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MINISTRY OF HEALTH-ETHIOPIA

National Guideline For Emergency Nutrition Intervention

Ethiopian Public Health Institute

May 2022, Addis Ababa, Ethiopia

National Guideline for Emergency Nutrition Intervention

Citation: Federal Government of Ethiopia, Ministry of Health, Ethiopian Public Health Institute (2022).

Acknowledgement

The National Emergency Nutrition Guidelines was developed through a series of consultations and collaborative efforts among emergency nutrition intervention implementing stakeholders. The actual implementation of the guideline seeks the active involvement of multiple sectors, partners as well as public and private sectors.

The Ethiopian Public Health Institute greatly appreciates Mr. Biruk Tadesse (Senior Nutrition Expert) for leading the overall activities of the Technical Working Group and coordinating the entire process of the guideline development.

The development of the guidelines was carried out under the auspices of the Ethiopian Public Health Institute. In this regard, the support extended by Mr Mesfin Wossen (Director of Diseases and Health Events Surveillance and Response Directorate) is gratefully acknowledged.

Special appreciation and thanks go to the following individuals, who have provided significant technical contributions relevant to the development of this document:

1. Biruk Tadesse (EPHI)
2. Miraf Tesfaye (MOH)
3. Mekonnen Balcha (EDRMC)
4. Cecile Basquine (UNICEF)
5. Dr Betty Lanyero (WHO)
6. Muzemil Muktar (WFP)
7. Emana Alemu (EPHI)
8. Dr Beyene Moges (EPHI)
9. Yoseph Teklu (UNICEF)
10. Dr Ayana Yeneabat (BRE-OPM)
11. Rashid Abdulai (UNICEF)
12. Ann Bush (OPM)
13. Habtamu Ayigegn (EPHI)
14. Mark Essex (BRE-OPM)
15. Dessalegn Geleta (EPHI)
16. Prof Tefera Belachew (BRE- OPM)
17. Yibeyin Mulualem (EPHI)
18. Bella Roman (BRE-OPM)
19. Shiberu Kelbesa (MOH)
20. Dr Abraham Alano (BRE-OPM)

Finally, we would like to extend our deepest appreciation to the Building Resilience in Ethiopia (BRE) programme for the technical and logistics contributions. BRE-TA is jointly implemented by the Federal Ministry of Health (MoH); the Ethiopian Public Health Institute (EPHI) with funding from the Foreign; Commonwealth & Development Office (FCDO) of the United Kingdom and United States Agency for International Development (USAID). We look forward to BRE-TA and other partners continued collaboration in the implementation of this guideline.

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Abbreviations and Acronyms

AIDS	Acquired Immuno Deficiency Syndrome	**MN**	Micronutrient
ANC	Antenatal Care	**MNCH**	Maternal Neonatal and Child Health
BRE-TA	Building Resilience in Ethiopia- Technical Assistant	**MND**	Micronutrient Deficiency
CDC	Communicable Disease Control	**MoA**	Ministry of Agriculture
CDR	Crude Death Rate	**MoE**	Ministry of Education
CHD	Community Health day	**MoH**	Ministry of Health
CMAM	Community-based Management of Acute Malnutrition	**MUAC**	Mid-Upper Arm Circumference
CSB	Corn Soya Blend	**NDRMC**	National Disaster and Risk Management Commission
EOS	Enhanced Outreach Strategy	**NGT**	Nasogastric Tube
EPHI	Ethiopian Public Health Institute	**OPM**	Oxford Policy Management
EPSA	Ethiopian Pharmaceutical Supply Agency	**OTP**	Outpatient Therapeutic Programme
FCDO	Foreign Commonwealth & Development Office	**PHEM**	Public Health Emergency Management
GAM	Global Acute Malnutrition	**PLW**	Pregnant and Lactating Women
GBV	Gender Based Violence	**PNC**	Postnatal Care
GFD	General Food Distribution	**PSNP**	Productive Safety Net Program
GFR	General Food Rationing	**ReSoMal**	Rehydration Solution for Malnutrition
HEP	Health Extension Program	**RUTF**	Ready-to-Use Therapeutic Food
HIV	Human Immuno Virus	**SAM**	Severe Acute Malnutrition
IASC	Inter-Agency Standing Committee	**SBC**	Social and Behavioral Change
IDP	Internally Displaced People	**SC**	Stabilization Center
IED	Information, Education and Communication	**SFP**	Supplementary Feeding Programme
IPC	Integrated Food Security Phase Classification	**TFP**	Therapeutic Feeding Programme
IU	International Unit	**SMART**	Standardized monitoring and assessment of relief and transitions
IV	Intravenous	**U5MR**	Under Five Mortality Rate
IYCF	Infant and Young Child Feeding	**UNICEF**	United Nations Children's Fund
KAP	Knowledge Attitude and Practices	**WASH**	Water, Sanitation and Hygiene
Kcal	Kilo calorie	**WFH**	Weight for Height
MAM	Moderate Acute Malnutrition	**WFL**	Weight for Length
MANTF	Multi Agency Nutrition Task Force	**WFP**	World Food Programme
MDD	Minimum Dietary Diversity	**WHO**	World Health Organization

Definition of Terms

Term	Definition
Acute Malnutrition	Acute Malnutrition is a form of undernutrition. It is caused by a decrease in food consumption and/or illness, resulting in bilateral pitting oedema or sudden weight loss. It is defined by the presence of bilateral pitting oedema or wasting – a low Mid-Upper Arm Circumference or a low Weight-For-Height.
Anthropometry	Anthropometry is the study and technique of human body measurement. It is used to measure and monitor the nutritional status of an individual or population group.
Blanket Supplementary Feeding Programme	A Blanket Supplementary Feeding Programme is an intervention that aims to prevent Acute Malnutrition among a vulnerable group. A supplementary ration is provided for everyone in an identified vulnerable group for a defined period. This might be all children aged 6–24 months or aged 6–59 months, and/or all pregnant and lactating women, regardless of their nutritional status.
Bilateral pitting oedema	Bilateral pitting oedema, also known as kwashiorkor or oedematous malnutrition, is a sign of Severe Acute Malnutrition. It is defined by bilateral pitting oedema of the feet and is verified when thumb pressure applied to the top of both feet for three seconds leaves a pit (an indentation) in the foot after the thumb is lifted. It is an abnormal infiltration and excess accumulation of serous fluid in connective tissue or in a serous cavity.
Community-Based Management of Acute Malnutrition	Community-Based Management of Acute Malnutrition refers to the management of Acute Malnutrition through: i) inpatient care for 6–59-month-old Severe Acute Malnutrition children with medical complications and Severe Acute Malnutrition infants under 6 months with/without medical complications; ii) an outpatient therapeutic programme for 6–59-month-old Severe Acute Malnutrition children without medical complications; iii) community outreach; and iv) services or programmes for children aged 6–59 months of age and Pregnant and Lactating Women with Moderate Acute Malnutrition.
Emergency or humanitarian crisis	An emergency or humanitarian crisis is an event which critically threatens the health, safety, security, or wellbeing of a large group of people. A crisis is triggered by a hazard that may be natural or manmade, with rapid or slow onset, and of short or protracted duration.
Formula 75	Formula 75 (75 kcal/100 ml) is a therapeutic milk recommended by the World Health Organization for the stabilisation phase of children with Severe Acute Malnutrition and medical complications.
Formula 100	Formula 100 (100 kcal/100 ml) is a therapeutic milk recommended by the World Health Organization for the nutrition rehabilitation of children with Severe Acute Malnutrition after stabilisation in a Stabilisation Centre. Formula 100 has a similar nutrient composition to Ready-to-Use Therapeutic Food.
Formula 100 diluted	Formula 100 diluted (100 kcal/130 ml) is a therapeutic milk recommended by the World Health Organization for the stabilisation and rehabilitation of infants 0–6 months of age with Severe Acute Malnutrition and without bilateral pitting oedema in a Stabilisation Centre.
Food security	Food security occurs when people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food

