Government of Malawi
Ministry of Health

NATIONAL COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION (CMAM) OPERATIONAL PLAN 2017-2021

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Preface

The Malawi Ministry of Health (MOH) recognises that malnutrition is complex and that addressing it requires a multisectoral approach. The MOH therefore adopted the Community-Based Therapeutic Care (CTC) approach in 2004 (later renamed Community Management of Acute Malnutrition [CMAM]) to address acute malnutrition beyond the nutrition rehabilitation units (NRU).

To date, CMAM services have been scaled up and provide care and treatment through four main components: community outreach, the supplementary feeding programme (SFP), outpatient management of severe acute malnutrition (SAM), and inpatient management of SAM.

Community outreach is critical in the management of acute malnutrition because of its focus on stimulating the understanding, engagement, and participation of communities in the prevention, identification, and treatment of acute malnutrition. SFP provides a platform for management of moderate acute malnutrition (MAM) through the provision of fortified blended, dry, take-home rations of food. SAM children without medical complications are treated on an outpatient basis using a ready-to-use therapeutic food (RUTF), whereas those with medical complications are treated in 24-hour inpatient care facilities, such as paediatric wards and NRUs.

Over the years, CMAM service delivery had several successes and challenges. The Ministry of Health, in collaboration with its partners, conducted a bottleneck analysis to synthesise challenges and lessons learnt, and identify solutions and strategies. That analysis guided the development of this CMAM Operational Plan for 2017–2021.

This operational plan outlines the overarching determinants of coverage needed to improve the quality of CMAM service delivery and provides guidance on the monitoring and evaluation of the plan's implementation.

Under the leadership of the MOH, all nutrition partners will be instrumental in supporting the implementation of the outlined priority actions over the five-year period of this plan. The Malawi CMAM Operational Plan 2017–2021 will be implemented alongside the National Multi-Sector Nutrition Policy 2017–2021, the National Multi-Sector Nutrition Strategic Plan, and the Health Sector Strategic Plan (HSSP) II. It is envisaged that these concerted efforts will contribute to improvements in national nutrition and health outcomes.

Dr. Charles Mwansambo
CHIEF OF HEALTH SERVICES

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Contents

Abbreviations and Acronyms

ABC	Activity-based Costing
BNA	Bottleneck Analysis
CHAI	Clinton Health Access Initiative
CIDA	Canadian International Development Assistance
CMAM	Community-based Management of Acute Malnutrition
CMED	Central Monitoring and Evaluation Division
CMS	Central Medical Stores
COW	Community Outreach Worker
CSB +	Corn Soy Blend fortified (Supercereal)
CSB++	Supercereal Plus
CTC	Community-based Therapeutic Care
DHS	Demographic and Health Survey
DHIS-2	District Health Information Software – Version 2
DHMT	District Health Management Teams
DNHA	Department of Nutrition, HIV and AIDS
DIP	District Implementation Plan
FANTA	Food and Nutrition Technical Assistance III Project
HMIS	Health Management Information System
HSA	Health Surveillance Assistant
HSSP	Health Sector Strategic Plan
IMCI	Integrated Management of Childhood Illnesses
IYCF	infant and young child feeding
LOE	level of effort
MAM	moderate acute malnutrition
MICS	Multiple Indicator Cluster Survey
MBS	Malawi Bureau of Standards
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
NCST	Nutrition Care Support and Treatment
NECS	Nutrition Education and Communication Strategy
NGO	Non-governmental Organization
MOH	Ministry of Health
NRU	Nutrition Rehabilitation Unit
OP	Operational Plan
OTP	Outpatient Therapeutic Programme
PBI	Performance-based Incentive
PLW	Pregnant and Lactating Women
PMPB	Pharmacy, Medicines and Poisons Board
ReSoMal	Rehydration Solution for Malnutrition

RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SDGs	Sustainable Development Goals
SFP	Supplementary Feeding Programme
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SMS	Short Message System
SUN	Scaling Up Nutrition
TNP	Targeted Nutrition Program
TOT	Training of Trainers
TOR	Terms of Reference
USAID	United States Agency for International Development
US$	U.S. dollar
WFP	World Food Programme
WHO	World Health Organization

1 Introduction

1.1 Background

Undernutrition poses a major development challenge for Malawi, contributing to high morbidity and mortality among children and other vulnerable groups, such as pregnant and lactating women (PLW). Poor nutrition jeopardized progress on almost all Millennium Development Goals (MDGs), including maternal mortality, child nutrition, education, and gender equality.

Stunting among children under 5 remains a serious public health concern. According to the 2014 Malawi MDG Endline Survey, about 42 percent of Malawian children under 5 are stunted and 3.8 percent are wasted (UNICEF 2014). These statistics suggest progress since 2010, when stunting was 47 percent and wasting was 4 percent (NSO and ICF Macro 2011). Despite these achievements, much needs to be done to maintain rates of wasting at less than 5 percent and to improve the care and treatment of children with acute malnutrition.

While the prevalence of stunting among children under 5 is unacceptably high, requiring public health attention, wasting also remains a public health concern due to several factors. Firstly, recurring humanitarian emergencies over the past decade have left Malawian children vulnerable. Secondly, the death rate among children with severe acute malnutrition (SAM) in inpatient care is unacceptably high. Data collected through the routine Community-Based Management of Acute Malnutrition (CMAM) programme and the Health Management Information System (HMIS) show that in 2015, the national average SAM death rate in inpatient care was 9.7 percent, with some districts reporting a death rate higher than the recommended Sphere standards cut-off of less than 10 percent. Thirdly, at community level, infant and young child feeding (IYCF) and caring practices are sub-optimal among children under 2, who constitute the majority of those affected by acute malnutrition.

Inadequate knowledge about appropriate foods and feeding practices is an important contributor to acute malnutrition in Malawi, where recent data suggest that IYCF practices are not improving. According to the 2010 Malawi Demographic and Health Survey (DHS), only 29.4 percent of children 6–23 months of age met the minimum dietary diversity requirement and nearly half (46.1 percent) did not eat the minimum number of meals per day (NSO and ICF Macro 2011). Similarly, the 2014 Malawi MDG Endline Survey reported that only 26.6 percent of children met the minimum dietary diversity requirement, and 46.8 percent were fed the minimum number of meals per day (NSO 2015). Given these statistics, the Government of Malawi has recognised undernutrition as an important development issue that needs to be addressed.

The Constitution of Malawi and the Public Health Act of 1948 advocate adequate nutrition for all Malawians. The Government of Malawi has reinforced that commitment by including prevention and treatment of malnourished children among its critical national development priorities in the Malawi Growth and Development Strategy II (2011–2016). Additionally, the management of acute malnutrition is a priority in the Malawi Health Sector Strategic Plan (2011–2016), the forthcoming Health Sector Strategic Plan (HSSP) II and the National Multi-Sector Nutrition Policy 2017–2021. Through the enabling policy environment created by the Government of Malawi, nutrition interventions, such as CMAM, are supported by diverse stakeholders, including U.N. agencies, nongovernmental organizations (NGOs), and the private sector.

1.2 Rationale for the Operational Plan

The first 5-year CMAM operational plan (OP) was developed in 2009 to coordinate and harmonise scale-up of services within the health system and among partners. During the planning period covered by the plan, the Government of Malawi and its development partners invested heavily in CMAM and significant progress was made. Some of the achievements include the development of a national CMAM guideline and job aids; the scale-up of CMAM services to about 90 percent of health facilities in the

country; capacity strengthening of numerous health workers, health surveillance assistants (HSA), and volunteers across the country; and the establishment of a national CMAM monitoring and evaluation (M&E) system. However, given the poor nutritional status of infants and young children, the favourable policy environment, and the expiration of the operational plan in 2012, the Government determined that it was an opportune time to review and map out new CMAM actions, including alignment to the National Multi-Sector Nutrition Policy 2017–2021 and the forthcoming HSSP II.

This CMAM Operational Plan 2017–2021 is grounded in evidence from past achievements, lessons learnt, and analysis of implementation gaps. The operational plan provides guidance to the government and its partners to effectively implement CMAM activities; accelerate the institutionalization and integration of service delivery within the health system; and provide a framework for M&E of CMAM activities over the next five years.

1.3 Scope of the Operational Plan

The CMAM Operational Plan guides overall operations at the national level and sets priorities for the next five years. The plan is designed to resolve existing challenges identified through a bottleneck analysis (BNA) of CMAM service delivery, an assessment of the CMAM supply chain, and a review of the 2009–2010 Operational Plan. The plan recognises the practical realities of management of acute malnutrition within the Malawi context; takes into consideration issues of coordination, governance, and advocacy; emphasises the need for measurable indicators with set targets to determine progress; and ensures access to those most in need of the services through its guiding principles. Lastly, the plan outlines the costs needed to implement each of the prioritised actions.

1.4 Goal

To contribute to a reduction in morbidity and mortality associated with acute malnutrition in children 0–15 years of age.

1.5 Objectives

The following five objectives will help maintain the rates of acute malnutrition in children at less than 5 percent throughout the 5-year period. Each of the objectives has a corresponding strategy and actions outlined in Section 3, and a monitoring and evaluation plan detailed in Section 4.1.

1. Improve availability and access to CMAM supplies and equipment.
2. Increase the competence of human resources involved in CMAM service delivery.
3. Increase effectiveness of CMAM coverage by improving access, acceptability, and utilization of services.
4. Strengthen the enabling environment for CMAM service delivery.
5. Improve monitoring and evaluation and promote the use of data and information to inform CMAM programming and planning.

1.6 Guiding Principles

The implementation of the CMAM Operational Plan 2017–2021 will be guided by a set of principles that are relevant to all strategic action areas. These principles are:

- **Equity**: CMAM services shall be provided to all vulnerable population groups in need, including infants, children, pregnant and lactating women, and other marginalised groups.
- **Gender equality and equity**: The design and implementation of CMAM services shall be non-discriminatory in addressing the nutritional needs of girls, boys, women, and men. The design and implementation of services shall also promote male involvement in the care of children and women for improved nutritional outcomes.

- **Health systems strengthening**: CMAM services will be provided in an integrated manner that links facility-based and community-based health and nutrition services along a continuum of care. The integrated health systems strengthening approach will involve human resources, health financing, governance, health information, medical supplies and products, and service delivery.
- **Effective coordination and partnerships**: All CMAM activities will be coordinated through the Department of Nutrition, HIV and AIDS (DNHA) and the Ministry of Health (MOH); effective inter- and multisectoral linkages will be created with health and other sectors, such as education, agriculture, and social welfare. The government will also endeavour to build and strengthen partnerships with multiple stakeholders, including the private sector and development partners.
- **Evidenced-based interventions**: CMAM service delivery will be informed by scientifically tested strategies and best practices that are most likely to lead to optimal outcomes.
- **Community empowerment and participation**: Partnering with and empowering communities with knowledge and skills to address the root causes of acute malnutrition will support better outcomes and engender community acceptance and ownership of CMAM services.
- **Good governance and accountability**: Effective leadership and governance from all government and non-government partners will facilitate efficient delivery of CMAM services.
- **Sustainability**: CMAM service delivery is designed to be economically sustainable and not dependent on donor funding. Both the government and the domestic private sector will be pro-actively engaged in ensuring the sustainability of service delivery.
- **Emergency preparedness and response.** During emergency and humanitarian situations, delivery of CMAM services will be intensified to meet the nutrition needs of the affected population through earlier case identification, referral, and provision of quality life-saving treatment and care.

2 Process of Developing the Operational Plan

The national CMAM Operational Plan 2017–2021 was developed through a participatory process involving national, zonal, and district stakeholders. Four main activities were conducted: a desk review and stakeholder consultation on the current status of CMAM and mapping a way forward; a BNA to understand the determinants of CMAM coverage; a draft of the operational plan using findings of the BNA; and a costing of the operational plan. Each step is described below.

2.1 Desk Review and Stakeholder Consultations

Alongside the review of the expired operational plan, several other documents were studied to identify implementation gaps and areas of harmonization with current national policy documents. Those documents included: *Assessment of Parallel CMAM Supply Chains for Harmonization and Integration into the National Supply System – Malawi* (Traas and Vreeke 2015); *National Nutrition Policy and Strategic Plan 2007–2012*; *Health Sector Strategic Plan 2011–2016* (MOH 2011); and the district implementation plans. The desk review was complemented by national stakeholder consultations conducted between 2014 and 2016. The aim of the desk review and consultations was to understand and document the extent to which objectives set in the retiring CMAM Operational Plan 2009–2012 were achieved and to identify lessons learnt and factors that contributed to the achievement of positive CMAM outcomes.

2.2 Bottleneck Analysis

A BNA was undertaken in 2014 by the MOH in collaboration with partners to understand the determinants of effective CMAM coverage and identify problem areas to be addressed. The determinants of coverage were reviewed under the following categories: enabling environment, demand, supply, and quality. For each of the four categories, a set of SAM and moderate acute malnutrition (MAM) indicators were defined and thresholds were set to categorise performance. Data used for the analysis were drawn from inpatient care, outpatient care, and Supplementary Feeding Programme (SFP) reports for the period of January to June 2014. Following this analysis, BNA workshops were held at national and regional levels to review the bottlenecks and identify their root causes and solutions. See Figure 1 for the national SAM and MAM BNA summary and Annexes 1 and 2 for details of the national BNA results for SAM and MAM.

Figure 1: National SAM and MAM BNA Summary

National SAM Dashboard Summary							
Supply of ready-to-use therapeutic food (RUTF)	Human Resources (HSA)	Human Resources (nurses & clinicians)	Geographic access – outpatient therapeutic programme (OTP)	Outreach	Initial Utilization	Continuous utilization	Quality
36% (Poor)	69% (Acceptable)	29% (Poor)	90% (Good)	24% (Poor)	44% (Acceptable)	42% (Acceptable)	36% (Poor)
National MAM Dashboard Summary							
Supply corn soy blend (CSB)	Human Resources (HSA)	Human Resources (nurses & clinicians)	Geographic access – SFP	Outreach	Initial Utilization	Continuous utilization	Quality
48% (Acceptable)	69% (Acceptable)	29% (Poor)	82% (Good)	24% (Poor)	23% (Poor)	22% (Poor)	15% (Poor)

Source: MOH/UNICEF 2014, Bottleneck analysis report for the national CMAM operational plan.

