with nongovernment health facilities, implementation in parallel with government health facilities, partial integration with a level of NGO support that varies from very high to very low, and finally complete integration with quasi- to no support from NGOs.

Variations in adherence to and interpretation of the national guidelines were numerous. Examples of observed field practices that differed from the national guidelines included, e.g.:

- The use of the WFH indicator to screen acute malnutrition in the community
- The non-use of MUAC as an admission criterion
- Counter-referral of children with mild edema to outpatient care if clinically well
- Varying discharge criteria for children admitted based on MUAC
- A number of phases during inpatient care (intensive care was added before stabilization phase for the most severe medical cases)
- Management of dehydration in SAM children
- How and when to prescribe antimalarial drugs

A certain amount of noncompliance with the national guidelines is understandable because of the revisions of the national guidelines (three versions were used and two revisions were made in 2009) that were not accompanied by systematic refresher training or information sessions. These changes caused inconsistency in the application of CMAM and confusion at the health facility, thereby affecting the quality of care and leading to, for example:

- Inconsistency in admission and discharge criteria
- Unclear guidance for counter-referral to outpatient care after stabilization
- Misleading routine treatment for malaria

- Incorrect discharge criteria from CRENAS when referred to CRENAM

The lack of guidance on monitoring and reporting, and the mixture of old and new monitoring tools, forms, and checklists, also resulted in inconsistent implementation. For example, entry and exit categories were interpreted differently, and very often the meaning of performance indicators was not understood (e.g., confusion between returned absentee or returned defaulter, transfer or move or referral/counter-referral) or was interpreted differently (e.g., case-fatality in the first 48 hours not counted). Moreover, deviations from the national guidelines were sometimes intentional in cases where the NGO applied international guidelines or its own treatment protocols based on other evidence.

Despite the fact that most health care providers have been trained on numerous occasions (some up to three times), the lack of standardized training materials other than the national guidelines and of standardized job aids other than the different versions of registers and monitoring forms, there is good reason for confusion and concern on standardized and quality care. Most of the variation could be traced back to the particular version of national guidelines. This is because training and refresher training were done using the national guidelines. Many small technical shortcomings that were identified in the national guidelines had major implications in the field and were often observed as being a source of confusion to health care providers. For example, in June 2010, the DN disseminated a letter supporting the use of MUAC as an independent criterion for admission, and implementers did not understand the message very well or did not know how to abide by the new rule, except if the supporting NGO provided additional guidance.

Moreover, not all health care providers are comprehensively implementing all components of CMAM. The biggest gaps are in M-MAM, and community outreach (including community mobilization and sensitization for early detection and presentation). Moreover, nutrition and health counseling and education (individual and group sessions), and links with infant and young children feeding (IYCF) for the prevention of malnutrition are underdeveloped. A plan to address situations where the CMAM approach is not being adhered to is being considered at the national level. This includes revising the national guidelines and the developing incentives to reinforce adherence to the minimum CMAM package and to the integrated approach with QI.

2.5.2 Standardized Job Aids, Tools, and Training Materials

The major job and training aids that are used for CMAM implementation in Niger are the national guidelines and the minimum set of individual treatment cards and reporting sheets that have been disseminated. Unfortunately, different versions of the national guidelines and cards and sheets were in use.

There were no job aids for CMAM management, besides the supervisory checklist, the stock management form, and the supply request. There were no job aids for community sensitization or health education besides the few places where NGOs were providing support either in ENA, using their own materials, or in EFP. In the EFP, there was no SBCC targeting CMAM. In the few examples where ENA was supported, SBCC targeting CMAM was included.

2.5.3 Support and Supervision

A national and regional supervision system was put in place, and health care providers at all sites visited during the review acknowledged receiving occasional supervisory visits during which a supervision checklist was used. Nevertheless the MOH has major challenges in terms of human and logistic resources. Hence, providing systematic and regular quality supervision is a major problem. Most often, the NGO providing support assists the MOH in conducting the supervision (e.g., providing a car with fuel and involving the NGO coordinator to provide assistance).

The NGO-supported health facilities received a comprehensive technical support package, including continuous mentoring support that improved the supervision role and performance and that could include:

- **Technical support:** through mobile teams consisting of a CMAM-experienced medical doctor, nurse, or nutritionist
- **Management and administrative support:** national- and district-level management support
- **Transportation support:** especially for referral to and from the CRENI
- **Supply support:** making essential drugs, therapeutic food supplies, and buffer stocks available
- **Funds:** for training, transportation of referrals and supplies, and buffer stocks

In the NGO-supported health facilities, the supervision usually took the form of supportive supervision and mentoring and was carried out regularly on a monthly or even weekly basis. Some IPs that assist with supervision mentioned not using the standard supervision tool to avoid the impression of controlling health care provider performance. Instead, they preferred the supportive approach that combined observation and discussions on cases managed jointly.

In the non-NGO-supported health facilities, a more classical supervision of CRENI and CRENAS was conducted on an ad hoc basis, providing limited technical support, mainly because the supervisor had only a limited technical capacity. Supervision was limited to the management of supplies and maybe enhancing regular reporting.

The review team perceived this as a missed opportunity for strengthening acquired knowledge and expertise, which is essential for complementing a limited initial training, and for supporting health care providers working in isolation in decentralized sites. Both financial and logistical constraints of the MOH and the limited expertise of nutrition focal points exacerbate the limitations of the supervisory tool and the need to support QI.

2.5.4 Monitoring of Individual Care

It was difficult to understand the standard individual care monitoring system, as there were different registers and forms in circulation, especially at the CRENI and CRENAS. In general, monitoring tools were in place and individual care was good in usual times, with supplies of therapeutic food and drugs available. However, the individual monitoring system of children with SAM and MAM in most health facilities was very basic, and treatment cards were very often not filled out and registers with minimal information were used instead.