Term	Definition
	preferences for an active and healthy life. A family (or country) may be food secure, yet include individuals who are nutritionally insecure. Food security is therefore a necessary but not sufficient condition for nutrition security. Hunger is an outcome of food insecurity, where dietary intake, at population level, falls below minimum requirements (typically averaged as 2,100 kcal per person per day).
Fortified Blended Food	A Fortified Blended Food is a mixture of cereals and other ingredients, such as soya beans or pulses that have been milled, blended, pre-cooked by extrusion or roasting, and fortified with a premix of a sufficient amount and range of vitamins and minerals. Super Cereal Plus is an example of a Fortified Blended Food.
Global Acute Malnutrition	Global Acute Malnutrition is a population-level indicator referring to overall Acute Malnutrition defined by the presence of bilateral pitting oedema or wasting defined by a Weight-for-Height < -2 z-score (World Health Organization standards). Global Acute Malnutrition is the sum of Severe and Moderate Acute Malnutrition (Global Acute Malnutrition = Severe Acute Malnutrition + Moderate Acute Malnutrition).
Mid-Upper Arm Circumference Indicator	A Low Mid-Upper Arm Circumference Indicator is an indicator of wasting, used for a child that is 6–59 months of age. A Mid-Upper Arm Circumference < 11.5 cm indicates severe wasting, or Severe Acute Malnutrition. A Mid-Upper Arm Circumference ≥ 11.5 cm and < 12.5 cm indicates moderate wasting, or Moderate Acute Malnutrition.
Moderate Acute Malnutrition	Moderate Acute Malnutrition, or moderate wasting, is defined by a Mid-Upper Arm Circumference Indicator ≥ 11.5 cm and < 12.5 cm or a Weight-for-Height ≥ -3 z-score and < -2 z-score (World Health Organization standards) in children aged 6–59 months. Moderate Acute Malnutrition can also be used as a population-level indicator defined by Weight-for-Height ≥ -3 z-score and < -2 z-score (World Health Organization standards).
Micronutrient deficiencies	Micronutrient deficiencies are a form of undernutrition that is related to vitamins and minerals. Deficiencies of iron, iodine, vitamin A, and zinc are among the top 10 leading causes of death through disease in developing countries. Other deficiencies which are more specific to emergencies include those of thiamine (B1), riboflavin (B2), niacin (B3), and vitamin C.
Outpatient Therapeutic Programme	An Outpatient Therapeutic Programme is a service treating patients with Severe Acute Malnutrition without medical complications through the provision of routine medical treatment and nutrition rehabilitation with Ready-to-Use Therapeutic Food. Patients attend outpatient care at regular intervals (usually once a week) until the discharge criteria are reached.
Public Health Emergency Management	Public Health Emergency Management is a process of anticipating, preventing, preparing for, detecting, responding to, controlling, and recovering from the consequences of public health threats in order that health and economic impacts are minimised.
Ready-to-Use Supplementary Food	Ready-to-Use Supplementary Food is an energy-dense, mineral- and vitamin-enriched food specifically designed to treat Moderate Acute Malnutrition. Ready-to-Use Supplementary Food has a similar nutrient composition to Ready-to-Use Therapeutic Food, but has a different source of protein and a vitamin and mineral premix. Ready-to-Use Supplementary Food is soft and can be consumed easily by children from the age of six months without adding water. Like Ready-to-Use Therapeutic Food, Ready-to-Use Supplementary Food is not water-based, meaning that bacteria cannot grow in it and that it can be used safely at home without refrigeration and in areas where hygiene conditions are not optimal. Unlike fortified

Term	Definition
	blended food, it does not require preparation before consumption. Plumpy'sup® is an example of a lipid-based Ready-to-Use Supplementary Food.
Ready-to-Use Therapeutic Food	Ready-to-Use Therapeutic Food is an energy-dense, mineral- and vitamin-enriched food specifically designed to treat Severe Acute Malnutrition. Ready-to-Use Therapeutic Food has a similar nutrient composition to Formula 100. Ready-to-Use Therapeutic Food is soft and can be consumed easily by children from the age of six months without adding water. Unlike Formula 100, Ready-to-Use Therapeutic Food is not water-based, meaning that bacteria cannot grow in it and that it can be used safely at home without refrigeration and in areas where hygiene conditions are not optimal. It does not require preparation before consumption. Plumpy'nut® is an example of a lipid-based Ready-to-Use Therapeutic Food.
Severe Acute Malnutrition	Severe Acute Malnutrition is defined by the presence of bilateral pitting oedema or severe wasting (Mid-Upper Arm Circumference Indicator < 11.5 cm or a Weight-for-Height < -3 z-score [World Health Organization standards]) in children aged 6–59 months. A child with Severe Acute Malnutrition is highly vulnerable and has a high mortality risk.
Severe wasting	Severe wasting is a sign of Severe Acute Malnutrition. It is defined by a Mid-Upper Arm Circumference Indicator < 11.5 cm or a Weight-for-Height < -3 z-score [World Health Organization standards]) in children aged 6–59 months. Severe wasting is also called non-oedematous malnutrition. The child with severe wasting has lost fat and muscle, and appears very thin (e.g. signs of 'old man face' or 'baggy pants', i.e. folds of skin over the buttocks).
Severe wasting with bilateral pitting oedema	Severe wasting with bilateral pitting oedema is the simultaneous condition of severe wasting (Mid-Upper Arm Circumference Indicator < 11.5 cm or Weight-for-Height/Weight-for-Length <-3 z-score) and bilateral pitting oedema of any grade (+, ++, or +++).
Sphere Project Humanitarian Charter and Minimum Standards in Disaster Response	The Sphere Project Humanitarian Charter and Minimum Standards in Disaster Response is a voluntary effort to improve the quality of assistance provided to people affected by disaster and to enhance the accountability of the humanitarian agencies in disaster response. Sphere has established Minimum Standards in Disaster Response (often referred to as Sphere Standards) and indicators to describe the level of disaster assistance needed. Visit www.sphereproject.org for more information.
Stabilisation Centre	A Stabilisation Centre is a service to treat children with Severe Acute Malnutrition with medical complications until their medical condition is stabilised and the complications are resolved (usually four to seven days). Treatment then continues in an Outpatient Therapeutic Programme until the discharge criteria are reached. Inpatient care for Severe Acute Malnutrition with medical complications is provided in a hospital or health facility with 24-hour-care capacity.
Super Cereal Plus	Super Cereal Plus is a blend of cereals and legumes (mostly corn/wheat/rice and soy), pre-cooked, available in dry form, and fortified with vitamins and minerals. Its formulation was designed to target pregnant and lactating women and malnourished individuals on Anti-Retroviral Therapy. The nutritional profile consists of 752–939 kcal, 31–38 g protein (16%), and 16–20 g fat (19%); it meets the Reference Nutrient Intake and Protein Digestibility Corrected Amino Acid Score. Shelf life is up to 12 months. The packages come in 25 kg (net) bags.
Targeted Supplementary Feeding Programme	Targeted Supplementary Feeding Programme is an intervention that aims to treat patients with Moderate Acute Malnutrition, and prevents deterioration of the condition to Severe Acute Malnutrition. The supplementary food ration is targeted at