Several conclusions were made from the BNA and subsequent causality analysis. Firstly, CMAM commodities—both SAM and MAM—were not in adequate supply. Secondly, adequately trained human resources were lacking, with few clinicians, nurses, and HSAs in service having received comprehensive CMAM training. The lack of adequately trained health care providers was associated with the poor CMAM outcomes at the community and health facility levels. Effective community outreach and mobilization, and appropriate care of acutely malnourished children, require competent CMAM service providers. Thirdly, CMAM volunteers who provide outreach services under the supervision of HSAs were mostly inactive, and less than a quarter of the active volunteers had received training. Fourthly, effective CMAM coverage—defined as the proportion of children who were cured out of the total annual burden of acute malnutrition—was low, at 36 percent and 15 percent of SAM and MAM, respectively. The cumulative effect suggests low geographical coverage, low initial and continuous utilization of services, and poor outcome in SAM and MAM case management.

2.3 Development of the Operational Plan

Following the completion of the aforementioned analysis, the findings of the desk review and BNA were synthesised and strategic action areas were identified for the operational plan. The prioritised strategic action areas are based on the theory that the identified gaps in CMAM implementation can be addressed by implementing a set of technical solutions that will lead to the achievement of the operational plan's objectives. Annex 3 provides details on the critical bottlenecks and prioritised actions.

2.4 Costing the Operating Plan

The final step in the development of the operational plan was a costing exercise. The following series of activities were conducted: collection and analysis of programmatic and epidemiological data; stakeholder participation to reach consensus on the costs and assumptions used; and training of national, zonal, and district nutrition managers on the CMAM costing process. A CMAM costing tool, developed by FANTA in February 2012, with adaptations made to fit the Malawi context, was used.[1] The costing tool is a set of Excel spreadsheets that allow users to determine the cost of implementing CMAM at the national or sub-national level. The tool is based on the activity-based costing (ABC) method—combining the "ingredients" and "adaptation" approaches for cost calculations[2]—which provides a more comprehensive picture of the direct and indirect costs associated with an activity.

Several assumptions were made prior to the costing exercise. The assumptions made are divided among the scale assumptions (number of facilities and communities delivering CMAM services); epidemiological assumptions (estimated annual SAM and MAM caseload); and programmatic assumptions (number of years CMAM will be implemented; geographical scope for implementation; distances between facilities and districts, zones, and national health headquarters; prices of various commodities required for CMAM; and roles and responsibilities at the national, zonal, district, facility, and community levels of the health system).

Stakeholders agreed that costing should be done in U.S. dollars due to the current instability of the Malawi kwacha. Costs presented only cover the direct cost of implementing CMAM at the community, district, zonal, and national levels. They do not include the cost of government or partner staff level of effort (LOE) needed to support service delivery.

[1] The CMAM costing tool is available at http://www.fantaproject.org/tools/cmam-costing-tool.

[2] The "ingredients" approach details each input that activities are composed of and computing its quantities and unit costs. The "adaptation" approach uses existing costs similar to the ones to be computed for the new or scaled-up activities (e.g., staff costs).

3 Operational Plan Strategic Action Areas

The five strategic action areas of the operational plan align with the specific objectives of this plan. The following strategic action areas are presented in the sections below: improve availability and access to CMAM supplies and equipment, increase competence of human resources, increase coverage of CMAM services, strengthen the enabling environment, and improve M&E. Under each of the five strategic action areas, prioritised actions and estimated costs are presented. Additionally, guidance is provided on how CMAM service delivery can be intensified to respond to the needs of the affected population during emergency and humanitarian situations. Among the recommendations are early identification, referral, and treatment of cases and monitoring of trends and prevalence of acute malnutrition.

It is envisioned that District Health Management Teams (DHMT) will prioritise key actions based on district specific needs. Their priorities will be included in the district implementation plans.

3.1 Improve Availability and Access to CMAM Supplies and Equipment

Uninterrupted availability of sufficient CMAM supplies, such as ready-to-use therapeutic food (RUTF), therapeutic milk (F-75 and F-100), Rehydration Solution for Malnutrition (ReSoMal), and supplementary foods, such as super cereal plus (CSB++), corn soy blend (CSB +), and vegetable oil, are critical for successful implementation of CMAM services. According to the BNA, two thirds (64 percent) of assessed outpatient therapeutic programmes (OTPs) experienced stock-outs of RUTF during the assessment period.[3] Fifty-two percent of SFP sites experienced stock-outs of CSB.

Specific challenges facing the supply chain for RUTF and CSB were identified through the BNA and supply chain assessment. Long turnaround time for quality control and the lack of a local, internationally certified laboratory to conduct quality control checks for therapeutic foods posed challenges to local producers and manufacturers in meeting nationwide demand for RUTF. Despite RUTF being listed in the essential medicines and supplies list, it has not been prioritised in planning or budgetary allocation. There were also logistical problems with delivering supplies of CSB to health facilities.

In addition to therapeutic and supplementary food supplies, essential CMAM supplies, including medicines, anthropometric, and other medical equipment, are crucial to achieving optimal health and nutrition outcomes. (See Annexes 3 and 5 for the essential CMAM equipment included in the OTP/SFP and NRU kits and Annexes 4 and 6 for lists of SFP/OTP and NRU supplies, including food products, medicines, and other medical equipment.)

Based on the findings of the BNA and the requirements set out in the national CMAM guidelines, this operational plan aims to establish and strengthen systems that will improve availability and access to CMAM supplies and equipment. Prioritised actions towards achieving this goal are listed in Table 3.1.

[3] The BNA considers a facility to have experienced a stock-out if they were without RUTF/CSB for at least a 1-week period between January and June 2014. The BNA assessed only outpatient therapeutic programme (OTP) and SFP sites.

Table 3.1: Prioritised Actions to Improve Availability and Access to CMAM Supplies and Equipment

1.	Integrate CMAM supplies and equipment into the national health commodity logistics system
2.	Advocate to Central Medical Stores (CMS) for increased allocation and long-term funding for RUTF as an essential drug and/or supply
3.	Ensure manufacturers and suppliers register therapeutic and supplementary food supplies with the Pharmacy Medicines and Poisons Board (PMPB)
4.	Adopt international technical specifications or reference ranges for quality control checks for locally produced therapeutic and supplementary food supplies
5.	Perform quality control certification of therapeutic and supplementary food supplies at Malawi Bureau of Standards (MBS)
6.	Conduct annual national quantification of CMAM supplies with all stakeholders
7.	Procure essential CMAM supplies and equipment based on annual needs
8.	Implement a national CMAM supplies real-time monitoring and reporting system at all levels
9.	Train service providers and managers on CMAM supplies and logistics management
10.	Establish sufficient warehouses and safe storage facilities at central, district, and facility levels
11.	Improve efficiency of transport of SAM and MAM supplies to the health facility and beneficiary

Below are the summary costs of the prioritised actions to improve availability and accessibility to CMAM supplies and equipment. Detailed costs of these activities are presented in Annex 7.

Table 3.2: Cost of Prioritised Actions: Supplies and Equipment

	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Year 4 (US$)	Year 5 (US$)
Actions 1, 2, 4 & 5					
Technical coordination, and advocacy meetings on supply chain management	2,901	2,901	2,901	2,901	2,901
Action 3					
Registration of therapeutic and supplementary foods with PMPB	3,100	1,300	1,300	1,300	1,300
Action 6					
Annual national review and quantification workshop	8,034	8,034	8,034	8,034	8,034
Action 7					
Therapeutic food supplies for management of SAM in children under 5[4]	3,735,202	3,803,728	3,895,137	3,980,340	4,066,859
Therapeutic food supplies for management of SAM in children 5–15	911,817	943,076	974,648	1,006,532	1,038,572
Medicines and other supplies for management of SAM in children under 5[8]	1,228,183	1,549,009	1,005,981	1,021,852	1,037,968
Medicines and other supplies for management of SAM in children 5–15	98,587	100,668	104,023	107,412	110,816
Supplementary food supplies for management of MAM in children under 5	3,119,230	3,192,200	3,268,395	3,347,819	3,430,317
Supplementary food supplies for management of MAM in children 5–15	57,309	59,284	61,266	63,260	65,288
Supplementary food supplies for management of MAM in pregnant and lactating women	699,841	722,003	744,912	768,586	793,040
Medicines and other supplies for management of MAM in children under 5	537,813	550,417	563,565	577,208	591,369
Medicines and other supplies for management of MAM in children 5–15	10,866	11,253	11,622	12,003	12,390
Action 8					
Cost of implementing the real-time monitoring system is budgeted for under Strategic Area 3.5, Activity 6.					
Action 9					
Logistics management training for facility-based service providers	298,243	334,515	334,515	334,515	334,515
Logistics management training for managers	153,783	153,783	153,783	153,783	153,783
Action 10					
Storage of therapeutic food for SAM—cost of renting space	10,250	10,471	10,742	11,001	11,263
Storage of supplementary food for MAM—cost of renting space	45,223	46,372	47,568	48,810	50,099

[4] Also includes HIV+ children under 5 with MAM, per national CMAM guideline treatment protocol.

	Year 1 (US$)	**Year 2 (US$)**	**Year 3 (US$)**	**Year 4 (US$)**	**Year 5 (US$)**
Action 11					
Transport of therapeutic food supplies for SAM	194,473	210,193	210,193	210,193	210,193
Transport of supplementary food supplies for MAM	1,007,152	1,031,785	1,057,301	1,083,711	1,110,976
Total Cost	**12,122,007**	**12,730,992**	**12,455,886**	**12,739,260**	**13,029,683**

3.2 Increase Competence of Human Resources Involved in CMAM

An adequate supply of well-trained health care providers is critical to obtaining optimal health and nutrition outcomes. Achieving this goal requires addressing multiple factors: availability of adequate numbers of health care providers, including medical officers, clinical officers, medical assistants, nurses/midwives, HSAs, nutritionists and dieticians; up-to-date training for health care providers; and availability of treatment protocols and other resources.

Through the BNA, several gaps in knowledge of human resources contributing to inadequate clinical outcomes were identified. For example, while 69 percent of HSAs had been trained on CMAM within the past year, only 29 percent of clinicians had been. To address these gaps, two levels of capacity development are essential: pre-service and in-service. During pre-service training, nurses and clinicians are not acquiring the competencies required for management of acute malnutrition because CMAM is not included in the medical and nursing curricula. During internships, they are rarely supervised on nutrition related activities, such as CMAM, including the management of SAM with medical complications in paediatric care and treatment. Moreover, in-service training materials have not been updated to reflect the most up-to-date treatment protocols.

The prioritised actions outlined under this strategic action area aim to build the competence of the frontline health workforce—such as nurses, clinicians, HSAs, and home craft workers—in the management of acute malnutrition according to the national guidelines. It also calls for continued supportive supervision and mentorship to reinforce knowledge and skills acquired through training.

Table 3.3: Prioritised Actions to Increase the Competence of Human Resources Involved in CMAM Service Delivery

1. Establish a practitioners' committee to ensure nutrition content in health professional pre-service training curricula remains current
2. Review the current pre-service training curricula for health professionals to understand gaps and recommend areas to be updated
3. Provide technical update to the pre-service training curricula for nurses, clinicians and HSAs to include CMAM theory and practice
4. Include management of acute malnutrition as part of the nurse and clinician internship program
5. Conduct CMAM training for pre-service tutors and lecturers teaching in the medical and nursing training institutions
6. Conduct CMAM in-service training for all providers in the NRU, OTP, and SFP sites
7. Conduct CMAM training for all district health management teams (DHMT)
8. Develop a computerized training tracking system for personnel trained in CMAM
9. Develop mentorship and supportive supervision guidelines and tools for facility-based CMAM service providers
10. Conduct mentorship and supportive supervision visits for facility-based CMAM service providers in NRU, OTP, and SFP sites

Below are the summary costs of prioritised actions to increase the competence of human resources involved in CMAM service delivery. Detailed costs of these activities are presented in Annex 8.

Table 3.4: Cost of Prioritised Actions: Competence of Human Resources

Item	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Year 4 (US$)	Year 5 (US$)
Action 1					
Pre-service training practitioners' committee bi-annual meetings	1,934	1,934	1,934	1,934	1,934
Action 2					
Assessment of pre-service training curricula for health professionals	23,270	--	--	--	23,270
Actions 3–4					
CMAM technical update workshops with medical, nursing, HSAs and other health professional training schools	8,125	--	8,125	--	8,125
Action 5					
CMAM training for lecturers and tutors in medical, nursing, HSAs and other health professional training schools	68,751	68,751	68,751	68,751	68,751
Action 6–7					
Outpatient care and SFP in-service training of providers	835,020	777,082	683,847	683,847	683,847
Inpatient care in-service training of providers	476,811	1,013,856	406,490	406,490	406,490
CMAM in-service training of trainers and district managers	84,023	84,023	84,023	84,023	84,023
Action 8					
To be included as part of real-time monitoring system budgeted for under Strategic Areas 3.5, Activity 6					
Action 9					
Development/review of mentoring and supportive supervision tools and system	8,034	--	--	--	--
Action 10					
Mentoring and supportive supervision from district to inpatient care, outpatient care, and SFP	129,135	140,088	126,752	126,752	126,752
Mentoring and supervision from national to the district level	6,162	6,162	6,162	6,162	6,162
Total Cost	**1,641,265**	**2,091,896**	**1,386,084**	**1,377,959**	**1,409,354**

3.3 Increase CMAM Coverage

Although geographic coverage of CMAM in Malawi is high, with 90 percent of health facilities delivering SAM services nationally, hard-to-reach areas rarely receive much needed services. Some of the districts with low SAM coverage are Kasungu, Karonga, and Mzimba South, which reported a coverage rate lower than 75 percent. Similarly, the geographic coverage of MAM services is high nationally (82 percent); however, Ntcheu, Mulanje, and Nkhatabay districts have a coverage rate lower than 60 percent.

Effective community outreach can provide active case identification, referral, and follow-up, helping to increase access to services for underserved groups. Currently, not all cadres of community-based service providers, including volunteers and HSAs, are actively engaged in CMAM activities. There is also a high rate of attrition among trained community volunteers. Correspondingly, the initial utilization of CMAM services—measured as the number of children enrolled in treatment of SAM and MAM compared to the expected annual caseload—was low nationally. Approximately 44 percent of the expected SAM cases were enrolled in outpatient care, while 23 percent of expected MAM cases were enrolled in the SFP—an indication that more efforts are needed to increase case identification and referral for treatment.

Support for CMAM at community level therefore needs to be strengthened to improve enrolment. Competent community service providers are important in sensitizing on better health-seeking behaviour and better infant and young child feeding practices. Initiatives to improve community involvement for CMAM are also necessary.

The operational plan aims to improve geographic coverage and access to CMAM services through intensified community outreach and mobilization and by establishing and expanding the network of community-based frontline workers who can identify, refer, and follow up cases of acute malnutrition. The plan will also promote awareness and understanding of the causes, consequences, and prevention of acute malnutrition at community level; create and enhance initial demand; and improve utilization of CMAM service through the prioritised actions below.