2.5.5 Surveillance Systems and Their Integration into the National Health Information System

Two parallel weekly surveillance systems are in place for acute malnutrition. First, the MOH/SPIS-managed MDO report provides incidence data on MAM and SAM (number of new detected cases of MAM and SAM) and case-fatality data (number of cases with MAM and SAM who died) per health facility, aggregated at ECD, DRSP, and national levels. Then, the UNICEF-managed *Scaling Up* surveillance system reports on weekly admission data on M-SAM aggregated at the regional and national levels. In addition, a monthly M-SAM reporting system that is a joint collaboration of the MOH and UNICEF provides information on admission and outcome of treatment, providing results at the treatment site, ECD, DRSP, and national levels. Lastly, there is the biannual national rapid household survey, led by the *Institut national de la statistique* (INS) (National Institute of Statistics) that provides nutrition, health, and causal factor prevalence data disaggregated at the regional level.

On a weekly basis, the MDO report registers new cases of ‘moderate and severe malnutrition’ (interpreted as growth faltering and/or acute malnutrition) that are detected at the health facility level, providing incidence information based on community growth monitoring (identifying children underweight) and/or active community screening for CMAM (screening for wasting and/or nutrition edema). Cases of death from SAM and MAM are reported in four age groups (under 1 year, 1–4 years, 5–14 years, and 15 years or over). The MDO reports on all notifiable diseases and is therefore recognized as a national surveillance system for reporting. It would benefit from overall strengthening, since accurate and precise reporting is not easy. Several inconsistencies in the MDO reporting system were noticed and related to:

- How malnutrition is defined: Some MDO reports are filled by using the weight-for-age indicator identifying children under 1 or under 2 with growth faltering, while others use the WFH indicator, MUAC, and/or the presence of edema to identify children under 5 with MAM or SAM.
- How cases are reported: Some report all diagnosed cases of malnutrition regardless of their admission for treatment, while others report only cases admitted to treatment.
- The completeness of health facilities that participate in the MDO reporting: CSIs compile the MDO and include MAM and SAM information from CSs, but CSs do not do systematically report information for the MDO, e.g., in cases where there are no CRENAS or CRENAM
- How information on case-fatality is collected: The origin of the data is not clear.
- How report data are compiled: There are concerns on coverage and completeness, and it is not clear how this is addressed or if there are plans to improve on this.

Scaling Up provides weekly information on the SAM caseload, or admissions for treatment, which makes it a great tool for evaluating trends in prevalence for resource planning, especially during fluctuations of cases in lean periods and/or nutrition crises. Reporting coverage is very good in areas with UNICEF presence and NGO support and much weaker in areas with limited UNICEF presence and NGO support. Hence, the reporting system is not providing a representative picture of the burden of disease, but simply reports on caseload at those health facilities that provided information for a specific week.

Discussion with health facility managers at the field level revealed that there were variations in the way information was collected and reported, e.g.:

- Double or triple counting of children with SAM in treatment if they move between CRENI and CRENAS
- Underreporting of children with SAM admitted for treatment in national or regional hospitals

The completeness and accuracy of the information that is generated by the two weekly surveillance systems (one detection of moderate and severe malnutrition and its case-fatality versus the number of admissions in treatment for SAM) are challenged by the use of different (and not always well defined) indicators, the presence or absence of an active community screening system, the presence or absence of a robust referral system, the presence or absence of treatment at the reporting health facility, and their inconsistent use (MDO is sometimes used to report on *Scaling Up* and vice versa). The two parallel systems also have reporting lines that differ between regions, depending on how the ECD or DRSP has managed or received support. As each surveillance system has its own purpose and therefore different limitations, each also has the potential to strengthen the others. In particular, the reporting coverage for both is limited and does not cover all health facilities or CRENI/CRENAS and CRENAM in the country, especially where the support of IPs is weak.

The MOH and UNICEF are aware of the weaknesses in the information systems, and efforts to strengthen and integrate the different systems that eventually will lead to improved accuracy, completeness, and timeliness are ongoing. However, a plan to simplify the information systems to prioritize key information needed to inform decision making and guide strategy modifications, and to decrease workload associated with data collection while simultaneously promoting accuracy and precision and avoiding quality loss, has not yet been considered. The planned review of the national guidelines could provide an opportunity to simplify and standardize reporting, as this is an entirely new section that has to be written and added.

The monthly statistical monitoring and reporting system for CMAM provides indications on the treatment outcomes and performance of M-SAM and M-MAM. Detailed information on admission and discharge and movement of children is provided in five age groups (i.e., under 6 months, 6–11 months, 12–23 months, 24–59 months, and 5 years or over); these data inform the overall performance indicators. Moreover, data on average length of stay and weight gain are calculated monthly for all discharged children.

The reporting system is far too complicated and does not provide data in a way that allows easy understanding of performance. Reporting challenges identified with the monthly reporting of M-SAM include the following.

- The disaggregation of reporting in nine entry and exit categories (with terminology that could easily mislead), five age groups, and disaggregated by sex, summarized in seven indicators

(cured, died, defaulted, nonresponded, transferred, referred, other) make the results impossible to understand.