Term	Definition
	individuals with Moderate Acute Malnutrition in specific vulnerable groups, such as children aged 6–59 months and malnourished pregnant and lactating women with infants under six months.
Undernutrition	Undernutrition is a consequence of a deficiency in nutrient intake and/or absorption in the body. The different forms of undernutrition that can appear in isolation or in combination are acute malnutrition (bilateral pitting oedema and/or wasting), stunting, underweight (a combined form of wasting and stunting), and micronutrient deficiencies.
Underweight	Underweight is a composite form of undernutrition, including elements of stunting and wasting, and is defined by a Weight-for-Age z-score below two standard deviations of the median (World Health Organization standards). This indicator is used in growth monitoring and promotion and child health and nutrition programmes aimed at the prevention and treatment of undernutrition.
Wasting	Wasting is a form of acute malnutrition. It is defined by a Mid-Upper Arm Circumference Indicator < 12.5 cm or a Weight-for-Height < -2 z-score [World Health Organization standards]) in children aged 6–59 months.
Weight-for-Age Index	The Weight-for-Age Index is used to assess underweight. It shows how a child's weight compares to the weight of a child of the same age and sex in the World Health Organization standards. The index reflects a child's combined current and past nutritional status.
Weight-for-Height/Weight-for-Length Index	The Weight-for-Height/Weight-for-Length Index is used to assess wasting. It shows how a child's weight compares to the weight of a child of the same length/height and sex in the World Health Organization standards. The index reflects a child's current nutritional status.

Section 1

Introduction to Nutrition in Emergency

1. Introduction

1.1 Overview of nutrition in emergencies

Humanitarian crises exacerbate nutritional risks and often lead to an increase in acute malnutrition. Emergencies include both manmade (conflict) and natural disasters (floods, drought, cyclones, typhoons, earthquakes, volcanic eruptions, etc.). Complex emergencies are combinations of both manmade and natural disasters, often of a protracted nature. Millions of people are affected by humanitarian crises every year. The increasing frequency and scale of emergencies requires nutrition to be addressed in all phases of a response.[1]

Crisis situations, whether acute or protracted, impact on a range of factors that can increase the risk of undernutrition, morbidity, and mortality. They may involve: the large-scale destruction of property and infrastructure; the erosion of livelihood strategies and purchasing power; a breakdown of and reduced access to essential services, including health services, water supply, and sanitation; and the displacement of large numbers of people. Emergencies can also disrupt social systems and the quality of care/feeding practices. Household access to food may be negatively affected and people may find themselves in overcrowded settlements with their families divided. As a result, at the individual level, there is often an increased risk of deteriorating health and nutritional status, resulting in a greater likelihood of death.

Who is most vulnerable to undernutrition in emergencies?
Some population groups are more nutritionally vulnerable than others in emergencies, based on physiological, geographical, social, economic, and refugee status, as described below.

Physiological vulnerability
Individuals can be physiologically vulnerable for two reasons. First, nutrient requirements increase at certain ages. Infants and young children who are growing and developing quickly are particularly vulnerable, as are PLW, who require more nutrients for intra-uterine growth and to breastfeed their infants.

Second, reduced appetite and ability to eat can also create vulnerability. Young children are also exposed to a higher risk (compared to other population groups) of contracting infections, which can further increase nutrient requirements, impede nutrient use, and reduce appetite.[2] Older people, the disabled, and people living with chronic illness, such as HIV and AIDS, may all suffer from a reduction in appetite, difficulties in chewing, and difficulties in accessing food, all of which makes them vulnerable to undernutrition.[3]

Geographic vulnerability
In some emergencies, populations who live in certain geographical areas are at nutritional risk. For example, those living in drought- or flooding-prone areas are likely to be less food and nutritionally secure. Certain livelihood groups are vulnerable when natural resources become scarce, and populations who reside in areas prone to conflict or in densely populated urban areas (slums) are also nutritionally vulnerable.

[1] USAID, Multi-sectoral nutrition strategy 2014–2025, Technical Guidance Brief on Nutrition in Emergency.
[2] Addressing Undernutrition in Emergencies; European Commission; Brussels, 12.3.2013 SWD (2013) 72 final.
[3] Older men and women are those aged over 60 years, according to the UN, but a definition of 'older' can vary in different contexts.

Social vulnerability

The poorest households are often some of the most vulnerable to emergencies as they often struggle the most to cope with shocks. There is evidence that vulnerable households (and their most nutrition-vulnerable members, the focus of this document) are likely to not have access to and/or cannot afford a nutritious diet (Fill the Nutrient Gap 2020). Most of the relief food security interventions are designed to provide rations that aim to fulfil kilocalories only (no other macro- and micronutrients). This is so because nutritious diets can be up to five to eight times more expensive than kilocalorie-based diets. However, the Ethiopian Public Health Institute (EPHI) has developed mechanisms to prioritise the resources, when these are limited (Terms of Reference (ToR) of the National Technical Working Group for the Cost / Non-Affordability of Healthy Diets 2020).