Table 3.5: Prioritised Actions to Increase Coverage of CMAM Services

1. Conduct coverage surveys to determine coverage of CMAM services and barriers to access
2. Re-establish community outreach activities countrywide
3. Conduct training of community-based CMAM service providers, including volunteers
4. Harmonise community mobilization efforts across community groups
5. Institutionalise a harmonised system for incentivizing community volunteers
6. Conduct community sensitization and awareness campaigns on acute malnutrition causes, consequences, prevention, and treatment
7. Develop mentorship and supportive supervision guidelines and tools for community-based CMAM service providers and volunteers
8. Conduct integrated mentorship and supportive supervision visits for community-based CMAM service providers and volunteers

Below are the summary costs of prioritised actions to improve the effectiveness of CMAM coverage, including access, acceptability, and utilization of services. Detailed costs of these activities are presented in Annex 9.

Table 3.6: Cost of Prioritised Actions: Coverage

Item	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Year 4 (US$)	Year 5 (US$)
Action 1					
Coverage survey	125,000	--	125,000	--	--
Actions 2–5					
Community outreach training of community volunteers and leaders	235,606	1,558,905	1,558,746	1,558,746	1,558,746
Action 6					
Establishment of community outreach (initial assessment and sensitization meetings)	80,302	449,852	20,867	20,867	20,867
Action 7					
No additional cost is required. The cost is already accounted for under Action 9, Section 3.2					
Action 8					
Mentorship and supportive supervision from district-based and health facility-based health care providers to the communities, and routine outreach activities	11,504,424	16,295,187	9,650,232	9,650,232	9,650,232
Total	**11,945,332**	**18,303,944**	**11,354,845**	**11,229,845**	**11,229,845**

3.4 Strengthen the Enabling Environment for CMAM Services

Creating an enabling environment that contributes to institutional coherence and engagement at the national, district, facility, and community level is an ongoing challenge. There are two areas that require improvement.

Firstly, although the institutional arrangement and coordination structures for the national nutrition and health policy are outlined in the National Multi-Sector Nutrition Policy 2017–2021 and HSSP 2011–2016, in practice, CMAM activities are insufficiently integrated. Efforts to link CMAM with other ongoing and related programmes, such as HIV care and treatment, remain weak. Linkages between complementary services, such as IYCF, integrated management of childhood illness (IMCI), and livelihood programmes (e.g., social protection and food security), remain weak. These weak linkages are hampering potential synergy in the prevention and management of acute malnutrition. By ensuring that those at risk of malnutrition are referred to complementary services at the facility and community level, new and relapsing cases of acute malnutrition can be prevented. Additionally, service providers of these complementary interventions should be aware of the signs and symptoms of acute malnutrition to ensure early referral and treatment. These actions, taken together, will ensure integration of services within and beyond the health sector.

Secondly, some key policymakers do not have comprehensive knowledge about the importance of including CMAM in the package of nutrition interventions and the impact acute malnutrition can have on developmental outcomes across sectors. Decision makers need to understand the critical role nutrition and CMAM play in improving the country's socioeconomic development. Continued advocacy will prompt stakeholders and policymakers to have a common understanding of the magnitude of the problem and their role in addressing existing gaps in service provision. Advocacy is thus a critical element to raise the profile for CMAM activities, specifically for annual government budgetary allocation for service delivery. Since development partners contribute significantly to CMAM funding, they should also be targeted by advocacy activities.

The operational plan seeks to improve the current institutional arrangement for coordinating CMAM at national, district, facility, and community levels. The plan also seeks to strengthen linkages between CMAM and other nutrition-specific and nutrition-sensitive interventions. Additionally, the plan aims at strengthening advocacy efforts for improved CMAM outcomes, policy formulation, planning, and budget allocation at various levels.

Table 3.7: Prioritised Actions to Improve the Enabling Environment for CMAM

1. Update the national CMAM guidelines, ensuring integration with other health and nutrition interventions
2. Integrate implementation of CMAM with other health services, such as IMCI, HIV, WASH, and Scaling Up Nutrition (SUN) initiatives
3. Operationalise the Targeted Nutrition Programs (TNP) technical working group for improved coordination and monitoring of implementation of the operational plan
4. Integrate CMAM advocacy activities into the national nutrition advocacy plan
5. Develop quarterly CMAM policy and technical briefs to share data, best practices, and lessons learnt
6. Conduct advocacy campaigns for increased awareness of CMAM among national level policymakers
7. Advocate prioritisation and funding of CMAM by the government
8. Advocate increased CMAM funding from development partners
9. Increase financial and logistical support for the CMAM focal persons at national, regional, and district levels
10. Establish performance based incentives (PBI) with the CMAM focal persons with clear articulation of targets

Below are the summary costs of prioritised actions to improve the enabling environment for CMAM. Detailed costs of these activities are presented in Annex 10.

Table 3.8: Cost of Prioritised Actions: Enabling Environment

Item	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Year 4 (US$)	Year 5 (US$)
Action 1					
Update of national CMAM guidelines	27,351	--	--	27,351	--
Actions 2–4					
Quarterly TNP technical working group meetings	3,868	3,868	3,868	3,868	3,868
Action 5					
Development and printing of quarterly CMAM policy and technical briefs	22,000	22,000	22,000	22,000	22,000
Actions 6–8					
Advocacy campaigns (2 per year)	22,614	22,614	22,614	22,614	22,614
Actions 9–10					
These costs are captured in other activity budgets (e.g., training, supportive supervision, mentoring)					
Total	**75,833**	**48,482**	**48,482**	**75,833**	**48,482**

3.5 Improve Monitoring, Evaluation, and Information Management

Information sharing for CMAM has not been satisfactory. There has been limited use of data to improve quality of care and programming at community, facility, district, and national levels. MOH, UNICEF, and other partners are supporting CMAM data collection and analysis through the national database and the health information management system. However, data is not transmitted in a timely manner or analysed at the source for immediate decision making. Capacity in CMAM data collection and utilization remains a challenge. A knowledge management system needs to be developed and supported across the entire CMAM programme.

This strategy aims to generate accurate and reliable monitoring and evaluation data that can inform and improve CMAM service delivery through the prioritised actions listed below.

Table 3.9: Prioritised Actions to Improve CMAM Monitoring, Evaluation, and Information Management

1. Identify country-level CMAM operational research questions that address knowledge and implementation gaps
2. Hold annual CMAM dissemination conferences
3. Conduct annual national review of operational plan implementation
4. Conduct midterm and endline evaluations of operational plan implementation
5. Conduct quarterly DHMT review workshops of CMAM data and programme outcomes
6. Establish real-time data management system for CMAM alerts on preparedness and response
7. Conduct CMAM data management trainings, and use of District Health Information Software – Version 2 (DHIS-2) for all district HMIS officers
8. Provide logistical and technical support to districts and facilities in the use of DHIS-2

Below are the summary costs of prioritised actions to improve CMAM monitoring, evaluation, and information management. Detailed costs of these activities are presented in Annex 11.

Table 3.10: Cost of Prioritised Actions: M&E

Item	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Year 4 (US$)	Year 5 (US$)
Action 1					
Meeting to identify operational research needs	8,034	--	--	--	--
Action 2					
Annual CMAM dissemination conference	22,334	22,334	22,334	22,334	22,334
Action 3					
Annual national review of CMAM operational plan	26,535	26,535	26,535	26,535	26,535
Action 4					
Midterm evaluation of CMAM operational plan	--	--	40,135	--	--

Endline evaluation of CMAM operational plan	--	--	--	--	40,135
Action 5					
Quarterly district data review meetings	452,972	452,972	452,972	452,972	452,972
Action 6					
Develop and maintain real-time CMAM monitoring and reporting system	50,000	60,000	65,000	70,000	75,000
Action 7					
CMAM data management and DHIS-2 training of managers and information officers	15,722	15,722	15,722	15,722	15,722
Action 8					
There is no budget included for logistical support. Cost of internet access and other logistical support to operation of DHIS-2 is provided by the Central Monitoring and Evaluation Division (CMED).					
Total	**575,597**	**577,563**	**622,698**	**587,563**	**632,698**

3.6 Intensifying CMAM Services to Respond to Emergency and Humanitarian Situations

Climate change has had an impact on Malawi's weather patterns, affecting agricultural productivity and household food security. The operational plan includes estimated expenses that will be required beyond regular CMAM operating costs to respond to emergencies and associated increases in SAM and MAM caseloads. The prioritised CMAM actions should be implemented as part of the integrated national nutrition cluster response plan.

To estimate additional supply requirements during an emergency, the incidence used to calculate anticipated SAM and MAM caseload was increased from 1.6 to 3.0 for SAM, and from 1.5 to 3.0 for MAM. This change would result in an increased caseload of 54 percent for SAM and 60 percent for MAM.

Table 3.11: Prioritised Actions to Intensify CMAM Services to Respond to Emergency and Humanitarian Situations

1.	Intensify case finding through community outreach and mobilization
2.	Procure additional supplies and equipment to meet the increased SAM caseload
3.	Procure additional supplies and equipment to meet the need for increased MAM caseload
4.	Conduct refresher training of CMAM service providers on inpatient care, outpatient care, and SFP
5.	Intensify the frequency of government and CMAM partner coordination meetings
6.	Intensify real-time monitoring and reporting of CMAM service delivery
7.	Conduct Standardised Monitoring and Assessment of Relief and Transitions (SMART) nutrition surveys during the emergency and post-emergency period
8.	Conduct coverage survey during an identified emergency period

Below are the summary costs to strengthen the response and management of SAM and MAM cases in emergency and humanitarian situations. The budget below is meant to be illustrative of the annual costs required during an emergency period. Note that the costs should be updated to reflect the annual population and/or caseload for the time period of a declared emergency.

Table 3.12: Cost of Prioritised Actions: Illustrative Annual Emergency Budget

Item	Annual Budget (US$)
Action 1	
Intensive case finding through community outreach and mobilization	16,295,187
Action 2 and 3	
Emergency therapeutic food, storage, and transport for SAM cases— under 5	2,314,434
Emergency therapeutic food and storage for SAM cases—adolescents ages 5–15	61,097
Emergency medical and other supplies for SAM cases—under 5	560,503
Emergency medical and other supplies for SAM cases—adolescents ages 5–15	6,691
Emergency supplementary food, storage, and transport for MAM cases—under 5	2,170,387
Emergency supplementary food, storage, and transport for MAM cases—adolescents ages 5–15	53,585
Emergency supplementary food, storage, and transport for MAM cases—pregnant and lactating women (PLW)	533,969
Emergency medical and other supplies for MAM cases—under 5	354,822
Emergency medical and other supplies for MAM cases—adolescents ages 5–15	7,434
Action 4	
Refresher training of CMAM service providers on inpatient care	835,020
Refresher training of CMAM service providers on outpatient care and SFP	476,811
Action 5	
Monthly government and CMAM partner coordination meetings	11,604
Action 6	
Intensified real-time monitoring and reporting data system	60,000
Action 7	
SMART survey—baseline	125,000
SMART survey—endline	125,000
Action 8	
Coverage survey	125,000
Total	**24,116,544**

4 National CMAM Monitoring and Evaluation Plan

Effective and efficient implementation of the CMAM operational plan depends on accurately tracking progress and performance, evaluating impact, and ensuring accountability at all operational levels. To ensure the goal, outcomes, and objectives of the operational plan are achieved, indicators and annual targets have been identified for each prioritised activity. These indicators are included in the M&E framework presented in Table 4.1 below.

Data for the indicators detailed below should be collected per the schedules indicated in the tables and complied by MOH on an annual basis. Each district should consolidate its CMAM data, which will then be aggregated at the national level. As detailed in Section 3.5, national and district level stakeholders should use this data to review progress towards operational plan objectives and targets on an annual basis. In addition, a midterm (Year 3) and endline (Year 5) evaluation of the operation plan shall be conducted. Guidance to districts on CMAM data collection is provided in Section 6 of this plan.

Table 4.1: National CMAM Monitoring and Evaluation Plan

Objective 1: Improve availability and access to CMAM supplies and equipment													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Annual Targets**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
1. Integrate CMAM supplies and equipment into the national health commodity logistics system	Percentage of CMAM supplies and equipment integrated in national health commodity logistics system	Measure of the CMAM supplies and equipment managed through the national commodity system. See Annexes 3 and 4 for the list of CMAM supplies and equipment.	CMS supply catalogue	Year 1	100%	100%	100%	100%	100%	100%	14,505	MOH	CMS
2. Advocate increased allocation and long-term funding for RUTF as an essential drug and/or supply to Central Medical Stores (CMS)	Percentage increase in funding allocation per year	Measure of the percentage increase in funding allocated by the CMS to procure and distribute RUTF as an essential drug and/or supply	CMS budget	Annually	0.05%	0.04%	0.04%	0.05%	0.05%	0.04%	Included under action 1	MOH	CMS
3. Ensure manufacturers and suppliers register therapeutic and supplementary food supplies with Pharmacy Medicines and Poisons Board (PMPB)	Number of therapeutic and supplementary food supplies registered with PMPB	Measure of the therapeutic (RUTF, F-75, F-100, ReSoMal and CMV) and supplementary (CSB++ or CSB+) food commodities registered with PMPB	PMPB list of registered suppliers Annual product certification	Year 1 Year 2, 3, 4 & 5	7	7	7	7-	7	7	8,300	MOH	PMPB
4. Adopt international technical specifications or reference ranges for local quality control checks of locally produced therapeutic and supplementary food supplies	Number of locally produced therapeutic and supplementary food supplies with technical specifications	Measure of the therapeutic (RUTF, F-75, F-100, ReSoMal and CMVl) and supplementary (CSB++ or CSB+) food commodities with technical specifications developed	MBS records	Year 1	7		7	--	--	--	Included under action 1	MOH	UNICEF WFP, manufacturers, MBS
5. Perform quality control certification of therapeutic and supplementary food supplies at Malawi Bureau of Standards (MBS)	Number of therapeutic and supplementary food supplies registered with MBS	Measure of the therapeutic (RUTF, F-75, F-100, ReSoMal and CMV) and supplementary (CSB++ or CSB+) food commodities certified by MBS	MBS records	Year 1, 2, 3, 4, 5	7	7	7--	7--	7--	7--	Included under action 1	MOH	MBS