- Six exit categories in CRENI and seven exit categories in CRENAS are used and define the denominator for the calculation of the performance indicators. At the global level and the Sphere standards, only four categories are used for the performance indicators indicating end of treatment (i.e., cured, died, defaulted, nonrecovered). All exit categories that induce no end of treatment should be disregarded in the calculation of the performance indicators.
- —“nonresponded” is used as an exit category (end of treatment) when it should be —“nonrecovered.” It is expected that after a certain time in treatment a child should recover. If not, based on a nonresponse to the treatment protocol (e.g., described in an action protocol), necessary steps, including referral to higher levels of care, are prescribed to investigate and address the reason for the nonresponse; commonly the treatment protocol of the child should be altered.
- In CRENI children with SAM that are referred to CRENAS after stabilization (i.e., not yet end of treatment) are marked as —“cured”, inflating the cure rate and deflating the death rate in CRENI (and CRENAS as they will be double counted). Moreover, the categories —“cured” after stabilization and at the end of treatment, for those who remained in the CRENI until full recovery, are confounded.
- Data at the district level are impossible to aggregate. There is no system that allows data to be merged from CRENI and CRENAS per district or region without double or triple counting. As a result, for example, children with SAM who are referred to CRENI are still being counted in CRENAS after they have physically moved to the CRENI, and could be counted again after reentering a CRENAS upon return from the CRENI.
- Underreporting of deaths is common, e.g., early deaths (i.e., deaths occurring in less than 24 or 48 hours after admission to a CRENI), deaths occurring during referral, and deaths occurring at home (as a consequence of weak outreach on defaulting) are not included.
- Health care providers filling out the report do not understand the different categories well, and there is a misunderstanding of referral/counter-referral (referral to higher/lower level of care) and transfer (move at same level of care) and other exits. This is further complicated by the fact that the French terms for “exit” and —“discharge” are both translated as —“sorties,” and referrals are classified in the same box as nonrespondents.
- Reporting data on movement between treatment sites are important to prevent or minimize double counting, but the system that is in place does not allow that data to be adequately controlled, since the movement categories are treated as discharge categories.
- Indicators are difficult to calculate and can be misinterpreted at the health facility level, and health care providers filling out the reports do not always receive immediate feedback.

Moreover, health care providers at the health facility level complained that there are too many reporting systems for different health and nutrition programs, which makes the weekly and monthly reporting duties very burdensome. One health care provider at a CSI mentioned that he has to fill out more than 30 different reporting sheets per month.

Since 2005, the INS has led the biannual national nutrition and child survival surveys that provide nutrition, health, and causal factor prevalence data disaggregated at the regional level based on the SMART method. The surveys provide very useful prevalence rates of key indicators during two periods in the seasonal calendar and allow analysts to assess trends in nutrition status. Unfortunately, the data are only disaggregated to the regional level, which makes it difficult to identify the pockets of malnutrition, while there are other more appropriate methods that would be able to provide disaggregated information. Most disturbing is that MUAC is not used as an indicator. As a result, important information is lacking on caseload based on MUAC, and on establishing and understanding the country-specific relationship between MUAC and WFH, which is a major fall back in important knowledge for Niger.

2.5.6 Evaluation of CMAM Performance: Quality and Coverage

The review team noted that the quality of the actual care provision was mostly satisfactory (apart from a few of the CRENI and CRENAS that were visited), but the outcomes of treatment varied widely. The main

factors contributing to the quality of performance of CMAM were the presence of an experienced NGO providing support, the type and extent of that support, the motivation of the health care providers, the number of qualified health care providers, and the daily caseload.

The review team had difficulties interpreting the performance results. Some of the disturbing or counter-intuitive findings are:

- There was a higher death rate (above 5 percent) in well-run M-SAM sites—considered centers of excellence—than there was (below 2 percent) in M-SAM sites that were obviously providing much worse care.
- There was double or sometimes even triple counting of some children that may lower the death and default rates if the majority of those overcounted are discharged as “cured”.
- More performance indicators than globally used are reported on. Thus, performance indicators have a different but wider or larger denominator than globally used, which dilutes the results and decreases the rates.
- Deaths are not recorded if they occur during the referral/counter-referral time.
- Early deaths (less than 24 or 48 hours after admission) are not reported on at several sites.
- The death rate is higher in M-MAM than in M-SAM in some sites.

These findings suggest that the quality of data collection for performance assessment might not be standardized and that the data collection and reporting system needs strengthening. In the interim, selecting sentinel sites for in-depth performance assessment might be more appropriate.

The quality of performance of M-SAM in the non-NGO-supported CRENI/CRENAS appears to be a major issue, but the supervisor’s assessment of quality is based on observation and discussion, not on performance indicators.

The implementation of M-MAM was rather limited as the national blanket feeding approach had justifiably received the majority of resources. But when it was implemented with NGO support and expertise, the quality of care was good and performance was well reported. The seemingly contradictory higher death rate that was observed may be explained by more accurate reporting.

In Niger the motivation of health care providers is a significant contributing factor in the quality of care and sustainability of the community outreach activities. Motivation is mostly linked to a minor financial benefit, improved social prestige or to an improved working environment (e.g., access to supplies, mentoring, job aids, and tools, or a cart to transport referred children), which are considerably higher prevalent in areas with NGO support. Quality is commonly weak where there is limited support from the MOH. Even in the era of strengthened logistic support, there were places and times when the supply of therapeutic and supplementary foods and drugs still ran out. Nevertheless, it must be pointed out that even in many NGO-supported health facilities the quality of care in CRENI and CRENAS is not appropriate.

Data on treatment coverage for SAM and MAM were not available, but, based on the *Scaling Up* statistics, the coverage rate is estimated to be high (maybe above 80 percent). Discussions are ongoing to conduct a nationwide coverage survey. Unless coverage is estimated using a direct method based on rigorous sampling, it will be difficult to have a clear picture of access and use of CMAM by the intended beneficiaries.

3 Conclusions

Niger recognizes acute malnutrition as a public health priority and is taking major steps to improve the political and policy environment for nutrition in general, creating an environment that is favorable for improving the quality of CMAM implementation. Niger has made considerable progress in the past 5 years on integrating and scaling up the management of acute malnutrition, with important support from national and international coordinating bodies and IPs. There is room for improving multisectoral coordination and linking between the different bodies and entities to have a more comprehensive approach/strategy to address recurrent food security and nutrition crises.