Gender also plays a role in a person's social vulnerability. Women/girls and men/boys face different risks in relation to the deterioration of their nutritional status in emergency contexts. These different vulnerabilities are related both to their differing physiological nutritional requirements and to socio-cultural factors related to gender. For example, in some emergency situations where food is in short supply, women/girls may be more likely to reduce their food intake as a coping strategy in favour of other household members. This can contribute to acute malnutrition among women and girls. Furthermore, because of social traditions, men/boys may be favoured and fed better than women and girls in some societies, although a recent systematic review shows wasting is more common in boys than girls in many contexts with possible biological and social causes[4].

Political vulnerability

Communities or individuals exposed to violence or marginalisation may be vulnerable. Emergency situations can lead to population migration and displacement. Refugees and internally displaced people (IDPs) who flee with little or no resources are at greater risk of being food insecure as they may be completely cut off from their normal food sources, social structures, and coping mechanisms. Their situation also depends on the size of the refugee and IDP population, whether they are living in large, overcrowded camps, in small groups, or with host families, whether they have access to land and income-earning opportunities, and on the food security of the host country and population. Populations hosting refugees and IDPs are also often increasingly vulnerable to nutrition crises.

Specific vulnerabilities in Ethiopia

In Ethiopia, pastoralists, primarily found in five regions – Afar, Oromia, Somali, South Ethiopia and South Western Ethiopia Regions – are particularly vulnerable for drought induced nutritional emergencies. As an economic and social system, pastoralism operates effectively in low and highly variable rainfall conditions. However, with an increasing population, climate change, and increased barriers to international markets, pastoralist livelihoods systems are becoming increasingly vulnerable. Traditional livestock practices have deteriorated and there has been significant degradation of some wet season grazing areas. Additionally, grazing land has been taken away from pastoralists for other purposes, such as farming and settlement along

[4] Thurstans S, Opondo C, Seal A, et al. Boys are more likely to be undernourished than girls: a systematic review and meta-analysis of sex differences in undernutrition. BMJ Global Health 2020;5: e004030.

pastoralist migratory routes. The pressures on pastoralists and their livelihoods, particularly in times of drought, make them highly vulnerable to acute and chronic food insecurity and malnutrition.

Seasonal vulnerability is also cause for concern in Ethiopia, given the dependence of agriculturalists on rain. Like pastoralists, in times of drought their available food and monetary resources decrease dramatically, often resulting in spikes in undernutrition. Recent study in rural Ethiopia have shown that in some situations child height growth velocity follows a seasonal pattern and that seasonal undulations in food security manifest as energy stress among women, men, and children [5]

What types of malnutrition occur during emergencies?
Of concern in emergencies is the increased risk of moderate and Severe Acute Malnutrition (SAM) because acute malnutrition is strongly associated with death. A child with SAM is around 12 times more likely to die than a non-wasted child, while a child with MAM has a three to four times greater risk of mortality. On average, household members with Moderate Acute Malnutrition (MAM) are five to eight times more numerous than those with signs of SAM.

Causes of acute malnutrition
The United Nations International Children's Emergency Fund (UNICEF) conceptual framework, found in Annex 6, is a useful tool to help understand the many factors that can impact on nutrition status. It identifies three levels of causality: immediate; underlying; and basic. All three can be disrupted during emergencies.

The immediate causes of acute malnutrition are a lack of dietary intake, and/or disease. This can be a result of consuming too few nutrients or an infection, which can increase nutritional requirements and prevent the body from absorbing the nutrients consumed. Whether or not an individual gets enough food (both staple and nutrient-dense) to eat or whether s/he is at risk of infection is mainly the result of factors operating at the household and community level, including:

- Inadequate household food and nutrition security;
- Inadequate maternal and child care; and
- Inadequate services and an unhealthy environment.

In practice, there is significant overlap in these three groups of underlying causes.

All three clusters of underlying causes of undernutrition are subject to seasonal variation. For example, access to food typically reduces prior to the harvest when the workload is also high (for agricultural producers), or prior to the rains when the workload finding water and pasture is high (for pastoralists).

The third level of factors contributing to undernutrition operates at the basic level. This refers to the resources available (human, structural, financial) and how they are used (the political, legal, and cultural factors). Adverse political, legal, and cultural factors may defeat the best efforts of households to attain good nutrition.

[5] Fantahun, *et al.* (2018). Seasonality and determinants of child growth velocity and growth deficit in rural southwest Ethiopia. BMC; 18:20. DOI.10.1186/ s/2887-018-0986-1