Objective 1: Improve availability and access to CMAM supplies and equipment													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Annual Targets**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
6. Conduct annual national quantification of CMAM supplies with all stakeholders	Annual quantification workshops held within each MOH fiscal year	Measure of the number of annual quantification workshops held with all stakeholders (MOH, national, and district representatives, CMAM partners, RUTF and CSB++/CSB+ manufacturers). See Annexes 3 and 4 for the list of supplies and equipment to be quantified annually.	Meeting minutes	Annually	5	1	1	1	1	1	40,170	MOH	CMS, UNICEF WFP, NGOs, manufacturers,
7. Procure essential CMAM supplies and equipment based on annual needs	Percentage of essential CMAM supplies and equipment procured annually	Measure of the quantity of CMAM supplies and equipment procured compared to the national need. See Annexes 3 and 4 for the list of essential supplies and equipment.	CMS, MOH, UNICEF, WFP and NGO record of procured commodities	Quarterly	100%	100%	100%	100%	100%	100%	53,991,666	MOH	CMS, UNICEF, WFP, and NGOs
8. Implement a CMAM supplies monitoring and reporting system at all levels	CMAM supplies monitoring and reporting system in place	Real-time monitoring and reporting system that captures data at the facility, district, and national level in place and interfaced with DHIS-2	MOH records	Year 2	1		1	--	--	--	Cost included under real-time monitoring system	MOH	CMS, UNICEF, WFP, and NGOs
9. Train service providers and managers on CMAM supplies and logistics management	Number of service providers trained on CMAM supplies and logistics management	Measure of the number of facility-based service providers trained on CMAM supplies and logistics management, disaggregated by sex	MOH and partner training records	Annually	3649	657	748	748	748	748	1,636,303	MOH	UNICEF, WFP, and NGOs
	Number of managers trained on CMAM supplies and logistics management	Measure of the number of district-, zonal-, and national-level managers trained on CMAM supplies and logistics management, disaggregated by sex	MOH training records	Annually	1450	290	290	290	290	290	768,915	MOH	UNICEF, WFP, and NGOs

Objective 1: Improve availability and access to CMAM supplies and equipment													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Annual Targets**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
10. Establish sufficient warehouses and safe storage facilities at central, district, and facility levels	Percentage of health facilities and districts with adequate storage space for therapeutic and supplementary food supplies	Measure of OTP/SFP and NRU site, district, and region with sufficient storage space to accommodate at least 2-month supply of therapeutic and supplementary food for estimated caseload	MOH national and district records	Quarterly	100%	50%	100%	100%	100%	100%	291,799	MOH	UNICEF WFP and NGOs
11. Improve efficiency of transport of SAM and MAM supplies to the health facility and beneficiary	Percentage of facilities experiencing stock-outs of essential CMAM supplies	Proportion of health facilities reporting stock-out of RUTF, F-75, F-100, ReSoMal, or CSB++/CSB+ on hand for a minimum 1-week period during the quarter	Facility records, CMS records	Quarterly	< 10%	< 10%	< 10%	< 10%	< 5%	< 5%	6,326,170	MOH	CMS, UNICEF, WFP and NGOs

Objective 2: Increase the competence of human resources involved in CMAM service delivery													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	Year 2	Year 3	Year 4	Year 5			
1. Establish a practitioners' committee to ensure nutrition content in health professional training curricula remains current	Committee established			Year 1	Committee established	1	--	--	--	--	--	MOH	Universities, Training Institutions and other partners
	Number of committee meetings per year	Measure of academic staff who participate in the annual meetings	Meeting minutes	Annually	10	2	2	2	2	2	9,670	MOH	Universities, Training Institutions and other partners
2. Review the current pre-service training curricula for nurses and clinicians to understand gaps and recommend areas for update	Assessment conducted	Measures the number of assessments conducted	Assessment report	Year 1 (baseline) and Year 5 (post-intervention)	2	1	--	--	--	1	46,540	MOH	Universities, Training Institutions and other partners

Objective 2: Increase the competence of human resources involved in CMAM service delivery													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	Year 2	Year 3	Year 4	Year 5			
3. Provide technical update to the pre-service training curricula for nurses, clinicians and HSAs to include CMAM theory and practice	Number of pre-service training curricula updated	Measure of the pre-service training curricula that have been updated for frontline workers (medical officers, clinical officers, medical assistants, nurses/midwives, HSAs)	Pre-service training curricula	Bi-annually	5 frontline workers curricula	5		5		5	24,375	MOH	Universities, Training Institutions and other partners
4. Include management of acute malnutrition as part of the nurse and clinician internship programme	Number of interns and students placed in NRUs, OTP, SFP sites, district or national level	Measure of the number of students who have an internship or student attachment project on CMAM	MOH and training institution records	Annually	Interns placed per year						Included under action 3	MOH	Universities and training institutions, UN agencies and NGOs
5. Conduct CMAM training for tutors and lecturers teaching in medical and nursing training institutions	Number of tutors and lectures trained per year	Measure of the number of tutors and lecturers trained on CMAM, disaggregated by sex	MOH and partner training records	Annually	175	35	35	35	35	35	343,755	MOH	Universities and training institutions
6. Conduct CMAM training for all service providers in the NRU, OTP, and SFP sites	Number trained on inpatient care (NRU)	Measure of the number of facility-based service providers trained on inpatient care (NRU), disaggregated by sex	MOH and partner training records	Quarterly	21,850	3,800	8,240	3,270	3,270	3,270	2,710,137	MOH	UNICEF, WFP and NGOs
	Number trained on outpatient care (OTP, SFP)	Measure of the number of facility-based service providers trained on outpatient care (OTP), disaggregated by sex	MOH and partner training records	Quarterly	9,924	2,116	2,057	1,917	1,917	1,917	3,663,643	MOH	UNICEF, WFP and NGOs
7. Conduct CMAM training for all district health management teams (DHMT)	Number of DHMT members trained	Measure of the number of DHMT members trained on CMAM, disaggregated by sex	MOH and partner training records	Annually	1,925	385	385	385	385	385	420,115	MOH	UNICEF, WFP and NGOs
8. Develop a computerized training tracking system for personnel trained in CMAM	Training tracking system in place	An electronic tracking system in place that captures name, location, and designation of all service providers and managers trained on CMAM	MOH record/system managed by Nutrition/CMED	Year 2	1		x				--	MOH	UNICEF, WFP, NGOs and other partners

Objective 2: Increase the competence of human resources involved in CMAM service delivery													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	Year 2	Year 3	Year 4	Year 5			
9. Develop mentorship and supportive supervision guidelines and tools for facility-based CMAM service providers	Guidelines and tools developed for OTP, SFP, and NRU mentoring and supportive supervision	A mentoring and supervision guide/tool is defined as an instrument designed to facilitate the process of conducting post-training mentorship and coaching or supportive supervision at the district or facility level	MOH records	Year 1	One mentorship and supervision guide for each of the CMAM components (OTP, NRU, and SFP).	X					8,034	MOH	WHO, UNICEF, WFP, NGOs and other partners
10. Conduct mentorship and supportive supervision visits for facility-based CMAM service providers in NRU, OTP, and SFP sites	Number of mentorship and supportive supervision visits per year	A measure of the number of mentorship and supportive supervision visits conducted using the standard guide/tool at the district, OTP, NRU, and SFP	MOH records	Quarterly		x	x	x	x	x	680,289	MOH	UNICEF, WFP, NGOs and other partners

Objective 3: Increase CMAM coverage by improving access, acceptability, and utilization of services													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
1. Conduct coverage surveys regularly to determine coverage of and barriers to access of CMAM services	SLEAC/SQUEAC Coverage survey conducted in all districts	Measure of the number of coverage surveys conducted	Coverage survey report	Year 1 and Year 3	2 nationally representative surveys	1	--	1	--		250,000	MOH	UNICEF, WFP, NGOs and other partners
2. Re-establish community outreach activities countrywide	Percentage of communities with outreach activities (active case-finding, referral and follow-up) re-established	Measure of the number of communities that have community assessment conducted, and active case finding, referral, and mobilization activities re-established and conducted on a quarterly basis	MOH and partner training records	Annually	100%	50%	75%	100%	100%	100%	592,755	MOH	UNICEF, WFP, NGOs and other partners

Objective 3: Increase CMAM coverage by improving access, acceptability, and utilization of services													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
3. Conduct training of community-based CMAM service providers, including volunteers	Number of HSAs, community-based volunteers, and community leaders trained on CMAM	Measure of the number of HSAs, community-based volunteers (care group, CMAM, and health) and opinion leaders trained on CMAM community outreach, disaggregated by sex	MOH and partner training records	Quarterly	3,515,900	128,022	846,970	846,970	846,970	846,970	6,470,749	MOH	UNICEF, WFP, NGOs and other partners
4. Harmonise community mobilization efforts across community groups	Percentage of communities that conduct harmonised activities through care groups	Measure of the number of communities that harmonise CMAM activities with care group activities	MOH and partner training records	Quarterly	100%	50%	75%	100%	100%	100%	Included under action 2	MOH	UNICEF, WFP, NGOs and other partners
5. Institutionalise a harmonised system for incentivizing community volunteers	Percentage of health facilities that provide volunteers with recommended incentive	A measure of the number of health facilities that provide community volunteers with incentives, such as a transport allowance during trainings, T-shirts, and priority services at the health centre	MOH and partner training records	Quarterly	100%	50%	75%	100%	100%	100%	Included under action 2	MOH	UNICEF, WFP, NGOs and other partners
6. Conduct community sensitization and awareness campaigns on acute malnutrition causes, consequences, prevention, and treatment	Number of community campaigns conducted per year	A measure of the number of outreach campaigns conducted, disaggregated by district	MOH and partner training records	Quarterly							Included under action 8	MOH	UNICEF, WFP, NGOs and other partners
7. Develop mentorship and supportive supervision guidelines and tools for community-based CMAM service providers and volunteers	Guidelines and tools developed for community outreach mentoring and supportive supervision	A mentoring and supervision guide/tool is defined as an instrument designed to facilitate the process of conducting post-training mentorship and coaching or supportive supervision at community level	MOH and partner records	Year 1	One community outreach mentorship and supervision guide	x					Cost integrate with Objective 2, priority action 8 above.	MOH	WHO, UNICEF, WFP, NGOs and other partners

Objective 3: Increase CMAM coverage by improving access, acceptability, and utilization of services													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
8. Conduct mentorship and supportive supervision visits for community-based CMAM service providers and volunteers, including community mobilization activities	Number of mentorship and supportive supervision visits per year	A measure of the number of mentorship and supportive supervision visits conducted using the standard guide/tool at the community level	MOH and partner records	Quarterly		x	x	x	x	X	56,750,307	MOH	UNICEF, WFP, NGOs and other partners

Objective 4: Strengthen the enabling environment for CMAM service delivery													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
1. Update the national CMAM guidelines, ensuring integration with other health and nutrition interventions	National CMAM guidelines updated	National CMAM guidelines that integrate elements of IMCI, HIV, WASH, and SUN	MOH and partner records	Year 1 and Year 4	Guidelines reviewed and updated in years 1 and 4	x			x		54,702	MOH	WHO, UNICEF, WFP, NGOs and other partners
2. Integrate implementation of CMAM with other health services, such as IMCI, HIV, WASH, and SUN initiatives	Percentage of health facilities that implement CMAM integrated with IMCI, HIV, WASH, and SUN	A measure of the number of health facilities that integrate CMAM service delivery with IMCI, HIV, WASH, and SUN	MOH records	Annually	100%	100%	100%	100%	100%	100%	19,340	MOH	UNICEF, WFP, NGOs and other partners
3. Operationalise the Targeted Nutrition Programs (TNP) technical working group for improved coordination and monitoring of operational plan implementation	Number of TNP technical working group meetings held per year	A measure of the number of TNP technical working group meetings held annually	Meeting minutes	Annually	20	4	4	4	4	4	Included undue action 2	MOH	UNICEF, WFP, NGOs and other partners

Objective 4: Strengthen the enabling environment for CMAM service delivery													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
4. Integrate CMAM advocacy activities into the national nutrition advocacy plan	CMAM activities included in national nutrition advocacy plan		National Nutrition Advocacy Plan	Year 1		x	--	--	--	--	Included undue action 2	MOH	DNHA
5. Develop quarterly CMAM policy and technical briefs to share data, best practices, and lessons learnt	Number of quarterly CMAM policy and technical briefs produced and delivered	Measures the number of CMAM briefs developed and disseminated to policymakers and implementers on a quarterly basis	MOH records	Annually	20	4	4	4	4	4	110,000	MOH	UNICEF, WFP, NGOs and other partners
6. Conduct advocacy campaigns for increased awareness of CMAM among national-level policymakers	Number of advocacy campaigns conducted per year	A measure of the number of advocacy campaigns conducted and attended by policymakers and development partners annually	MOH and partner records	Annually	5	1	1	1	1	1	113,070	MOH	UNICEF, WFP, NGOs and other partners
7. Advocate for prioritisation and funding of CMAM by the government	Percentage increase in funding allocation by government per year	Measure of the percentage increase in CMAM funding allocated by the government	Government (MOH) budget	Annually	X%						Included undue action 6	MOH	DNHA
8. Advocate increased CMAM funding from development partners	Percentage increase in funding allocation by development partners per year	Measure of the percentage increase in CMAM funding allocated by the development partners	Government (MOH) and development partner budgets	Annually	X%						Included undue action 6	MOH	UNICEF, WFP, NGOs and other partners
9. Increase financial and logistical support for the CMAM focal persons at national, regional, and district levels											--	MOH	UNICEF, WFP, NGOs and other partners
10. Establish working performance contracts that clearly articulate targets with the CMAM focal persons	Number of CMAM focal persons with working performance contracts	Number of CMAM focal persons with working performance contracts/total number of CMAM focal persons	MOH records	Annually	100%					100%	--	MOH	UNICEF, WFP, NGOs and other partners

Objective 5: Improve monitoring and evaluation and promote the use of data and information to inform CMAM programming and planning													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
1. Identify country-level CMAM operational research questions that address knowledge and implementation gaps	Operational research questions identified	Meeting held with stakeholders to identify and document CMAM operations research questions	Operational research meeting report	Year 1	1	x					8,034	MOH	Universities and partners
2. Hold annual CMAM dissemination conference	CMAM dissemination conference held annually	A measure of the number of annual CMAM conferences conducted	Conference report	Annually	5	1	1	1	1	1	111,670	MOH	UNICEF, WFP, NGOs and other partners
3. Conduct annual national review of implementation of the CMAM operational plan	CMAM operational plan annual review meeting held	A measure of the number of annual CMAM review meetings conducted annually	Annual meeting report/brief	Annually	5	1	1	1	1	1	132,675	MOH	UNICEF, WFP, NGOs and other partners
4. Conduct midterm and endline evaluations of implementation of the CMAM operational plan	Midterm evaluation conducted		Midterm report	Year 3	Midterm evaluation			x			40,135	MOH	UNICEF, WFP, NGOs and other partners
	Endline evaluation conducted		Endline report	Year 5	Endline evaluation					x	40,135	MOH	UNICEF, WFP, NGOs and other partners
5. Conduct quarterly DHMT CMAM data and programme outcomes review workshops	Number of quarterly DHMT CMAM data review workshops per year	A measure of the number of quarterly CMAM data and programme review meetings conducted, disaggregated by district	MOH and partner records	Quarterly	580	116	116	116	116	116	2,264,860	MOH	UNICEF, WFP, NGOs and other partners
6. Establish real-time data management system for CMAM alerts on preparedness and response	Real-time data management system in place		MOH, UNICEF, and WFP records	Year 1 and during emergencies	1	X					320,000	MOH	UNICEF and WFP