The MOH/DN has limited capacity to play a lead role in coordination and technical expertise for CMAM, which has ramifications on the coordination role and technical expertise of the DRSP and ECD health managers and nutrition focal points. Moreover, the regional and district nutrition system would benefit from a stronger operational framework with defined links to the national, regional, and district health managers and decision makers. In the short term, the strong leadership role of UNICEF and technical expertise of IPs (depending on the presence of the individual rather than on institutionalized learning) make up for this gap at the MOH. But this stopgap approach is not promoting a long-term sustainable and comprehensive strategy for capacity strengthening for CMAM.

An in-service training strategy for CMAM within the MOH has been established, but training is not standardized and is often lead by facilitators with limited expertise. Therefore, the quality of the training varies and its impact is limited and insufficient. Concrete steps to integrate CMAM into the pre-service training have started.

The review team identified the existence of several “sites of excellence” that had high-quality performance on inpatient care, outpatient care, and/or community outreach. However, these sites were scattered, and no one site combined all components of CMAM. Sometimes these sites of excellence were within the same district or region, or implemented by an NGO supporting other sites with weak quality. While excellent and promising practices are being implemented or tested, there is still limited cross-fertilization, documentation, and use of lessons learned from these opportunities, despite the often expressed need and eagerness for learning.

As integration and scale-up of CMAM was a national MOH decision starting in 2007, in 2010, all national, regional, and district hospitals and CSIs should have trained staff and access to supplies and, hence, should be in a position to offer M-SAM in inpatient care and outpatient care. In practice, most health facilities depend on support from UNICEF and IPs, and this support varies and is packaged in different strategies of technical, human resource, logistic, supervision, monitoring and reporting, and/or financial support. As a result, under the umbrella term of “integrated CMAM,” depending on the IPs’ support strategy and resources, one finds a great variety of implementation strategies and, hence, quality. In some cases, NGOs are running independent or quasi-independent services outside or within the MOH premises, sometimes outside and sometimes under the authority of the MOH. Most often, in the absence of NGOs, CMAM services are absent or weak. Community sensitization and active and routine community screening was not developed, with the exception of a few NGOs, but, during the 2010 lean period, the census for the blanket feeding for children under 3 was sometimes linked with screening activities and partially covered this gap.

Despite the nationwide implementation, CMAM is not yet decentralized to the lowest level of health facilities with qualified health care providers (e.g., CSs with nurses). Moreover, M-MAM was not part of the same national scale-up effort and, in the absence of a national strategy, sites for M-MAM are limited and scattered. Furthermore, the referral system between inpatient care and outpatient care and between M-SAM and M-MAM is weak. It is expected that many children are lost in between the different services. The informal health system plays an important role in health-seeking behavior and only a few IPs were aware and taking this factor into consideration to sensitize communities and assess and address barriers to access to CMAM.

A national supply system for CMAM is not in place, but strengthened logistic support by UNICEF, WFP, and IPs did improve the supply system during the 2010 lean period and did limit the supply outages. However, it was very common for health facilities without strengthened support to have great difficulties accessing supplies. Innovative stock management support systems are being piloted and could provide some promising lessons on how to strengthen the supply system.

Besides the national guidelines, there are few standardized tools and job aids made available to health managers, supervisors, facilitators, and health care providers. The monitoring and reporting system is extensive and complex, but its application is not harmonized. This naturally leads to inaccurate and imprecise reporting on caseloads and performance.

The impact of the 2010 emergency response and of the blanket feeding in particular merits an in-depth evaluation to guide decision making on contingency planning to cover future lean periods.

The CMAM management system works well only where there is sufficient expertise and support from the IPs. The significant gaps in the CMAM program that the review team identified and that need swift and thorough consideration in the short term to improve overall quality of CMAM include:

- Lack of funding for CMAM in the national MOH budget
- Unclear messages and recommendations in the national guidelines, resulting in confusion about their application
- Shortage of qualified human resources in the national health system
- Limited number of inpatient care sites and weak quality
- Limited number of M-MAM sites
- Absence of pre-service training of health professionals
- Weak quality of in-service training, and no on-the-job mentoring system (unless through specific IP support)
- Lack of a community-based network of volunteers for community screening and referral of acutely malnourished children (unless through specific NGO support)
- Limited successful implementation of the free services for children under 5 scheme
- Weak and complicated monitoring and reporting systems

The strategy for the implementation of CMAM in Niger rapidly progressed from a total parallel approach to an enforced integrated approach that still houses variations of integration depending on the extent of IP support. These variations do affect the quality of care. Still, the integrated approach is most suitable for creating ownership and responsibility and most sustainable, because it is not subject to fluctuations in the level of support and variations in responsibilities. Given the level of the SAM caseload, the dispersed population, and the human resources constraints in the health sector, a decentralized CMAM model will guarantee a better managed caseload, reduce opportunity costs for caregivers, and improve the overall quality of services.

Within the paradigm of an integrated CMAM, maintaining the quality of services is a continuously challenging but achievable objective, if political will; strategic planning for strengthening capacities; improving quality of services; and increasing access to qualified health care providers, supplies, and funding resources are supported.