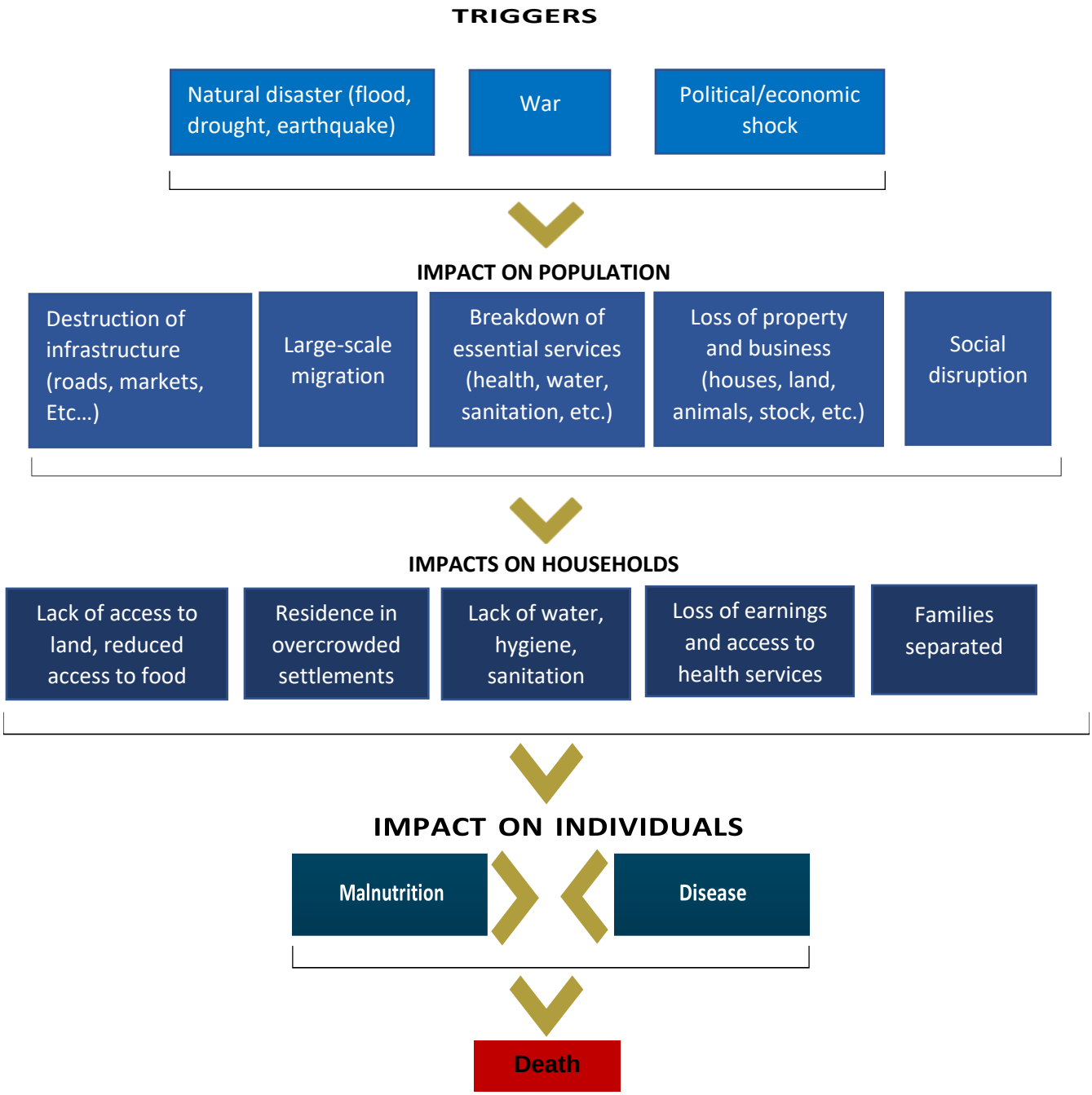

Figure 1. The impact of an emergency on nutritional Status

1.2 Rationale

Ethiopia faces recurrent natural hazards and manmade humanitarian crisis and associated high burden of nutritional emergencies. Due to this, field practitioners, humanitarian actors and nutrition experts are often caught in day-to-day emergency response and may fall short of developing and maintaining comprehensive and effective emergency nutrition preparedness and response guidance, tools, and resources to help them ease the process.

In response, the Ethiopian Public Health Institute, Ministry of Health (MoH), and Ethiopia Disaster and Risk Management Commission have developed this interim guideline to help nutrition cluster, nutrition sectors, nutrition partners, public and private sectors to strengthen coordination, surveillance, preparedness and response towards effective protection of the nutritional status of the vulnerable populations.

1.3 Scope of the guideline

Part 1 of this document provides a rationale followed by the scope of the guideline, users of the guideline and guiding principles.

Part 2 of this document provides information on the following sections: 1. Overview of emergency nutrition 2. Preparedness for emergency nutrition 3. Nutritional surveillance and Early warning 4. Food aid and nutritional responses 5. Nutrition supply management 6. Monitoring & evaluation of key emergency nutrition indicators and other topics are covered in the technical annexes.

1.4 Users of the guideline

- Nutrition Programme managers
- Health and nutrition experts
- Health service providers at health facility and community level
- Teaching institutions that train health professionals
- Humanitarian workers
- Government officials within the relevant ministries.
- Donors and UN agencies
- National and international non-governmental organisations (NGOs).

1.5 Guiding principles

- Whole-of-society, multisectoral/multidisciplinary engagement
- A community-centered (bottom-up) approach
- Inclusiveness to ensure no one is left behind
- Right based risk informed approach
- Humanitarian principles

Section 2

Preparedness for Nutrition Emergency

2. Preparedness for Nutrition Emergency

2.1 What is emergency response preparedness?

Emergency Response Preparedness (ERP) is usually associated with measures taken in advance or in anticipation of an emergency. It can also be seen as an early action and capacity development tool which aims to mitigate negative impacts, by improving the overall effectiveness, efficiency, timeliness of response, and recovery.

Preparedness is part of risk-informed programming (which also includes disaster risk reduction, climate change adaptation, peace building, and social protection). In most emergencies, external support can take days, in some cases weeks, to arrive. Therefore, it is vital that there is a plan in place, based on the available in-country capacity, to deal with the initial phase of an emergency. Figure (2) illustrates preparedness to response timeline adapted and extracted from IASC ERP guidelines

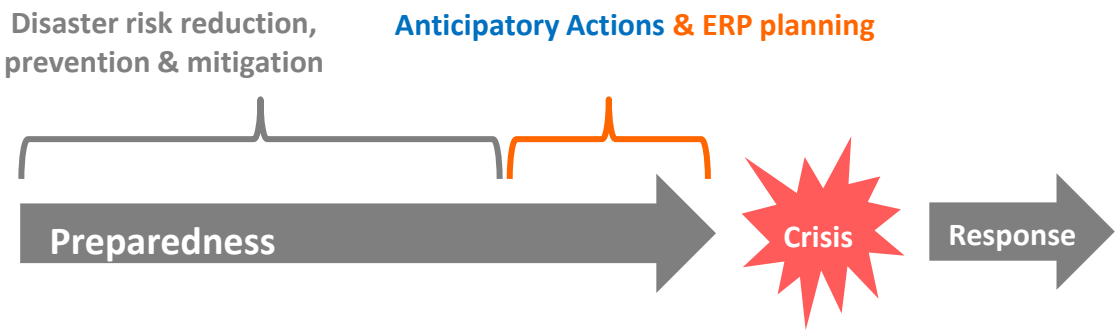

Figure 2. Emergency preparedness to response timeline.

2.2 Why is emergency response preparedness important?

Investing in disaster preparedness has proven its benefits in terms of speed and cost saved during a humanitarian response. The cost benefits of investing in prevention are clear – time saved in response implementation is critical in emergencies since the speed of a response has direct implications on lives saved.

2.3 How to undertake emergency response preparedness?

ERP planning is not a standalone process, elements of preparedness have to be mainstreamed throughout all phases of the regular workstream to maximize the speed and effectiveness of the emergency response provision. ERP is a continuous process that is constantly adjusted and updated to reflect changing environments and potential hazards and risks.