Objective 5: Improve monitoring and evaluation and promote the use of data and information to inform CMAM programming and planning													
Priority Action	**Indicator**	**Indicator Definition**	**Means of Verification**	**Frequency**	**Total Target**	**Timeframe**					**Cost ($)**	**Lead Agency**	**Supporting Agency**
						Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**			
7. Conduct CMAM data management trainings and use District Health Information Software–Version 2 (DHIS-2) for all district HMIS officers	Number of HMIS officers trained on DHIS-2	Measure of the number of managers trained on CMAM data management, disaggregated by sex	MOH training records	Annually	175	35	35	35	35	35	78,610	MOH	UNICEF, WFP, NGOs and other partners
8. Provide logistical and technical support to districts and facilities in the use of DHIS-2	Percentage of districts with reliable internet access	Reliable: without outages of more than 1 week within the quarter	DHOs, CMED	Quarterly	100%	100%	100%	100%	100%	100%	--	MOH	UNICEF, WFP, NGOs and other partners

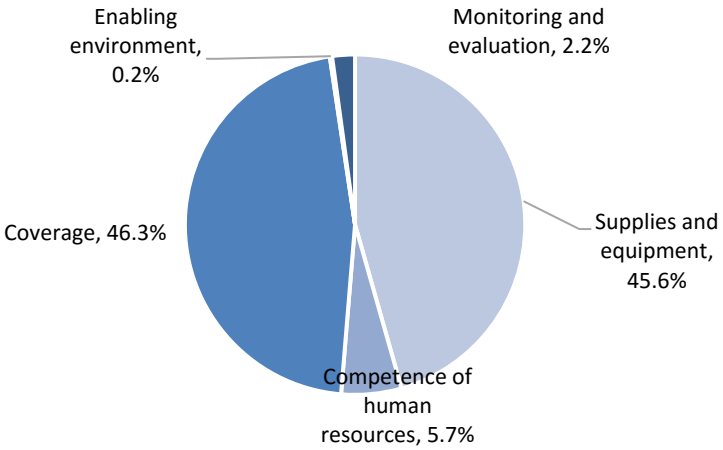
5 Summary of the National CMAM Costs

5.1 Total Cost of Implementing CMAM by Strategic Action Area

The total cost of the operational plan's prioritised actions is presented below, summarised by strategic action area. Note that Strategic Action Area 6, strengthen emergency preparedness and response, is not included in the costs below, as these are not part of routine CMAM operational costs.

	Year 1	Year 2	Year 3	Year 4	Year 5
Improve availability and access to CMAM supplies and equipment	12,122,007	12,730,992	12,455,886	12,739,260	13,029,683
Increase the competence of human resources involved in CMAM service delivery	1,641,265	2,091,896	1,386,084	1,377,959	1,409,354
Increase CMAM coverage by improving access, acceptability, and utilization of services	11,945,332	18,303,944	11,354,845	11,229,845	11,229,845
Strengthen the enabling environment for CMAM service delivery	75,833	48,482	48,482	75,833	48,482
Improve monitoring and evaluation and promote the use of data and information to inform CMAM programming and planning	575,597	577,563	622,698	587,563	632,698
Total	**26,360,034**	**33,752,877**	**25,867,995**	**26,010,460**	**26,350,062**

Figure 2: Percentage of Total Cost for Each Strategic Action Area



Cost of Treatment per SAM and MAM Child Under 5

The costs below show the cost of treating an individual SAM or MAM child. These costs include:

- Human resource time and space at the facility level
- Therapeutic and supplementary food supplies
- Medicines and other equipment
- Storage and transport of food supplies

The costs of treatment per SAM and MAM child are below the international average costs of treatment for SAM ($200 per child) and MAM ($80 per child).

Figure 3: Average Cost of Treating a SAM Child

Table 5.1: Total Treatment Cost and National Caseload of SAM Children under 5

	Year 1	Year 2	Year 3	Year 4	Year 5
Total SAM treatment cost	6,277,256	7,040,506	6,636,186	6,756,001	6,877,850
Targeted number of SAM cases	54,846	56,229	57,618	58,933	60,623

Figure 4: Average Cost of Treating MAM Child

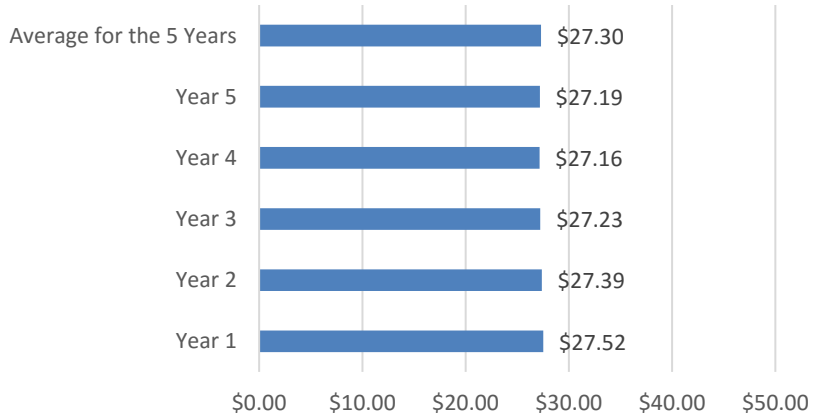


Table 5.2: Total Treatment Cost and National Caseload of MAM Children under 5

	Year 1	Year 2	Year 3	Year 4	Year 5
Total MAM treatment cost	5,041,019	5,134,836	5,227,471	5,340,785	5,477,726
Targeted number of MAM cases	183,182	187,468	191,942	196,607	201,452

6 Guide for Developing District Plan of Action

Following the launch of the national CMAM operational plan, all district health management teams will be required to draft and implement specific annual operational plans that will be integrated within their district implementation plans. The plans will be revised on a yearly basis. The following components should be included in developing the annual plan.

6.1 Summary of the CMAM Bottlenecks in the Districts

This section will be guided by a district specific BNA and should highlight the corresponding technical solutions to address the bottlenecks/challenges.

6.2 Health Facility and CMAM Resource Mapping

This section should document health facilities that provide CMAM services and those that do not provide services, preferably on a colour coded map that highlights the degree of CMAM service performance of each CMAM component (SFP, OTP, and NRU). The map should also highlight those facilities that meet or do not meet the sphere standards (cure, default, and death rates). Finally, the section should summarise resources available to effectively deliver CMAM services, including:

- Proportion of staff trained on CMAM in the past 2 years
- CMAM stock-out history in the past 3 months
- Space/volume for storage of therapeutic and supplementary food supplies
- Availability of CMAM job aids, guidelines, and protocols
- Availability and functionality of CMAM equipment (see Annexes 3 and 4 for essential supplies and equipment)

Additionally, the resource mapping should highlight the number of communities in the districts, those actively conducting and reporting case findings, referral and follow-up activities, and the number of community volunteers and opinion leaders trained and actively supporting CMAM activities.

6.3 Stakeholder Mapping

This section should provide an updated list of all CMAM stakeholders, including NGOs in the district, and their role in CMAM. The list should provide a corresponding documentation of the CMAM resources that the stakeholders are contributing to the programme.

6.4 Costing of District Operational Plan

Each district should use their "Zonal Costing Report 2017–2021" to review the annual CMAM costs generated through the national costing exercise and review costing assumptions used to ensure that they are still valid. The DHMT should then update the annual projected costs and include them in the district implementation plan.

6.5 District Operational Plan

The annual district plan should be presented in table format and include activities aligned to the national strategic action areas: 1) improving availability and access to CMAM supplies and equipment; 2) increasing competence of human resources; 3) increasing coverage of CMAM services; and 4) strengthening the enabling environment at the district level, and improving monitoring and evaluation at the district level. **Table 6.1** shows a template for developing a district CMAM operational plan.

Table 6.1: Example of District CMAM Operational Plan

Activity	Indicator	Indicator Definition	Means of verification	Frequency	Annual District Target	Timeframe				Cost ($)	Lead Agency	Supporting Agency
						Q1	Q2	Q3	Q4			
Objective 1: Improve availability and access to CMAM supplies and equipment												
1.												
2.												
Objective 2: Increase the competence of human resources involved in CMAM service delivery												
1.												
2.												
Objective 3: Increase CMAM coverage by improving access, acceptability, and utilization of services												
1.												
2.												
Objective 4: Strengthen the enabling environment for CMAM service delivery												
1.												
2.												
Objective 5: Improve monitoring and evaluation and promote the use of data and information to inform CMAM programming and planning												
1.												
2.												

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Annex 1: National Bottleneck Analysis Results for SAM

District	Supply of RUTF	Human resources (HSA)	Human resources (clinicians)	Geographic access OTP	Outreach	Initial utilization	Continuous utilization	Effective coverage
Balaka	15%	76%	19%	100%	48%	58%	57%	56%
Blantyre	25%	99%	95%	100%	10%	98%	92%	79%
Chikwawa	91%	82%	21%	88%	10%	62%	59%	54%
Chiradzulu	77%	100%	92%	100%	14%	63%	61%	52%
Chitipa	100%	12%	11%	100%	8%	6%	6%	6%
Dedza	3%	74%	16%	100%	0%	47%	46%	36%
Dowa	76%	100%	55%	100%	12%	49%	48%	50%
Karonga	55%	99%	89%	65%	42%	20%	19%	18%
Kasungu	16%	1%	28%	66%	49%	27%	24%	19%
Lilongwe	37%	7%	3%	90%	5%	75%	68%	65%
Machinga	0%	78%	28%	100%	99%	115%	112%	94%
Mangochi	4%	100%	33%	98%	44%	33%	32%	20%
Mchinji	0%	97%	74%	100%	25%	17%	16%	18%
Mulanje	18%	87%	20%	96%	71%	243%	236%	196%
Mwanza	100%	100%	11%	100%	48%	371%	371%	404%
Mzimba North	21%	0%	0%	83%	5%	39%	34%	29%
Mzimba South	100%	71%	1%	74%	0%	30%	26%	20%
Neno	100%	100%	99%	100%	61%	181%	178%	122%

Nkhata-Bay	16%	85%	25%	90%	11%	333%	284%	201%
Nkhotakota	10%	100%	88%	100%	42%	57%	54%	45%
Nsanje	100%	57%	20%	80%	69%	69%	67%	75%
Ntcheu	19%	100%	23%	84%	25%	81%	76%	40%
Ntchisi	42%	80%	66%	100%	34%	90%	86%	70%
Phalombe	0%	92%	81%	86%		44%	43%	38%
Rumphi	0%	0%	0%	94%	26%	184%	179%	173%
Salima	0%	96%	39%	100%	29%	31%	29%	31%
Thyolo	80%	94%	57%	80%	35%	10%	10%	10%
Zomba	55%	94%	14%	97%	0%	40%	40%	37%
National	36%	69%	29%	90%	24%	44%	42%	36%
Green Band	>=60%	75%-100%	75%-100%	>80%	75%-100%	>=60%	>=60%	>=60%
Orange Band	40% -59%	50% - <75%	50% - <75%	40% -<80%	50% - <75%	40% - 59%	40% - 59%	40% -59%
Red Band	<40%	<50%	<50%	<40%	<50%	<40%	<40%	<40%

Annex 2: National Bottleneck Analysis Results for MAM

District	Supply of CSB	Human resources (HSA)	Human resources (clinicians)	Geographic access SFP	Outreach	Initial utilization	Continuous utilization	Effective coverage
Zomba	54%	94%	14%	93%	0%	21%	20%	8%
Thyolo	39%	94%	57%	72%	35%	7%	6%	4%
Salima	42%	96%	39%	100%	29%	18%	18%	12%
Rumphi	0%	0%	0%	94%	26%	44%	43%	34%
Phalombe	0%	92%	81%	93%	0%	40%	40%	23%
Ntchisi	83%	80%	66%	100%	34%	99%	97%	27%
Ntcheu	100%	100%	23%	16%	25%	6%	6%	4%
Nsanje	100%	57%	20%	100%	69%	59%	55%	44%
Nkhotakota	57%	100%	88%	100%	42%	74%	73%	69%
Nkhatabay	100%	85%	25%	57%	11%	36%	31%	28%
Neno	23%	100%	99%	100%	61%	39%	39%	26%
Mzimba South	100%	71%	1%	97%	0%	52%	47%	36%
Mzimba North	52%	0%	0%	79%	5%	42%	39%	26%
Mwanza	75%	100%	11%	100%	48%	22%	22%	20%
Mulanje	25%	87%	20%	52%	71%	15%	15%	15%
Mchinji	56%	97%	74%	100%	25%	15%	15%	9%
Mangochi	4%	100%	33%	100%	44%	22%	21%	10%
Machinga	0%	78%	28%	100%	99%	47%	42%	32%

Lilongwe	33%	7%	3%	38%	5%	9%	8%	8%
Kasungu	65%	1%	28%	79%	49%	22%	20%	10%
Karonga	100%	99%	90%	100%	46%	45%	39%	24%
Dowa	76%	100%	55%	100%	12%	10%	10%	8%
Dedza	0%	74%	16%	97%	0%	27%	26%	16%
Chitipa	56%	12%	11%	100%	8%	7%	7%	4%
Chiradzulu	42%	100%	92%	92%	14%	29%	29%	14%
Chikhwawa	96%	82%	21%	96%	10%	44%	38%	28%
Balaka	15%	99%	19%	100%	48%	28%	28%	12%
Blantyre								
National	48%	69%	29%	82%	24%	23%	22%	15%
Green Band	>=60%	75%-100%	75%-100%	>80%	75%-100%	>=60%	>=60%	>=60%
Orange Band	40% to 59%	50% - <75%	50% - <75%	40% -<80%	50% - <75%	40% to 59%	40% to 59%	40% to 59%
Red Band	<40%	<50%	<50%	<40%	<50%	<40%	<40%	<40%