4 Recommendations

4.1 GENERAL RECOMMENDATIONS TO SUPPORT THE MOH/DN AND IMPLEMENTING PARTNERS IN CMAM

Enabling environment

- Encourage MOH/DN to support ongoing initiatives to endorse and promulgate policy documents that are favorable for the scale-up of CMAM. All stakeholders involved and interested in CMAM should take advantage of the current momentum and increase advocacy efforts toward the endorsement and adoption by the GON of binding government acts that are CMAM-friendly.
- Improve the integration and collaboration between the different structures involved in the development of emergency preparedness and response strategies, linking and involving the CMC, the CNSAP, the CIC, and the Nutrition Cluster; develop comprehensive nutrition contingency plans based on documented effectiveness of the response and identify sustainable funding mechanisms for contingencies.
- Put into place a cross-sectional nutrition working group with defined terms of reference, e.g., defined priority tasks for tackling nutrition at multisectoral levels (relevant ministries and cells): advocacy and community participation.
- Absorb the national and regional nutrition cluster as coordination mechanism in a wider nutrition coordination system merging emergencies with development (and its respective partners), including academic, training, and research institutions, and linking with relevant ministries; strengthen a decentralized nutrition coordination system at regional levels, including the districts.
- Put in place a decentralized structure dealing with nutrition at regional and district levels; create a nutrition service, instead of focal points, and link the nutrition staff with DRSPs and ECDs; define a terms of reference with roles and responsibilities, job descriptions, and annual work plan and budget; learn from the malaria or tuberculosis control programs.
- Strengthen decentralized nutrition technical leadership at regional levels, including the districts; put into place technical working groups, fixed and ad hoc, at national and regional levels; use monthly DSRP meetings and trimester ECD meetings to discuss or link with technical discussions.
- Reinforce the role of the *communicateurs* (community health mobilizers) of the ECDs in strengthening community mobilization for CMAM linked with SBCC initiatives for IYCF promotion and CMAM, and community screening strategies for acute malnutrition.
- Document the 2010 emergency response results (e.g., on blanket feeding, TA partners, reporting on incidence of SAM) and use “what worked” to advocate for adapted long-term strategies and to develop guidance for standardized TA for CMAM of IPs (including UNICEF where there are no partners).
- Develop a strategy for resource mobilization and advocacy for CMAM through the national budget or other sustainable national mechanisms.
- Strengthen the support and/or formalization of national and local initiatives that are supportive of CMAM scale-up and QI, e.g., free health care for children under 5 scheme the president’s special program to boost human resources capacity through decentralized structures, the “additional cents” project to assist referral to CRENI.

Competencies

- Develop and adapt a strategy for in-service training based on a needs/capacity assessment and QI system, which should include reinforcing the skills of trainers; developing a comprehensive strategy for capacity strengthening, including standardized training methods and materials and continuous mentoring; and QI systems.
- Strengthen the ongoing review of pre-service training curriculum review for different levels of health professions. Map what exists, identify needs, and develop an appropriate curriculum and training materials. Provide high-level technical support to complete training materials and methods for including nutrition basics, and prevention and treatment of malnutrition at different levels of health professions (and involve other sectors, e.g., SBCC, food security, rural development).

- Strengthen the technical capacities of MOH/DN and DRSP/ECD nutritionists on management and QI of CMAM; use coordination and technical meetings (at national, regional, and district levels) as opportunities for developing the capacities of MOH and partners, thereby stimulating cross-fertilization of new knowledge, promising practices, and lessons learned.
- Convene annual technical nutrition meetings/workshops involving field implementers and regional and district managers for learning and cross-fertilization.
- Document promising practices and lessons learned about comprehensive health and nutrition community outreach initiatives for CMAM and EFP/ENA.
- Put into place a nutrition coordination information system to ensure flow of coordination and technical information from national to regional to district levels and vice versa, and link with global initiatives; promote the use of interactive and informative websites.
- Enhance operational research, documentation of promising practices, and sharing of good practices and lessons learned. Some questions that warrant further research and/or could be addressed with the current practices include:
 - How to ensure continuity of care and adherence to treatment for children with SAM in nomadic communities?
 - How to prevent sharing of therapeutic foods within and among households?
 - What are appropriate strategies for discouraging the sale of RUTF?
 - What are the outcomes of edematous children without medical complications who are treated in CRENAS compared to those who are treated in CRENI?
 - What is the impact of the blanket feeding program on the incidence of acute malnutrition and what are the confounding factors?
- Strengthen information-sharing strategies and the documentation repository to enhance learning and information exchange among peers, including lessons learned from other countries.

Access to services

- Strengthen the presence of qualified staff in health facilities. This can be achieved by retaining existing staff employed on short-term contracts by the prefecture for the current emergency response by a mechanism that allows local administrations to employ new staff using decentralized funds or by advocating at high levels within, for example, the GON and the World Bank for a positive perspective on the health care system during this period of budgetary restriction to allow the GON to employ new health care providers.
- Develop a strategy to increase access to CMAM inpatient care. This may include identifying innovative strategies for decentralizing inpatient care at some CSIs and small rural hospitals.
- Decentralize care at the CSs, including strengthened logistics and supervision systems.
- Merge the management of SAM and MAM in one strategic CMAM approach.
- Redefine the role and responsibilities of the trained CHWs; redirect CHW toward the implementation of preventive activities with strategies for improved SBCC promoting early referral for treatment of any illness, including acute malnutrition. This is in the context of the plan to upgrade the CSs to CSIs by and because of posting nurses.
- Strengthen comprehensive health and nutrition community outreach for CMAM (with *relais communautaires*) and merge with prevention initiatives (e.g., EFP or ENA).
- Strengthen the referral system managed by the community to ensure its sustainability and enhance its effectiveness by improving the managerial skills of the community and encouraging the community to engage into activities that will ensure the sustainability of the scheme.
- Establish links between CMAM and health and nutrition prevention and rural development initiatives.

Access to supplies

- Strengthen logistics systems and distribution by learning from, e.g., the ACH/E pilot on strengthening the logistics supply system for distribution of CMAM supplies through supporting the ONPPC to supply the department of Mayahi, and testing a communication system for data and stock management using the Short Message Service; maximize the use of the distribution system of the *Pharmacie Populaire*.
- Explore the possibility of using private-public partnerships for distributing CMAM supplies.

- Develop planning tools for projections based on realistic estimates (prevalence and expected incidence).