With this in mind, it is recommended in all contexts to establish the foundations for a minimum level of emergency preparedness by integrating Minimum Preparedness Actions (MPAs) in regular work and throughout the program cycle. In areas where specific hazards pose an increasing risk of disaster, it is important to enter a more advanced level of preparedness and go through a detailed ERP planning process and undertake advanced preparedness actions (APAs), including the development of risk-specific contingency plans. Figure 3 below extracted from IASC guideline shows ERP planning process

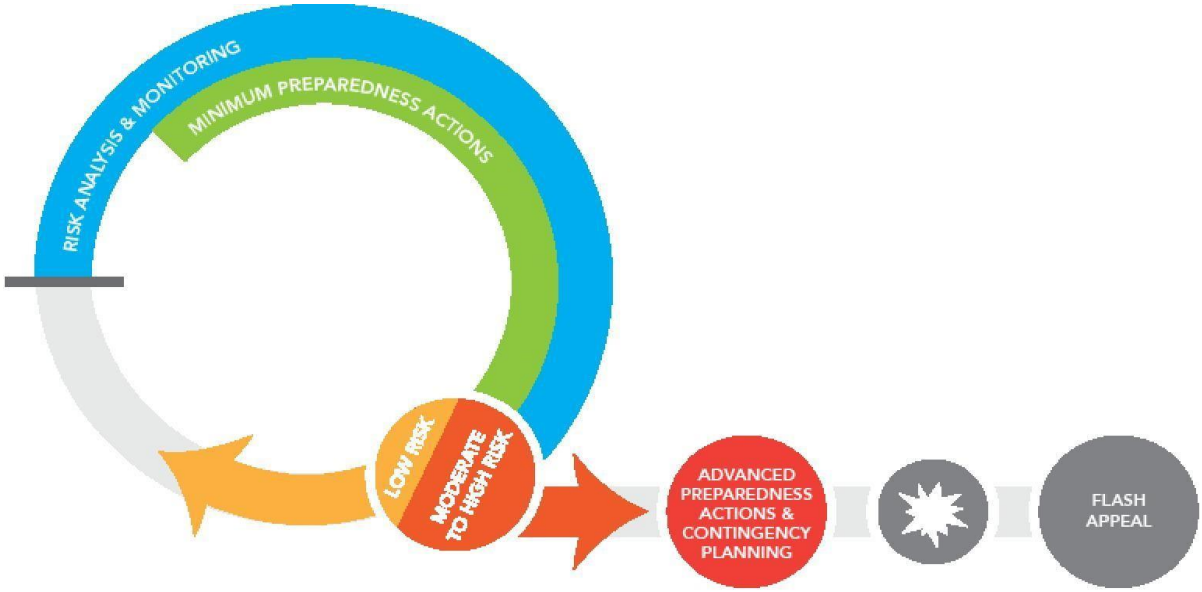

Figure 3. Emergency response preparedness planning process.

In areas where the likelihood of experiencing a disaster of severe impact is high, this process supports building an advanced level of Preparedness, the development of a comprehensive multi-risk ERP plan, including estimated needs, targets, funding requirement, response objectives and prioritized activities for immediate response. While an ERP plan reflects multi-risks and includes planning arrangements for different possible crisis scenarios; a contingency plan is risk-specific. As such, a multi-risk ERP plan may include several contingency plans, e.g., a contingency plan for floods, a contingency plan for drought, etc.

2.4 Elements of emergency response preparedness

ERP is a continuous process, divided into three key elements.

1 Risk Analysis and Monitoring

A clear and common understanding of the risks which may trigger a crisis significant enough to require a coordinated humanitarian response is fundamental to the entire ERP process. Analysis informs the planning while monitoring ensures that the process is responsive to emerging risks.

The risk analysis process identifies the hazards that could trigger a crisis and ranks them by impact and likelihood. The risk ranking determines whether thresholds are low, medium, or high. Development of a contingency plan is recommended when risk thresholds are determined to be medium or above.

In parallel, risk monitoring should be undertaken using indicators identified as part of the risk analysis process. Monitoring provides early warning of emerging risks which in turn allows for early action, such as tailoring the contingency plan and where possible taking action that could mitigate the impact of the emerging risk.

Minimum Preparedness Actions (MPA)

Minimum Preparedness Actions are a set of activities that every country team must implement in order to establish a minimum level of emergency preparedness within the country. The MPAs are not risk or scenario-specific and usually do not require significant additional resources to accomplish. Minimum Preparedness Actions include risk monitoring, establishment of coordination and management arrangements, preparing for joint needs assessments, response monitoring, information management, and establishing operational capacity and arrangements to deliver critical relief assistance and protection. Implementing MPAs will make a fundamental difference to eventual response and provide flexibility to respond to different types of emergencies.

Advanced Preparedness Actions and Contingency Planning (MPA)

Advanced Preparedness Actions (APAs) and Contingency Planning (CP) are two sets of complementary activities that should be initiated together to plan for specific risks when risk analysis and monitoring indicate moderate or high risk. Advanced Preparedness Actions are designed to advance readiness to respond to specific risks. Unlike the MPAs, the APAs are risk-specific. they build on the MPAs already in place.

A contingency plan sets out the initial response strategy and operational plan to meet the humanitarian needs during the first three to four weeks of an emergency. A contingency plan addresses what could happen and what might be needed; actions to take and resources required and gaps to be bridged. it lays the ground for a flash Appeal, if required.

2.4.1. Risk Analysis and Monitoring

The Inter-Agency Standing Committee (IASC) defines risk analysis and monitoring as the first pillar of emergency preparedness planning. A clear and common understanding of the risks which may trigger a crisis significant enough to require a coordinated response is fundamental to the entire preparedness process. The risk analysis informs the planning, while monitoring ensures that the process is responsive to emerging risks. The ERP process should begin with risk analysis. Risk analysis and monitoring should be an ongoing process. however, an overall review of risk analysis involving all partners should be carried out at least once a year

Emergency risk analysis and monitoring actions includes

a. Hazard identification:

For the purpose of effective ERP planning, a focus is placed on six main hazard categories which have potential humanitarian consequences and may represent risks for the Nutrition status of the affected populations.

- Natural hazards, either hydro-meteorological (floods, landslides, storms, droughts) or geophysical (earthquake, volcanic eruption, tsunami) and include plant pests and locusts that threaten to harm crops.
- Armed conflict and civil unrest.
- Epidemics and pandemics.
- Drastic changes in the socio-economic environment, such as a surge in prices of essential goods, restrictive government legislation such as export and import bans.
- Serious violations of international human rights law and international humanitarian law.
- Environmental hazards (industrial accidents, severe pollution).

b. Ranking the risks: all hazards should be ranked by the perceived impact (on a scale 1-5) and likelihood of happening (on a scale 1-5). Risk=Impact x Likelihood. Risks should then be ranked from low to high. The risk ranking grade is Low (1-7), Medium (8-14) and High (above 15).
c. Defining thresholds: thresholds for the risk values, as above calculated, should then be set by the HCT or NCC and the actions needed when exceeded are defined (e.g. when risk > 12 initiate contingency planning).
D. Monitoring the risk: a mechanism should be established to track the hazards and in particular those with a high-risk value