Annex 3: Critical Bottlenecks and Prioritised Actions

1. Supplies and Commodities

Critical bottleneck/s	Prioritised actions	Stakeholders	Expected outcomes
CMAM commodities (RUTF, F75, F100, Super Cereal) not adequately considered in planning, budgeting, and funding	Advocate inclusion of CMAM supplies into the essential drugs list	MOH and partners	Increased Government resource allocation for CMAM supplies
	Advocate a strengthened procurement and distribution system for therapeutic supplies and equipment within the wider existing system		
	Advocate increased funding for RUTF as an essential drug		
	Strengthen integration of CMAM supplies management into the existing health supplies management system		
	Ensure wide participation of CMAM partners in the national MOH quantification exercise for CMAM supplies		
	Ensure registration of CMAM supplies with PMPB by manufacturers and suppliers		
	Support development of technical specifications of CMAM supplies for Malawi based on international standards		
	Support registration of CMAM suppliers with the Malawi Bureau of Standards		
	Support the development of a CMAM supplies monitoring plan for use at district level and reporting on the CMAM supplies monitoring plan		
The production capacity of local RUTF does not match country's total demand	Strengthen operationalization of buffer stocks at national, district, and health facility levels	MOH, local RUTF manufacturers and partners	Improved knowledge on forecasting and replenishment of buffer stocks Eliminate country stock-outs of RUTF and maintain a favourable pipeline
	Establish minimum time for conducting and review of RUTF test results		
	Develop a rapid SMS system for stock monitoring and reporting		
	Support learning and adoption of best practices on planning, procurement, and distribution of supplies from other countries, such as Ethiopia		
Limited safe warehouse/space for stock storage at district and health facility levels	Establish sufficient buffer stock warehouses and safe storage facilities at central warehouse	MOH and partners	Availability of regular buffer stock at central location, district hospitals and the health facilities
	Increase storage spaces at district hospitals and health facilities		
	Ensure and monitor the warehouse/storage standards from national to health facility level		
Stock-outs due to delayed transport of RUTF from central warehouse to district hospitals and health facilities	Increase MOH logistics support on transport of supplies to the district hospital and health facilities	MOH and partners	Elimination of stock-outs due to logistical bottlenecks between the central warehouse, district hospitals to health facilities
	Increase partner participation in transport of supplies to district hospitals and health facilities		
	Where possible and feasible, directly transport supplies to the health facilities from the central warehouse		
Limited stock monitoring at national, district, and health facility level	Develop a guideline/monitoring plan for CMAM supplies control measures and rollout to zones, DHOs, partners, and health workers	MOH and partners	Reduction of leakages and adequate buffer stocks of CMAM commodities at district and health facility level
	Harmonised guidelines between CMAM and nutrition care support and treatment (NCST) program to minimise abuse of supplies		
	Increase the frequency of stock monitoring at health facility level		

	Closely monitor utilization of stock management tools (stock cards, routine regular physical inventory, and auditing)		
	Develop a rapid SMS system for stock monitoring and reporting		
	Enforce disciplinary action for reported cases of supplies pilferages		
	Support learning and adoption of best practices on planning, procurement, and distribution of supplies from other countries, such as Ethiopia		
	Include all relevant partners in coordination of supply chain management from central warehouse to facility level		

2. Increased Competence of Human Resources Involved in CMAM

Critical bottleneck	Prioritised actions	Stakeholders	Expected outcomes
Pre-service training curricula for health professionals, including nurses and clinicians, has not been informed by up-to-date practice on management of acute malnutrition	Update the pre-service training curricula for nurses and clinicians to include CMAM theory and practice	Medical Council, Nursing Council, College of Medicine, MOH	Graduating nurses and clinicians have the required knowledge and skills on CMAM
	Establish/operationalise medical and practitioners' committee on nutrition curricula review in health professional training (nurses and clinicians)		
	Include management of acute malnutrition as part of internship supervision programme for nurses and clinicians		
Not all practicing nurses and clinicians have had in-service training on CMAM (inpatient, outpatient, supplementary feeding, and community outreach)	Conduct CMAM training for all targeted practicing nurses and clinicians	MOH, NGO partners, UN agencies, donors	Increased the capacity of practicing health workers to provide CMAM services
	Develop a computerised tracking system/template for clinician trainings		
Weak orientation of district health management teams (DHMTs) on CMAM	Conduct CMAM training for all DHMTs	MOH, NGO partners	Improved attitude, knowledge, and skills of DHMTS on CMAM
Limited coverage of CMAM training for health workers other than nurses and clinicians	Conduct training of all CMAM service providers at the community level, including HSAs, care group members, and volunteers	MOH, nutrition partners	Improved competency of all CMAM service providers
Inadequate support supervision and mentorship and follow-up	Develop and implement guidelines for on-the-job training and mentorship to target all CMAM service providers	MOH, nutrition partners (e.g., NGOs, UN agencies)	Increased capacity of practicing health workers to provide CMAM services
	Increase frequency and regularised follow-up and supervision of CMAM services at the health facility and community levels		
	Integrate CMAM into the Continuous Professional Development (CPD) protocol		
Management of acute malnutrition is not perceived as a core function of clinicians and nurses	Ensure continuous advocacy through Medical and Nursing Councils on the importance of involving clinicians and nurses in CMAM	Medical Council, Nursing Council, College of Medicine, MOH	Intensified advocacy for CMAM among nurses and clinicians

3. Increased CMAM Coverage

Critical bottleneck	Prioritised actions	Stakeholders	Expected outcomes
Weak national geographic mapping of CMAM coverage to rationalise where CMAM sites are most needed	Conduct geographic mapping to ensure all households can access CMAM services	MOH, nutrition partners (e.g., NGOs, UN agencies)	Increased geographical coverage of CMAM
Some social norms, beliefs, and attitudes in the local context serve as barriers to uptake of CMAM and access to CMAM services	Conduct community sensitization and awareness campaigns on acute malnutrition causes, consequences, prevention, and health seeking	MOH, nutrition partners (e.g., NGOs, UN agencies)	Improved knowledge, beliefs, and skills of CMAM among all cadres of community members
	Reorient community members and leaders on CMAM case identification, referral, and follow-up.		
Inadequate involvement on CMAM by relevant cadres of community groups (e.g., Community Care Groups)	Actively engage and empower community groups (e.g., care groups) on the prevention of SAM/MAM.	MOH, nutrition partners (e.g., NGOs, UN agencies)	Heightened involvement among community groups in CMAM activities
Poor coordination among nutrition partners at community level in community mobilization	Harmonise community mobilization efforts across community groups	MOH, nutrition partners (e.g., NGOs, UN agencies)	Improved community mobilization by all partners
Lack of support in active case findings at community level	Support and expand active case finding among different cadres of community volunteers, including community care groups	MOH, nutrition partners (e.g., NGOs, UN agencies)	Increase coverage for both SAM and MAM
	Support and expand community mobilization initiatives through available channels in the community		
	Ensure increased involvement and participation of additional cadres of community volunteers for CMAM (e.g., mother-to-mother support groups and community care groups)		
Late presentation of cases due to long distances to health facilities resulting in poor CMAM performance	Strengthen outreach services to increase coverage and reach those who are far from health facilities.	MOH, nutrition partners (e.g., NGOs, UN agencies)	Improved CMAM outcomes (deaths, defaulters, length of stay); increase in recovery rate and coverage
Suboptimal follow-up systems at community level	Develop and implement well-coordinated supervision and follow-up systems between health facility and community level	MOH, nutrition partners (e.g., NGOs, UN agencies)	Improved follow-up at community level for active case finding
	Support and enhance follow-up systems between health facility and community levels		
	Deploy sufficient volunteers in all the districts for CMAM service provision		

High turnover of volunteers due to lack of incentives to motivate them	Institutionalise and harmonise a system for incentivizing and motivating community volunteers and recognizing best performing volunteers	MOH, nutrition partners (e.g., NGOs, UN agencies)	Availability of motivated and skilled volunteers for CMAM service provision
Errors in admission into CMAM programmes due to inaccurate screening	Training/retraining of health workers and close supervision of screening of children at community and health facility levels	MOH, nutrition partners (e.g., NGOs, UN agencies)	Proper triage and appropriate treatment protocol assigned to the acutely malnourished
	Include equipment supervision as part of regular supervision, including proper calibration		
Children lost to follow-up due to lack of effective follow-up at community or household level	Ensure weekly supervision of volunteers	MOH at district level, NGO partners	Reduced loss to follow-ups of CMAM clients
	Develop and operationalise tools for monitoring volunteers on CMAM service provision		
Inaccurate screening, misdiagnosis of children, and treatment without following CMAM guidelines	Develop and implement CMAM mentorship model for capacity strengthening of volunteers and health workers implementing CMAM	MOH, nutrition partners (e.g., NGOs, UN agencies)	Adherence to CMAM guidelines and standard operating procedures
	Training/re-training of frontline nutrition health workers on CMAM guidelines		
	Developing standard tools for health facility supervision for CMAM, as opposed to having different tools by different partners or districts		

4. Strengthen the Enabling Environment for CMAM

Critical bottleneck	Prioritised actions	Stakeholders	Expected outcomes
Weak CMAM integration with health initiatives (e.g., HIV/AIDS, IMCI) and other initiatives, such as WASH, social protection, and food security	Link CMAM with Nutrition Education and Communication Strategy (NECS) at community level through the existing multisectoral platform (agriculture, social protection, food security, WASH, and family planning)	MOH, UNICEF, NGO partners	CMAM functionally integrated into the health system
	Link CMAM to SUN initiatives and interventions, strengthening its integration and scale-up through the SUN initiatives		
	Ensure that CMAM services are accessible to HIV positive clients		
	Review CMAM guidelines to include identification and treatment of acutely malnourished mothers		
	Harmonise data collection and reporting between HIV and CMAM		
Weak harmonization between HIV and CMAM	Support strengthening of bi-directional referrals from CMAM and HIV service points	MOH, relevant line ministries	Harmonised for CMAM and HIV services
Differing approaches in coordination of the implementation of CMAM	Strengthen the operationalization of coordination system from national to community level	MOH, nutrition partners (e.g., NGOs, UN agencies)	A functional CMAM coordination system from national to
	Ensure participation of all actors in coordination meetings		

	Develop and update who does what, where, and when (4Ws) in CMAM to avoid duplication of support to districts		community level and the vice versa
Issues of CMAM not considered by policymakers and planners	Integrate CMAM advocacy activities into the national nutrition advocacy plan	MOH, nutrition partners	Increased consideration of CMAM in planning
	Development of policy and technical briefs on CMAM		
	Advocate increased CMAM funding by the government	Nutrition partners, MOH, development partners	
	Advocate increased CMAM funding by development partners	MOH, NGO partners, development partners	
	Initiate campaigns to increase awareness of CMAM at national level (to policymakers) and district level	Nutrition partners, MOH	
There is no indication of who is accountable for ensuring that the various components of CMAM are effectively implemented	Increased logistical and funding support for the focal person in charge of CMAM at national, regional, and district level	MOH, UNICEF	Increased accountability and leadership at national, regional, and district level
	Establish a working performance contract with the CMAM focal point with clear articulation of targets		
Inadequate funding for CMAM activities in national budget	Advocate prioritisation of CMAM in national planning and budgeting	MOH, UNICEF, NGO partners	Increased funding allocation for CMAM
	Support and prioritise CMAM in national budget		
	Support development and implementation of resource mobilization strategy for CMAM		
	Monitor funding and utilization allocation for CMAM		
	Support inclusion of CMAM plans and budget in district implementation plans		

5. Improve Monitoring, Evaluation, and Information Management

Critical bottleneck	Prioritised action	Stakeholders	Expected outcomes
Inadequate evidence-based information on CMAM bottlenecks and solutions	Conduct country-level CMAM operational research that provides specific answers to key bottlenecks	Universities, NGO partners, MOH, UN agencies, research institutes	Practical and evidence-based solutions for CMAM
Limited platforms for sharing information on CMAM	Development of quarterly CMAM bulletin to share CMAM experiences, best practice, and lessons learnt	MOH, UNICEF, other UN agencies, NGO partners, universities, research institutions	Improved CMAM information sharing
	Hold biannual conferences on CMAM to share best practices within and outside of the country		
	Annual evaluation and review of CMAM operational plan (2016–2020)		

Late reporting as a result of delayed submission of data	Establish a real-time system for CMAM alerts on preparedness and response	MOH, UNICEF, NGO partners	Use of monitoring data for timely and accurate decision making
Incomplete and missing data make it difficult to assess situation or make informed decisions	Support capacity development (training) in data management at all levels of CMAM		
	Ensure intensified supervision of data capture, management, and submission		
Limited utilization of data both at the source and central level	Training in data analysis and use at district-level facilities		
Not all data have been mainstreamed into DHIS II. The RapidSMS data (surveillance) is still hosted by UNICEF	Integrate CMAM indicators and tools into DHIS-2		
	Train and support district and facility-based HMIS and data officers on CMAM data management through DHIS 2		
	Institute a 'one-stop shop' for data at the MOH (through DHIS2), including RapidSMS data surveillance		

Annex 4: Essential CMAM Equipment for OTP and SFP

Tools, materials, and other OTP/SFP supplies	Minimum amount per clinic
Strong file to store treatment cards	4
Small clock or watch with second hand	2
Bucket (plastic, graduated, lid, 8.5 litres)	2
Jug (transparent plastic, graduated, 1 litre)	2
Marker pens (permanent ink)	12
Notebook	4
Metal spoons	4
Teaspoons	12
Nail clippers	4
Water carrier (plastic, 20 litres)	4
Water jug (with lid)	4
Small metal bowl	4
Thermometer (electronic)	2
Hanging scale with 100 g indications	1
Adult scale/electronic scale	1
Height boards	1
MUAC bands for children	20
Calculators	2
Weight-for-height chart	1
Additional height board	1
Scissors	1
Stapler and staples	1
Beaker (orange plastic, 500 ml)	2
Copy of CMAM guidelines	2
Set of cups and spoons	6
Wooden pallets for food	10
Cooking pots for SFP demonstration	1
MUAC tapes for adults	5
SFP and OTP monitoring cards	Based on caseload
OTP register	1
OTP report	1 booklet
SFP registers; one for children and one for mothers	2
SFP monthly report booklet	1

Supplementary and therapeutic foods	**Minimum amount**
Sugar to make 10% sugar solution	500g
RUTF	Based on caseload
CSB++	Based on caseload
CSB+	Based on caseload
Vegetable oil	Based on caseload
Routine medicines for OTP	
Amoxicillin syrup 125mg/5ml	500 bottles
Albendazole or Mebendazole	4 tins
Paracheck (malaria rapid test)	200
HIV test kit	based on caseload