Quality of services

- Thoroughly review the national guidelines for CMAM, adapt them to the latest evidence and promising practices, and finalize, including a monitoring and reporting system and job aids.
- Standardize job aids, training materials, and management tools for QI of CMAM.
- Put simplified QI system in place to complete the supportive supervision (*supervision formative*) at all levels (CRENI, CRENAS, CRENAM, community outreach).
- Simplify the monitoring and reporting system and pilot either a sentinel system, or a periodic review system on sampled sites that provides more in-depth information on performance.
- Put into place a knowledge and skill system to enhance interpretation and use of performance information for QI at all levels.
- Support the ongoing efforts to simplify nutrition surveillance. Standardize and clearly delineate the approaches for *Scaling Up* and MDO reporting without increasing the overall burden of reporting.
- Add MUAC as indicator in all nutrition surveys to estimate the burden of MAM and SAM, and explore the relationship between WFH and MUAC in Niger. The classification of children with SAM or MAM based on the WFH distribution of the standard population for children under 5 aims at identifying children with extreme WFH values, and based on MUAC aims at identifying children with high risk of death (In addition, MUAC correlates better than WFH with muscle mass, hence, with body nutritional reserves).
- Consider the use of alternative sampling²¹ and other surveillance methods to be able to disaggregate nutrition information to the district level and unmask the reality of the burden of acute malnutrition without increasing the cost or time to have the survey done.

4.2 SPECIFIC RECOMMENDATIONS FOR DCHA/OFDA AND ITS IMPLEMENTING PARTNERS

In addition to the recommendations listed above, two additional areas of focus for OFDA are:

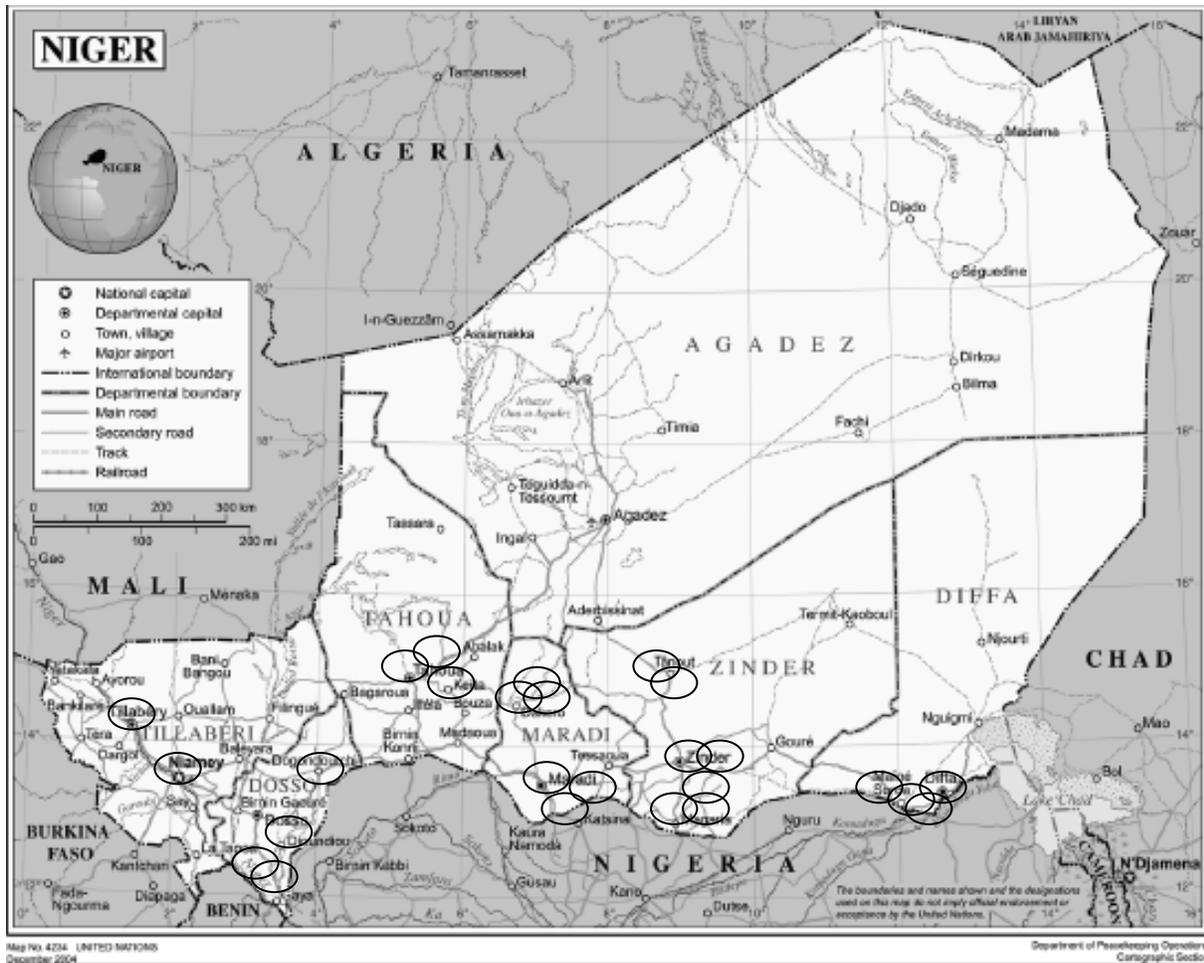
- Provide long-term funding for TA to IPs emphasizing integration, standardization of TA, inclusion of SBCC and improved links to EFP/ENA, and sustainability of CMAM.
- Support strategies and sustainable systems to expand decentralized care through increasing the base of skilled health care providers (clinical, auxiliary, and CHWs staff) and *relais communautaires* (volunteers) and through decentralizing outpatient care to the CS level, and expanding inpatient care to rural hospitals and some CSIs.

²¹ FANTA-2, 2009, Alternative Sampling Designs for Emergency Settings : A Guide for Survey Planning, Data Collection and Analysis, Washington, DC, <http://www.fantaproject.org/publications/asg2009.shtml>.

Annex 1: Map of Niger Site Visits

Places visited:

Niamey, Tilaberi, Gaya, Tanda, Terra, Douchi, Tahoua, Keita, Diffa, Kourgamari, Boudoum, Malamboulamari, Maine Soroa, Chetimasidiri, Malam Boubardi, Zinder, Kassama, Mirria, Mayahi, Dakoro, Koren Habijia, Maradi, and Madarounfa in October 2010; Tanout and Magaria in April 2010.