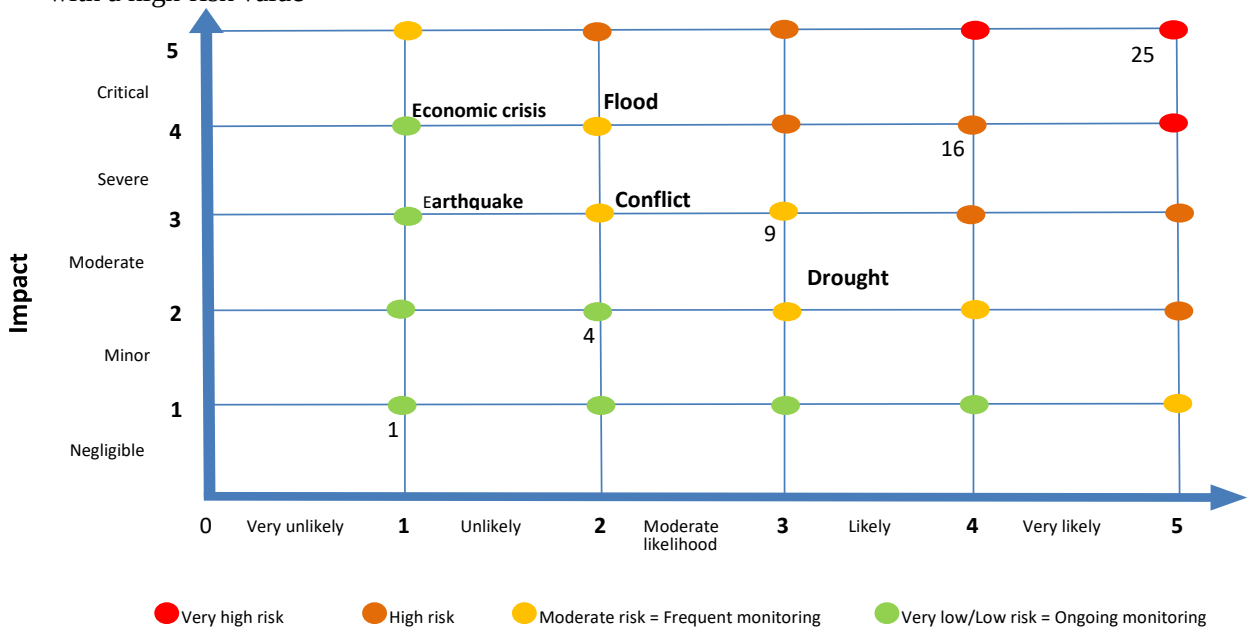

Figure 4. Risk Monitoring Graph

2.4.2. Minimum Preparedness Action

Minimum Preparedness Actions (MPAs) are a set of activities that every Humanitarian Country Team must implement in order to establish a minimum level of emergency preparedness within the country. It indicates minimum level of readiness that should be in place to deliver humanitarian protection. Minimum preparedness action is performed when the risk is categorized as low.

Coordination

Local coordination platform should incorporate the following elements

- Nutrition in emergency coordination mechanism should be established.
- Ensure availability of agreed upon terms of reference for nutrition cluster staff.
- Technical working group and strategic advisory group created and TOR available.
- Contact list of nutrition sector partners is available and updated.
- The nutrition clusters participate and contribute to inter-sector coordination.
- Cluster members are familiar with humanitarian principles, cluster approach and accountability to affected populations.

Information management

- Role and responsibilities for information management agreed upon with government and cluster members.
- A platform for storing and sharing documents is operational.
- Data collection tools harmonized and available to all members.
    - Example there should be standard and agreed data collection tool/reporting format.

Needs assessment, analysis and monitoring

- Rationale and methods for needs assessment and analysis understood all stakeholders.
- Historical nutrition data are retrieved and analyzed.
- Nutrition is included in joint/common rapid assessment.
- Rapid and standard nutrition assessment is agreed by all stake holders.
- Nutrition screenings and surveillance systems are in place.

Resources mobilization

- Donor relation is established.
- Cluster members are familiar with CERF.
- Cluster members build preparedness for supplies management.

Implementation and monitoring

- Capacity mapping is performed and regularly updated.
- Preparedness measures for specific nutrition interventions are taken.
- Gap analysis is performed and regularly updated.
- Rapid response mechanism implementation is discussed.
- A capacity building strategy/plan is designed.
- Monitoring and evaluation of preparedness is performed.

Communication and advocacy

- A communication and advocacy strategy is needed to agree with members and implementers.

2.4.3. Advanced Preparedness Actions and Contingency Planning

- Advanced Preparedness Actions (APAs) and Contingency Planning (CP) are two sets of complementary activities that should be initiated together to plan for specific risks when risk analysis and monitoring indicate moderate or high risk.
- APA is performed when the risk is categorized as medium and high (score of 8 or higher in the risk mapping).

Contingency Planning

Contingency planning follows the same steps as the preparedness planning, without the risk analysis, since the risk analysis has already been done and triggered the contingency planning. It is more specific than a multi-risk preparedness plan

Example: Imagine a country at risk of political instability, drought and conflicts in neighboring countries that could cause an influx of refugees. The country office develops a multi-risk preparedness plan to address the possible consequences of all these crises, without specific details on the population affected, the likely timing of the crisis or the country office exact response.

If, however, the risk of conflict in a neighboring country escalates above the global threshold (Figure X), then the CO develops a (risk-specific) contingency plan closely tailored to the specific potential event. In this example the contingency plan includes preparedness actions to be ready to provide humanitarian aid through four INGOs, focusing initially on nutrition, WASH, education and protection (as agreed through interagency coordination), to 100,000 people expected to cross the north east border during June, resettling in four refugee camps whose location has been agreed by the government