Annex 5: Essential CMAM Equipment for NRU

Tools, materials, and other NRU supplies	Minimum amount per clinic
Strong file for treatment cards	4
Small clock or watch with second hand	2
Bucket (plastic, graduated, lid, 8.5 litres)	2
Jug (transparent plastic, graduated, 1 litre)	2
Marker pens (permanent ink)	12
Notebook	4
Metal spoons	4
Teaspoons	12
Nail clippers	4
Water carrier (plastic, 20 litres)	4
Water jug (with lid)	4
Small metal bowl	4
Hanging scale with 100 g indications	1
Adult scale/electronic scale	1
MUAC bands	20
Calculators	2
Weight-for-height chart	1
Height board	1
Scissors	1
Stapler and staples	1
Beaker (orange plastic, 500 ml)	2
Set of communication materials for counselling on health and nutrition	2
Job aids for staff	1
Copy of CMAM guidelines	1
Registration book	1
Monthly reporting forms	1
NRU treatment cards	Based on caseload
Set of cups and spoons	6
Infant scale with 10 g indications	1
Food scale (up to 10 kg) for weighing milk powder	1
Electric kettle	1
Beds (that can sleep mother and baby)	20
Thermos flask	1
Blankets	1

Wall thermometers (room thermometer)	1
Hand whisk	1
Syringes (for measuring small milk feeds)	50
Room heater	2
Resuscitator hand, infant/child set	1
Insecticide treated bed nets (ITN)	20

Therapeutic Foods	
F75 milk	Based on caseload
F100 milk	Based on caseload
RUTF	Based on caseload
Sugar	Based on caseload
CMV	1

Routine and essential drugs	
Vitamin A	Based on caseload
Folic acid	Based on caseload
Ferrous sulphate	Based on caseload
Amoxicillin	Based on caseload
Cotrimoxazole	Based on caseload
Gentamycin	Based on caseload
Benzyl Penicillin	Based on caseload
Cefotaxime	Based on caseload
Ceftriaxone	Based on caseload
Ciprofloxacin	Based on caseload
Cloxacillin	Based on caseload
Tetracycline eye ointment	Based on caseload
Chloramphenicol eye drops	Based on caseload
1% Atropine eye drops	Based on caseload
Nystatin (oral suspension)	Based on caseload
Fluconazole	Based on caseload
Benzyl benzoate (12.5%)	Based on caseload
Whitfields	Based on caseload
Gentian violet	Based on caseload
Silver sulfadiazine	Based on caseload
Zinc oxide ointment (10%)	Based on caseload
Paraffin gauze	Based on caseload

Measles vaccine	Based on caseload
10% Dextrose	Based on caseload
Metronidazole	Based on caseload
Blood for transfusion[5]	Based on caseload
Albendazole or Mebendazole	Based on caseload
Anti-malarial drugs—Lumefantrine Artemether - LA (oral)	Based on caseload
Antiretroviral therapy (ART)	Based on caseload
TB drugs	Based on caseload
Medical supplies	
ReSoMal	Based on caseload
Malaria test kit	Based on caseload
HIV test kit	Based on caseload
Hb test strips	Based on caseload
IV kits	Based on caseload
NG tubes	Based on caseload
Mixing syringes (50–60 ml)	Based on caseload
Glucometer or glucose test kit	1
IV fluids: half-strength Darrow's or Ringer's lactate	Based on caseload
Thermometer (for measuring body temperature)	1

[5] The cost of ART and TB drugs will be covered by the HIV and TB programmes and therefore has not been costed for in the CMAM Operational Plan.

Annex 6: Detailed Budgets: CMAM Supplies and Equipment

Table 6.1: Actions 1–5: Supply Chain Advocacy Meetings

	Year 1	Year 2	Year 3	Year 4	Year 5
Venue	201	201	201	201	201
Lunch/refreshments	2100	2100	2100	2100	2100
Stationary	600	600	600	600	600

Table 6.2: Action 3: Registration with PMPB

	Year 1	Year 2	Year 3	Year 4	Year 5
Registration fee for locally produced products	600	--	--	--	--
Registration fee for imported products	--	300	300	300	300
Annual renewal fee for locally produced products	2500	--	--	--	--
Annual renewal for locally produced products	--	1000	1000	1000	1000

Table 6.3: Action 6: Annual National Quantification

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	5600	5600	5600	5600	5600
Venue	134	134	134	134	134
Lunch/refreshments	1400	1400	1400	1400	1400
Stationary	200	200	200	200	200
Printing	700	700	700	700	700

Table 6.4: Action 7: SAM Supplies and Equipment—Children under 5

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Therapeutic foods												
RUTF	kg	4.22	807,492	3,407,617	822,305	3,470,126	842,064	3,553,509	860,481	3,631,231	879,183	3,710,153
F-75	kg	5.52	44,176	243,430	44,986	247,904	46,067	253,870	47,074	259,432	48,098	265,080
F-100	kg	6.35	13,253	84,154	13,496	85,698	13,820	87,757	14,122	89,677	14,429	91,626
Medicines and medical supplies												
Sugar water	litre	0.12	37,180	4,462	37,862	4,543	38,772	4,653	39,620	4,754	40,481	4,858
Cotrimoxazole	dose	0.79	4,016	3,159	4,090	3,217	4,188	3,295	4,279	3,367	4,373	3,440
Fluconazole	dose	1.46	3,012	4,391	3,067	4,471	3,141	4,579	3,210	4,679	3,279	4,780
Silver sulfadiazine	tube	1.39	3,012	4,182	3,067	4,258	3,141	4,361	3,210	4,456	3,279	4,553
Zinc oxide ointment (10%)	tube	17.35	3,012	52,269	3,067	53,228	3,141	54,507	3,210	55,699	3,279	56,910
Metronidazole	dose	4.74	3,012	14,270	3,067	14,531	3,141	14,880	3,210	15,206	3,279	15,536
Ferrous sulphate/fumarate	dose	0.46	1,004	465	1,022	473	1,047	485	1,070	495	1,093	506
Cloxacillin	dose	0.51	4,016	2,051	4,090	2,089	4,188	2,139	4,279	2,186	4,373	2,233
Chloramphenical eye drops	bottle	0.44	4,418	1,942	4,499	1,978	4,607	2,025	4,707	2,070	4,810	2,115
1% Atropine eye drops	bottle	0.58	201	116	204	118	209	121	214	124	219	126
Nystatin (oral suspension)	dose	0.67	8,032	5,381	8,179	5,480	8,376	5,612	8,559	5,735	8,745	5,859
Paraffin gauze	pack	2.60	4,016	10,454	4,090	10,646	4,188	10,901	4,279	11,140	4,373	11,382
Whitfields	tube	0.60	1,004	604	1,022	615	1,047	630	1,070	644	1,093	658
10% Dextrose	does	0.23	4,016	911	4,090	927	4,188	950	4,279	970	4,373	991
Gentian violet	bottle	2.71	456	1,236	1,308	3,545	1,308	3,545	1,308	3,545	1,308	3,545
Benzyl benzoate	bottle	2.56	38	97	109	279	109	279	109	279	109	279
Amoxicillin	g	0.75	59,584	44,688	60,677	45,508	62,135	46,601	63,494	47,621	64,874	48,656

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Antimalarial	full course	4.43	22,046	97,664	22,450	99,456	22,990	101,845	23,493	104,073	24,003	106,335
Malaria tests	tests	0.53	44,092	23,378	44,901	23,807	45,980	24,379	46,986	24,912	48,007	25,454
Albendazole/ Mebendazole	100 mg	0.03	26,709	801	27,201	816	27,859	836	28,473	854	29,095	873
Folic acid	dose	0.01	20,080	1,019	20,448	1,049	20,939	1,080	21,397	1,111	21,863	1,141
Gentamicin	dose	1.68	19,566	32,823	19,918	33,414	20,393	34,211	20,835	34,953	21,285	35,707
Metronidazole	dose	4.92	915	3,176	939	3,250	965	3,336	990	3,418	1,015	3,501
Benzylpenicillin	dose	2.38	19,660	47,480	20,015	48,346	20,494	49,505	20,939	50,585	21,391	51,681
Ceftriaxone	dose	8.16	3,962	31,926	4,034	32,501	4,130	33,276	4,220	33,997	4,312	34,730
Retinol (100,000 IU)	dose	0.08	1,958	148	1,994	150	2,042	154	2,086	157	2,132	161
Retinol (200,000 IU)	dose	0.06	3,117	173	3,183	176	3,264	180	3,340	184	3,417	189
Measles vaccine	doses	0.27	45,666	12,330	46,509	12,557	47,636	12,862	48,686	13,145	49,751	13,433
Measles syringe	syringes	0.05	45,666	2,283	46,509	2,325	47,636	2,382	48,686	2,434	49,751	2,488
Measles mixing syringes	syringes	0.05	4,567	228	4,651	233	4,764	238	4,869	243	4,975	249
Disposable syringes	Per SAM case	6.42	20,080	128,938	20,448	131,303	20,939	134,456	21,397	137,396	21,863	140,383
HIV test kits	tests	1.35	59,584	80,438	60,677	81,914	62,135	83,882	63,494	85,717	64,874	87,580
IV kits	each	0.15	2,971	446	2,033	305	2,082	312	2,127	319	2,173	326
Nasogastric (NG) tubes	each	0.10	4,827	483	5,081	508	5,204	520	5,318	532	5,434	543
ReSoMal	sachets	0.38	13,568	5,156	14,314	5,439	14,658	5,570	14,978	5,692	15,304	5,815
CMV	tin	76.19	38	2,895	109	8,305	109	8,305	109	8,305	109	8,305
Other treatment supplies												
Outpatient care kits (new site)	each	1,543	37	57,091	20	30,860	-	-	-	-	-	-
Outpatient care kit (established site)	each	197	582	114,654	619	121,943	639	125,883	639	125,883	616	121,352

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Inpatient care kit (new site)	each	8,495	38	322,802	71	603,131	-	-	-	-	-	-
Inpatient care kit (established site)	each	986	-	-	38	37,462	109	107,457	109	107,457	106	104,499
Soap	bars	1.00	32,188	32,188	33,228	33,228	33,228	33,228	33,228	33,228	33,228	33,228
Stationary												
Stock forms and cards	form	0.20	8,232	1,646	9,324	1,865	9,324	1,865	9,324	1,865	9,324	1,865
Treatment cards (outpatient care and inpatient care)	cards	1.10	59,584	65,542	60,677	66,745	62,135	68,349	63,494	69,843	64,874	71,361
RUTF ration cards	cards	0.20	59,584	11,917	60,677	12,135	62,135	12,427	63,494	12,699	64,874	14,180

Table 6.5: Action 7: SAM Supplies and Equipment—Adolescents ages 5–15

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Therapeutic foods												
RUTF	kg	4.22	212,689	897,546	219,980	928,316	227,344	959,393	234,781	990,778	242,255	1,022,317
F-75	kg	5.52	1,925	10,603	1,991	10,967	2,058	11,334	2,125	11,705	2,193	12,078
F-100	kg	6.35	578	3,668	597	3,793	617	3,920	638	4,049	658	4,177
Medicines and medical supplies												
Sugar water	litre	0.12	4,953	594	4,827	579	4,989	599	5,152	618	5,316	638
Amoxicillin	g	1.50	5,786	8,680	6,034	9,051	6,236	9,354	6,440	9,660	6,645	9,968
Antimalarials	full course	8.86	2,309	20,453	2,233	19,781	2,307	20,443	2,383	21,112	2,459	21,784
Malaria tests	tests	0.53	4,229	2,241	4,465	2,367	4,615	2,446	4,766	2,526	4,917	2,606
Albendazole/ Mebendazole	200 mg	0.06	5,772	346	6,034	362	6,236	374	6,440	386	6,645	399
Cotrimoxazole	dose	0.79	393	309	407	320	420	331	434	341	448	352
Fluconazole	dose	2.92	295	860	305	889	315	919	326	949	336	979

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Silver sulfadiazine	tube	1.39	295	409	305	423	315	438	326	452	336	466
Zinc oxide ointment (10%)	tube	17.35	295	5,118	305	5,293	315	5,470	326	5,649	336	5,829
Metronidazole	dose	10.15	295	2,994	305	3,097	315	3,200	326	3,305	336	3,410
Ferrous sulphate/fumarate	dose	0.46	98	45	102	47	105	49	109	50	112	52
Cloxacillin	dose	1.09	393	430	407	445	420	460	434	475	448	490
Chloramphenical eye drops	bottle	0.44	433	190	447	197	462	203	477	210	493	217
1% Atropine eye drops	bottle	0.58	20	11	20	12	21	12	22	13	22	13
Nystatin (oral suspension)	dose	0.67	786	527	813	545	841	563	868	582	896	600
Paraffin gauze	pack	2.60	393	1,024	407	1,059	420	1,094	434	1,130	448	1,166
Whitfieds	tube	0.58	98	57	102	59	105	61	109	63	112	65
10% Dextrose	dose	0.49	393	191	407	198	420	204	434	211	448	218
Folic acid	dose	0.01	1,966	14	2,033	15	2,102	15	2,170	16	2,239	16
Gentamicin	dose	3.59	1,966	7,060	2,033	7,302	2,102	7,547	2,170	7,793	2,239	8,042
Metronidazole	dose	10.55	39	415	41	429	42	444	43	458	45	473
Benzylpenicillin	dose	5.11	1,966	10,045	2,033	10,389	2,102	10,737	2,170	11,088	2,239	11,441
Ceftriaxone	dose	17.49	393	6,877	407	7,113	420	7,351	434	7,592	448	7,833
Retinol (200,000 IU)	dose	0.06	242	15	251	16	259	16	267	17	276	17
Measles vaccine	doses	0.27	5,834	1,575	6,034	1,629	6,236	1,684	6,440	1,739	6,645	1,794
Measles auto-disable (AD) syringe	syringes	0.05	5,834	292	6,034	302	6,236	312	6,440	322	6,645	332
Measles mixing syringes	syringes	0.05	583	29	603	30	624	31	644	32	665	33
Disposable syringes	per case	6.42	1,878	12,055	1,940	12,453	2,002	12,856	2,066	13,263	2,129	13,669
HIV test kits for inpatient care	tests	1.35	5,834	7,876	6,034	8,146	6,236	8,419	6,440	8,694	6,645	8,971
IV kits	each	0.15	88	13	91	14	94	14	97	14	100	15
Nasogastric tubes	each	0.10	219	22	226	23	234	23	242	24	249	25
ReSoMal	sachets	0.38	613	233	634	241	655	249	676	257	698	265
Stationary												

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Treatment cards (outpatient care and inpatient care)	cards	1.10	5,834	6,417	6,034	6,637	6,236	6,860	6,440	7,084	6,645	7,310
RUTF ration cards	cards	0.20	5,834	1,167	6,034	1,207	6,236	1,247	6,440	1,288	6,645	1,329