Annex 2: Niger Schedule of Meetings and Site Visits

Date	REGION	Organization	Location	Purpose
October 12	NIAMEY	MOH/DN	Niamey	Meeting
		WFP	Niamey	Meeting
		Nutrition Cluster	Niamey	Meeting
October 13		MOH/DN	Niamey	Meeting
		WHO	Niamey	Meeting
		HKI	Niamey	Meeting
		Concern	Niamey	Meeting
October 14		WFP	Niamey	Meeting
		MSF/Belgium	Niamey	Meeting
		World Vision International	Niamey	Meeting
		Save the Children UK	Niamey	Meeting
		UNICEF	Niamey	Meeting
October 15		UNICEF	Niamey	Meeting
		HKI	Niamey	Meeting
		MDM	Niamey	Meeting
		HELP	Niamey	Meeting
October 16	TILLABERI	District Hospital (DH) CRENI	Tillaberi	Visit
		ECD and HELP	Tillaberi	Meeting
		MOH/DN	Niamey	Meeting
October 18	DOSSO	DH CRENI	Doutchi	Visit
		CSI CRENAS	Doubalma	Visit
		CS CRENAM	Kodiffo	Visit
		DH CRENI	Doutchi	Visit
		ECD	Doutchi	Meeting
		HKI	Doutchi	Meeting
		DH CRENI	Gaya	Visit
		CSI CRENAS/CRENAM	Tanda, Gaya	Visit
		CSI CRENAS/CRENAM	Terra, Gaya	Visit
		ECD and regional and district focal points nutrition	Gaya	Meeting
October 19	DIFFA	HKI	Diffa	Meeting
		CS CRENAM	Kourgamari	Visit
		Village women and children, <i>relais communautaires</i>	Kourgamari	Meeting
		DRSP regional focal point nutrition	Diffa	Meeting
	TAHOUA	CHR CRENI	Diffa	Visit
		Concern Worldwide	Tahoua	Meeting
		MDM	Tahoua	Meeting
October 20	DIFFA	Save the Children	Diffa	Meeting
		CSI CRENAS CRENAM	Boudoum	Visit
		CSI CRENAS CRENAM	Malamboulam ari	Visit
	TAHOUA	DH CRENI	Maine Soroa	Visit
		ECD	Tahoua	Meeting
		DRSP	Tahoua	Meeting
		CHR	Tahoua	Meeting
		CSI CRENAS	Bagaye	Visit

Date	REGION	Organization	Location	Purpose
		CHR CRENI	Tahoua	Visit
October 21	DIFFA	Village PCAC CRENAM, women and children, <i>relais communautaires</i>	Chetimasidiri	Meeting
		CSI CRENAS CRENAM	Malam Boubardi	Visit
		Village ENA, women and children, <i>relais communautaires</i>	Malam Boubardi	Meeting
	ZINDER	HKI	Zinder	Meeting
		World Vision	Zinder	Meeting
	TAHOUA	MDM	Keita	Meeting
		DH CRENI	Keita	Visit
		ECD	Keita	Meeting
October 22	ZINDER	CSI CRENAS CRENAM	Kassama	Visit
		BEFEN	Mirria	Meeting
		DH CRENI	Mirria	Visit
		DRSP regional focal point nutrition	Zinder	Meeting
October 23	ZINDER	CRF	Zinder	Meeting
		MSF CH CRENI	Zinder	Visit
October 24	ZINDER	UNICEF	Zinder	Meeting
October 25	MARADI	ACH	Mayahi	Meeting
		ECD, district focal point nutrition	Mayahi	Meeting
		DH CRENI	Mayahi	Visit
		CSI CRENAS	Koren Habjja	Visit
October 26	MARADI	FORSANI	Maradi	Meeting
		ECD, district focal point nutrition	Madarounfa	Meeting
		CSI CRENAS	Madarounfa	Visit
		DH CRENI	Madarounfa	Visit
		CSI CRENAS	Maradi	Visit
October 27	MARADI	DRSP	Maradi	Introduction
October 28	NIAMEY	CHU de Niamey, Dr Guero Tankari	Niamey	Meeting and visit
		MOH/DN, MOH/Human Resources, WHO UNICEF, Ecoles national de santé publique	Niamey	Meeting, discussion on review of nutrition curriculum
		MOH/DN	Niamey	Meeting
		FHI 360	Niamey	Meeting
		HKI	Niamey	Meeting
		UNICEF	Niamey	Meeting
		USAID	Niamey	Meeting