Table 6.6: Action 7: MAM Supplies and Equipment—Children under 5

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Supplementary food												
CSB++	MT	860	3,627	3,119,230	3,712	3,192,200	3,800	3,268,395	3,893	3,347,819	3,989	3,430,317
Medicines and medical supplies												
Albendazole/ Mebendazole	100 mg	0.03	1,188,963	24,666	1,215,558	25,219	1,244,213	25,813	1,274,794	26,448	1,307,276	27,120
Iron and folic acid	Tablets	0.02	3,704,758	130,381	3,792,566	133,390	3,883,597	136,566	3,977,532	139,893	4,074,580	143,377
HIV test kits	tests	1.35	140,863	190,165	144,204	194,675	147,666	199,349	151,237	204,170	154,925	209,149
Stationary												
Stock forms/cards	form	0.20	5,076	1,015	5,076	1,015	5,076	1,015	5,076	1,015	5,076	1,015
Treatment cards (SFP)	cards	1.10	183,183	163,413	187,466	167,277	191,947	171,289	196,607	175,435	201,455	179,724
SFP ration cards	cards	0.20	140,863	28,173	144,204	28,841	147,666	29,533	151,237	30,247	154,925	30,985

Table 6.7: Action 7: MAM Supplies and Equipment—Adolescents ages 5–15

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Supplementary food												
CSB++	MT	860	67	57,309	69	59,284	71	61,266	74	63,260	76	65,288
Medicines and medical supplies												
Albendazole/ Mebendazole	200 mg	0.06	3,364	202	3,484	209	3,598	216	3,716	223	3,836	230
Iron and folic acid	Tablets	0.02	87,464	1,749	90,584	1,812	93,548	1,871	96,616	1,932	99,736	1,995
HIV test kits	tests	1.35	3,364	4,541	3,484	4,703	3,598	4,857	3,716	5,017	3,836	5,179
Stationary												
Treatment cards (SFP)	cards	1.10	3,364	3,700	3,484	3,832	3,598	3,958	3,716	4,088	3,836	4,220
SFP ration cards	cards	0.20	3,364	673	3,484	697	3,598	720	3,716	743	3,836	767

Table 6.8: Action 7: MAM Supplies and Equipment for PLW

Item	Unit	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5	
			Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost	Annual Requirement	Annual Cost
Supplementary food												
CSB+	MT	602.80	965	581,428	995	599,840	1,027	618,873	1,059	638,541	1,093	658,858
Vegetable oil	MT	1,105.00	107	118,413	111	122,163	114	126,039	118	130,044	121	134,182
Total				699,841		722,003		744,912		768,586		793,040

Table 6.9: Action 9: Logistics Management Trainings

Training Type	Year 1	Year 2	Year 3	Year 4	Year 5
Logistics management training for service providers					
Accommodation (B&B) for trainers	27,840	27,840	27,840	27,840	27,840
Transport for trainees	7,622	8,303	8,303	8,303	8,303
Refreshments for trainees	39,420	44,880	44,880	44,880	44,880
Per diem for trainees	210,240	239,360	239,360	239,360	239,360
Hall hire for training	5,829	5,829	5,829	5,829	5,829
Training materials sets	7,293	8,303	8,303	8,303	8,303
Logistics management training for managers					
Accommodation (B&B) for trainers	27,840	27,840	27,840	27,840	27,840
Transport for trainees	6,695	6,695	6,695	6,695	6,695
Refreshments for trainees	17,400	17,400	17,400	17,400	17,400
Per diem for trainees	92,800	92,800	92,800	92,800	92,800
Hall hire for training	5,829	5,829	5,829	5,829	5,829
Training materials sets	3,219	3,219	3,219	3,219	3,219

Table 6.10: Action 10: Therapeutic and Supplementary Food Storage

	Year 1	Year 2	Year 3	Year 4	Year 5
Storage of therapeutic foods					
RUTF	9,682	9,891	10,149	10,394	10,642
F-75	437	446	457	467	477
F-100	131	134	137	140	143
Storage of supplementary foods					
CSB++	35,053	35,880	36,742	37,641	38,574
CSB+	9,154	9,443	9,743	10,053	10,373
Vegetable oil	1,017	1,049	1,082	1,117	1,152

Table 6.11: Action 11: Transport of Supplementary and Therapeutic Foods

	Year 1	Year 2	Year 3	Year 4	Year 5
Transport of therapeutic foods					
RUTF, F-75, F-100	194,473	210,193	210,193	210,193	210,193
Transport of supplementary foods					
CSB++	931,803	954,049	977,100	1,000,960	1,025,592
CSB+	42,459	43,804	45,194	46,630	48,114
Vegetable oil	32,890	33,931	35,008	36,121	37,270

Annex 7: Detailed Budgets: Competence of Human Resources Involved in CMAM

Table 6.12: Action 1: Practitioner Committee Meetings

	Year 1	Year 2	Year 3	Year 4	Year 5
Venue	134	134	134	134	134
Lunch/refreshments	1400	1400	1400	1400	1400
Stationary	400	400	400	400	400

Table 6.13: Action 2: Assessment of Pre-Service Training Curricula for Nurses and Clinicians

	Year 1	Year 2	Year 3	Year 4	Year 5
Venue	134	134	134	134	134
Lunch/refreshments	1400	1400	1400	1400	1400
Stationary	400	400	400	400	400

Table 6.14: Actions 2–3: CMAM Technical Update Workshops

	Year 1	Year 2	Year 3	Year 4	Year 5
International consultant	9,000	--	--	--	9,000
National consultant	5,000	--	--	--	5,000
Meeting to validate data collection tools					
Accommodation	2,800	--	--	--	2,800
Venue	335	--	--	--	335
Lunch/refreshments	700	--	--	--	700
Stationary	200	--	--	--	200
Printing	600	--	--	--	600
Data collection					

Accommodation	3,920	--	--	--	3,920
Per diem	2,310	--	--	--	2,310
Meeting to validate results					
Accommodation	2,800	--	--	--	2,800
Venue	335	--	--	--	335
Lunch/refreshments	700	--	--	--	700
Stationary	200	--	--	--	200
Printing	600	--	--	--	600

Table 6.15: Action 4: CMAM Training for Tutors

Training Type	Year 1	Year 2	Year 3	Year 4	Year 5
NRU training for tutors					
Accommodation (B&B) for trainers	2640	2640	2640	2640	2640
Transport for trainees	2395	2395	2395	2395	2395
Refreshments for trainees	7000	7000	7000	7000	7000
Per diem for trainees	30800	30800	30800	30800	30800
Hall hire for training	670	670	670	670	670
Training materials sets	389	389	389	389	389
CMAM TOT for tutors					
Accommodation (B&B) for trainers	1440	1440	1440	1440	1440
Transport for trainees	2395	2395	2395	2395	2395
Refreshments for trainees	3500	3500	3500	3500	3500
Per diem for trainees	16800	16800	16800	16800	16800
Hall hire for training	335	335	335	335	335
Training materials sets	389	389	389	389	389

Table 6.16: Actions 5-6: CMAM Training for Service Providers and Managers

Training Type	Year 1	Year 2	Year 3	Year 4	Year 5
OTP/SFP training					
Accommodation (B&B) for trainers	30,720	28,320	24,880	24,880	24,880
Transport for trainees	48,227	47,054	43,694	43,694	43,694
Refreshments for trainees	141,760	131,420	115,020	115,020	115,020
Per diem for trainees	567,040	525,680	460,080	460,080	460,080
Hall hire for training	23,785	21,775	18,894	18,894	18,894
Training materials sets	23,488	22,833	21,279	21,279	21,279
NRU training					
Accommodation (B&B) for trainers	27,920	47,440	20,560	20,560	20,560
Transport for trainees	5,271	13,164	7,357	7,357	7,357
Refreshments for trainees	76,000	164,800	65,400	65,400	65,400
Per diem for trainees	304,000	659,200	261,600	261,600	261,600
Hall hire for training	21,440	37,788	15,276	15,276	15,276
Training materials sets	42,180	91,464	36,297	36,297	36,297
CMAM training for district managers and trainers					
Accommodation (B&B) for trainers	3,200	3,200	3,200	3,200	3,200
Transport for trainers	1,414	1,414	1,414	1,414	1,414
Transport for trainees	6,472	6,472	6,472	6,472	6,472
Per diem for trainees	47,023	47,023	47,023	47,023	47,023
Refreshments for trainees	23,500	23,500	23,500	23,500	23,500
Training materials	4,277	4,277	4,277	4,277	4,277

Table 6.17: Action 8: Mentoring and Supportive Supervision Guideline and Tools Development

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	5600	--	--	--	--
Venue	134	--	--	--	--
Lunch/refreshments	1400	--	--	--	--
Stationary	200	--	--	--	--
Printing	700	--	--	--	--

Table 6.18: Action 9: Mentoring and Supportive Supervision

Training Type	Year 1	Year 2	Year 3	Year 4	Year 5
Mentoring of outpatient care and/or inpatient care (by district HQ)					
Supervisor lunch allowance	30,271	34,516	30,702	30,702	30,702
Transport for supervisor	88,683	93,928	85,279	85,279	85,279
Materials for supervision	10,181	11,645	10,771	10,771	10,771
Supportive supervision of community outreach workers (COW) (by outpatient care site)					
Supervisor lunch allowance	779,433	4,766,177	2,679,625	2,679,625	2,679,625
Transport for supervisor	1,201,902	7,350,706	3,980,730	3,980,730	3,980,730
Materials for supervision	424,008	2,592,226	1,403,798	1,403,798	1,403,798
Supportive supervision of district HQ staff (by health zone HQ)					
Supervisor lunch allowance	681	681	681	681	681
Supervisor accommodation	6,640	6,640	6,640	6,640	6,640
Transport for supervisor	5,342	5,342	5,342	5,342	5,342
Materials for supervision	139	139	139	139	139

Annex 8: Detailed Budgets: Coverage

Table 6.19: Actions 2–5: Community Outreach Training and Harmonization

	Year 1	Year 2	Year 3	Year 4	Year 5
Community outreach training					
Transport for COWs	100,159	662,811	662,813	662,813	662,813
Training materials	135,447	896,094	895,933	895,933	895,933

Table 6.20: Action 6: Establishment of Community Outreach

	Year 1	Year 2	Year 3	Year 4	Year 5
Transport	80,190	449,757	20,867	20,867	20,867
Lunch allowance for mid-level district manager	112	96	-	-	-

Table 6.21: Action 8: Supervision and Mentorship for Community-Based Volunteers

	Year 1	Year 2	Year 3	Year 4	Year 5
Transport (outpatient care to community outreach site)	238,090	1,586,078	1,586,078	1,586,078	1,586,078
Supervision of COWs	11,266,334	14,709,109	8,064,154	8,064,154	8,064,154

Annex 9: Detailed Budgets: Enabling Environment

Table 6.22: Action 1: Update of National CMAM Guidelines

	Year 1	Year 2	Year 3	Year 4	Year 5
Consultants					
International consultant	6300	--	--	6300	--
National consultant	3500	--	--	3500	--
Technical working group meetings					
Venue	201	--	--	201	--
Lunch/refreshments	900	--	--	900	--
Stationary	200	--	--	200	--
Stakeholder consultation meeting					
Accommodation	5600	--	--	5600	--
Venue	134	--	--	134	--
Lunch/refreshments	1400	--	--	1400	--
Stationary	200	--	--	200	--
CMAM guideline	791	--	--	791	--
Stakeholder consensus meeting					
Accommodation	5600	--	--	5600	--
Venue	134	--	--	134	--
Lunch/refreshments	1400	--	--	1400	--
Stationary	200	--	--	200	--
CMAM guideline	791	--	--	791	--

Table 6.23: Actions 2–4: Quarterly TNP Meetings

	Year 1	Year 2	Year 3	Year 4	Year 5
Venue	268	268	268	268	268
Lunch/refreshments	2800	2800	2800	2800	2800
Stationary	800	800	800	800	800

Table 6.24: Action 5: Quarterly CMAM Policy and Technical Briefs

	Year 1	Year 2	Year 3	Year 4	Year 5
Printing of briefs	20,000	20,000	20,000	20,000	20,000
LOE for designer	2,000	2,000	2,000	2,000	2,000

Table 6.25: Actions 6–8: Advocacy Campaigns

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	19,200	19,200	19,200	19,200	19,200
Venue	134	134	134	134	134
Lunch/refreshments	2400	2400	2400	2400	2400
Stationary	400	400	400	400	400
Printing	480	480	480	480	480

Annex 10: Detailed Budgets: Monitoring and Evaluation

Table 6.26: Action 1: Identification of Operational Research Needs

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	5,600	--	--	--	--
Venue	134	--	--	--	--
Lunch/refreshments	1,400	--	--	--	--
Stationary	200	--	--	--	--
Printing	700	--	--	--	--

Table 6.27: Action 2: Annual CMAM Dissemination Conference

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	16,000	16,000	16,000	16,000	16,000
Venue	134	134	134	134	134
Lunch/refreshments	4,000	4,000	4,000	4,000	4,000
Stationary	200	200	200	200	200
Printing	2,000	2,000	2,000	2,000	2,000

Table 6.28: Action 3: Annual National Review of Operational Plan

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	20,000	20,000	20,000	20,000	20,000
Venue	335	335	335	335	335
Lunch/refreshments	5,000	5,000	5,000	5,000	5,000
Stationary	200	200	200	200	200
Printing	1,000	1,000	1,000	1,000	1,000

Table 6.29: Action 4: Midterm and Endline Evaluation of Operational Plan

	Year 1	Year 2	Year 3	Year 4	Year 5
Midterm evaluation					
Accommodation	--	--	20,000	--	--
Venue	--	--	335	--	--
Lunch/refreshments	--	--	5,000	--	--
Stationary	--	--	200	--	--
Printing	--	--	600	--	--
International consultant	--	--	9,000	--	--
National consultant	--	--	5,000	--	--
Endline evaluation					
Accommodation	--	--	--	--	20,000
Venue	--	--	--	--	335
Lunch/refreshments	--	--	--	--	5,000
Stationary	--	--	--	--	200
Printing	--	--	--	--	600
International consultant	--	--	--	--	9,000
National consultant	--	--	--	--	5,000

Table 6.30: Action 5: Quarterly District Data Review Meetings

	Year 1	Year 2	Year 3	Year 4	Year 5
Accommodation	337,600	337,600	337,600	337,600	337,600
Venue	7,772	7,772	7,772	7,772	7,772
Lunch/refreshments	84,400	84,400	84,400	84,400	84,400
Stationary	23,200	23,200	23,200	23,200	23,200
Printing	324,800	324,800	324,800	324,800	324,800

Table 6.31: Action 7: CMAM Training of Managers and Information Officers

	Year 1	Year 2	Year 3	Year 4	Year 5
Transport for trainees	1,833	1,833	1,833	1,833	1,833
Refreshments for trainees	2,100	2,100	2,100	2,100	2,100
Per diem for trainees	11,200	11,200	11,200	11,200	11,200
Hall hire for training	201	201	201	201	201
Training materials sets	389	389	389	389	389