Annex 3: Niger Contacts

Organization	Nom	Fonction
ACH	Coudert Karine	Coordinateur médicale
ACH	Frederic Ancelin	Responsable de base Mayahi
ACH	Jacques Alain Adousou	X
ACH	Sambo Sidikou	Chef de projet adjoint
FHI 360	Rougiatou Diallo	Représentant (rep) pays
FHI 360	Rene Djamen	Assistant rep pays
FHI 360	Kadri Nana	Coordinateur UNHAS
Africare	Dr Djibril Issa	X
BEFEN	Maidadji Oumarou	Coordinateur Zinder
CRF	Clementine Leprette	Chef de délégation
CRF	Delphine Tuyse	Chef de bureau Zinder
CRF	X	Coordinateur Zinder
CRS	Ali Abdoulaye	X
CS Kourgamari, Diffa	Abdou Boucar	CHW
CSI Boudoum, Maine Soroa	Mariama Ouseini Abari	Infirmier
CSI Malam Boukardi, Diffa	Moude Maman	Chef de poste
CSI Kassama, Mirriah	Abdou Onda	Chef de poste
CSI Koren Habjia, Mayahi	Lawali Boube	Chef de poste
CSI Malamboulamari, Maine Soroa	Inayatou Amadou	Infirmier
CSI Tanda, Gaya	Omar Zeinam et X	Sage femme, chef de poste, infirmière
CSI Terra, Gaya	X	Chef de poste
MSP/DN	Dr Aboubacar Mahamadou	Directeur a.i.
MSP/Ressources Humaines	Boubacar Thiombiano	Directeur
DRSP Diffa	Mahamadou Adamou	Point focal régional
DRSP Dosso	Dr Katta Mousa	Directeur adjoint
DRSP Dosso	Mme Bello Zeinabou (Sylvie)	Point focal nutrition
DRSP Zinder	Nassaratou	Point focal nutrition
ECD Maine Soroa	Assoumane Guero	Médecin Chef
ECD Diffa	Assoumane Guero Issoufou	Médecin Chef
ECD Diffa	Mato Seydou	X
ECD Gaya	Harane Souleymane	X
ECD Gaya	Hamadou Hajara	Assistante sociale
ECD Gaya	Lawali Arzika	Médecin Chef
ECD Gaya	Sidi Be Laure	Point focal nutrition district
ECD Madarounfa	Mamoud Mefada	Communicateur
ECD Madarounfa	X	Point focal nutrition
ECD Mayahi	Bunda	Médecin Chef
ECD Mayahi	Kako	Médecin Chef Adjoint
ECD Tillabéri	X	Médecin Chef HD
FORSANI	Aboubacar	Coordinateur Madarounfa
FORSANI	Sidi Be	Médecin de référence Madarounfa
FORSANI	Lawali	Coordinateur Maradi
HD CRENI Mayahi	Rabi Akuri	X
HD CRENI Mayahi	X	X
HD Maine Soroa	Ramatou Acroni Issafas	Infirmière Chef
HD Maine Soroa	Nafisa	Médecin Save the Children
HELP	Dr Albert Tshiula	Coordinateur médical
HELP	Mokhtar Kodo	Coord Tillabéri
HKI	Marily Knieriemen	Représentante
HKI	Dr Bamba Ibrahim	Représentant adjoint

HKI	Dr Saleh	Coordinateur Tanout/Mirria, Zinder
HKI	Lawali Moussa Gri	Coordinateur Zinder
HKI	Harouna Hamani	Chargé de programme
HKI	Halimatou Niandou	Coordinateur nutrition
HKI	Oumarou Balki	Nutrition Doutchi
HKI	EIHadj Houmar	Coordinateur Diffa
HKI	AITawal Mustafa	Administrateur Diffa
HKI	Mai Ariabba	Animateur Diffa
MDM France	Barro Mamoudou	Coordinateur général
MDM France	Dr Hama	Coordinateur Keita
MSF-CH	X	Pédiatre CRENI Zinder
MSF-CH	X	Pédiatre CRENI Zinder
OMS	Dr Nzeyimana Innocent	Action Humanitaire
OMS	Dr Abdullaye Mariama	Nutritionist
PAM	Rachel Fuli	Nutritioniste
PAM	Tidjani Bintou	Charge programme nutrition
PAM	Sylla Moyadi	M&E
Save the Children	Dr Cissé Samana Aissa	Nutritionist
Save the Children	Dr Didier Tamakloe	Coord. Santé et nutrition Diffa
Save the Children	Andres Felices	Chef de poste a.i. Diffa
UNICEF	Gwenola Desplats	Nutritioniste
UNICEF	Dr Eric Alain Ategbo	Nutritionist, chef
UNICEF	Elisabeth Zanou	Nutrition Zinder
UNICEF	Andre Ouedraogo	Consultant DN
URC	Dr Amsagana Maina Boucar	Directeur régional
USAID	Rob Luneburg	USAID-OFDA in Niger
USAID/OFDA Dakar	Regina Davis	OFDA régionale
Village	Malam Boukardi, Village ENA	Relais communautaires, femmes et enfants
Village	Chetimasidiri, Village PCAC/CRENAM	Relais communautaires, femmes et enfants
World Vision	Souleymane Ousmane	Coordinateur CMAM

Annex 4: CMAM Components and Integration Framework

Figure 1. CMAM and its components

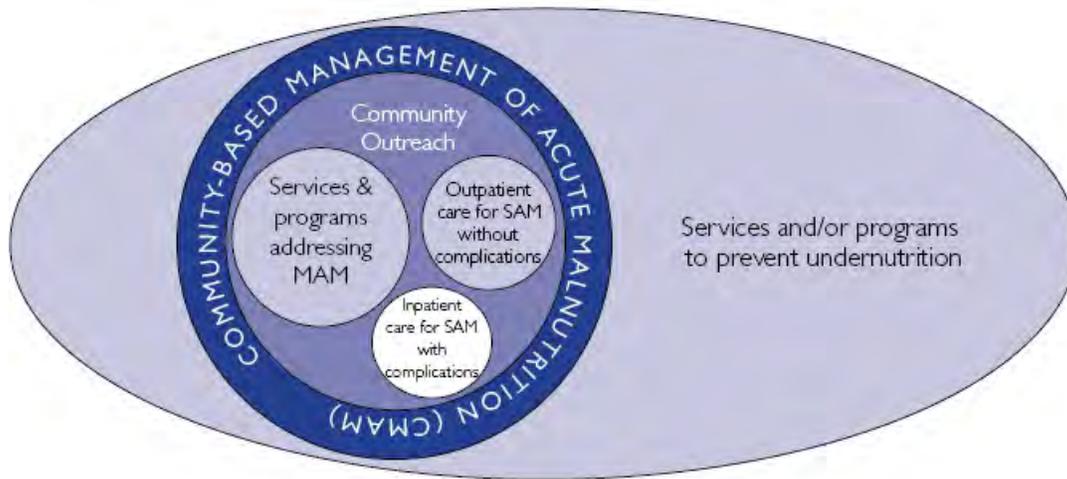


Figure 2. CMAM integration framework domains including enabling environment, competencies, access to services, access to supplies and quality of services.