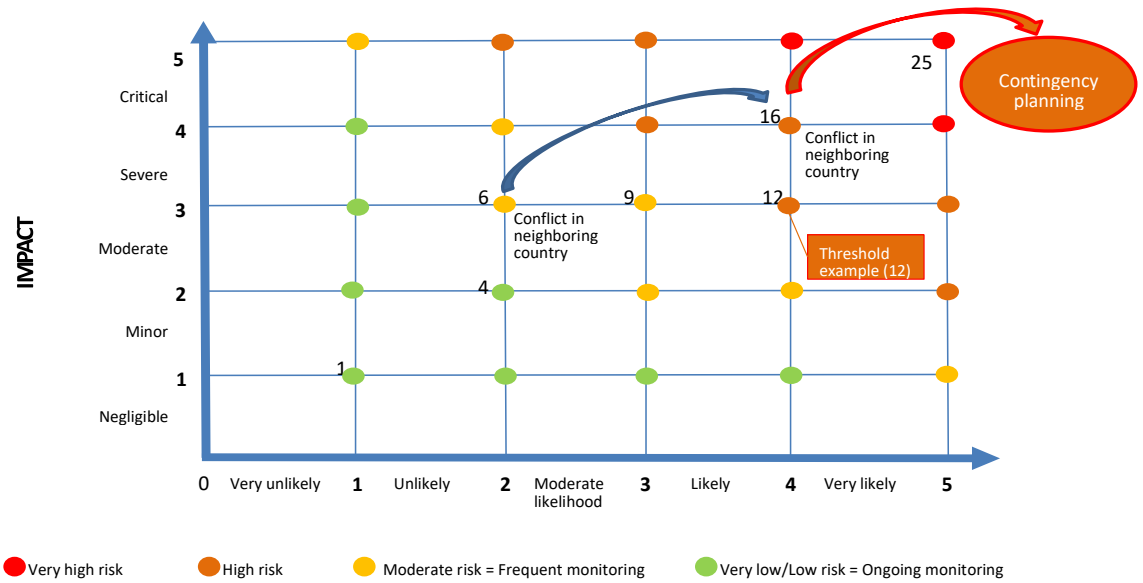

Figure 5. Threshold for contingency planning

2.5 Coordination and collaboration

At federal level

The Ethiopia Disaster Risk Management Commission and/or the equivalent bodies at subnational and local levels are responsible for coordinating preparedness and responses to emergencies, including those caused by natural and manmade hazards (see Figure 2). During emergency nutrition interventions, the coordination of numerous sectors, partners, and UN agencies is very important. It is essential to increase cooperation and collaboration between health and other sectors (e.g. agriculture, water, energy, law enforcement, transport, migration, foreign affairs, and trade) before, during, and after all types of emergencies.

The Multi-Agency Nutrition Task Force (MANTF), which is the technical taskforce at federal level, oversees and ensures the proper technical operation of preparedness and response activities. The health and emergency nutrition operational activities are planned and monitored through the EPHI/Emergency Nutrition Operation Unit. These, with the respective regional and sub-region level are responsible for coordinating resources and information.

At regional/zonal level

A Multi-sectoral emergency nutrition coordination forum comprising all concerned sectors, UN agencies, and NGOs coordinates the emergency technical activities at regional level. The regional Disaster Risk Management -Technical Working Group Coordination and Emergency Operation Centres will be activated based on the pre-set criteria, if necessary. The regions are therefore preparing Emergency Preparedness and Response Plans, and to carry out search and rescue operations and coordinate joint impact assessment and humanitarian responses for affected and displaced peoples.

At woreda/community level

Local governmental structures with representatives of at-risk communities closely coordinate awareness creation and messaging of the threats, and take appropriate emergency response measures, including relocating at-risk populations. Activities include the dissemination of alert messages and continuous monitoring updates, and the coordination of emergency response at times of emergency.

Incident command posts can be established depending on the severity of the disaster.

Roles and Responsibilities	• General food rationing that meets nutrient requirements (adequate food basket composition, including the use of fortified vegetable oil) • Enhancement of livelihoods, food, and nutrition security in selected communities through improved diversification of food sources • Links b/n national social safety nets or cash transfer programmes and nutrition interventions, e.g., women and mothers engaged in an IYCF focused SBC programme are eligible for cash transfer programmes; or households engaged in promotion of adequate complementary feeding activities are eligible for cash transfer programmes • Multi-sectoral Knowledge Attitude and Practices (KAP) surveys including nutrition, food security and livelihood indicators and GFR coverage among others. • Linkages b/n GFD and other nutrition services	• ECD kits are made available at mother-baby friendly spaces • Integrated SBC strategies with a focus on promoting adequate childcare and feeding practices • Provision of technical and material support for school feeding programs	• Lead the national emergency nutrition coordination • Develop policy, program and strategy for emergency nutrition • Develop guidelines, manuals and SOP for emergency nutrition intervention • Conduct rapid nutrition assessments, SMART surveys, and other types of nutrition surveys • Conducting high level emergency nutrition advocacy workshops and seminars • Coordinate the development of national integrated emergency nutrition plan • Provide nutrition education, counselling and promotion for the community • Monitoring the national nutrition programs and strategies • Coordinate and lead nutrition intervention in humanitarian setting • Activation the national public health emergency operation center (PHEOC) during large scale nutritional emergencies • Partners mapping and coordination • Lead the national health and nutrition seasonal assessments • Lead the national nutrition information system • Develop TOR and establish TWG for emergency nutrition	• Protection of women and children • Risks assessments on gender-based violence and other social affairs • Gender based violence (GBV) prevention is integrated to the nutrition response • Risk informed preparedness and planning • Community engagement on GBV protection • Coordination with relevant ministries on women and social affairs	• Besides nutrition, key messages on hygiene practices are delivered as part of the nutrition services. • In some communities, a group of resourceful individuals is created to promote preventive practices including those identified as indirect causes of malnutrition related to WASH. • Integrated SBC strategies with a focus on promoting IYCF practices, hygiene practices, use of safe drinking water and use of improved sanitation facilities. • Conduct WASH surveys and Assessments • Water schemes maintenance • Ensure water availability in emergency settings/IDP sites • Provision of water treatment chemicals

Figure 6. The roles of different sector ministries under the coordination of EDRMC

Section 3

Nutrition Surveillance and Early warning

3. Nutrition Surveillance and Early warning

Effective and timely response to emergency nutrition is contingent upon a very well-developed surveillance system which not only servers the purpose of early warning but also as source for monitoring and evaluation of the emergency response over time.

3.1 Sources of nutrition data

Nutrition data comes from:

- Periodic nutrition surveys
- Routine nutrition screenings
- Health facility growth monitoring and promotion (GMP) Centers
- The supplementary and therapeutic feeding centres
- The routine surveillance; and
- Different Assessments
- From other sectors like Agriculture, DRMC etc.

Table 1. Malnutrition indicators and some epidemic prone diseases under the national surveillance inventory

Data Types	Sources	Collection periods
Target PLW for Screening	EPHI/RHB/RPHI/ZHD/WoHO	Annually
Target U5 children for Screening	EPHI/RHB/RPHI/ZHD/WoHO	Annually
Total Screened PLW	EPHI/RHB/RPHI/ZHD/WoHO/HF	Monthly
Total screened U5 children	EPHI/RHB/RPHI/ZHD/WoHO/HF	Monthly
SAM inpatient for U5 children	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
SAM outpatient for U5 children	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
SAM inpatient death for U5 children	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
MAM outpatient for U5 children	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
MAM outpatient for PLW	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
Malaria	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
Cholera	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly
Measles	EPHI/RHB/RPHI/ZHD/WoHO/HF	Weekly

3.2 Nutrition assessments and surveys

3.2.1. Rapid nutrition assessments

Rapid nutrition assessments can be undertaken as part of initial assessments to obtain an overview of the nutritional situation, and determine the areas and population groups affected by an emergency. The information collected during rapid assessment provides data on gender disparities in nutritional status in a population, when results are disaggregated by sex, age groups (0–6 months, 6–24 months, and 24–59 months), and PLW.

Rapid nutrition assessments are frequently multi-agency (involving several agencies) and multi-sectoral (involving several technical sectors) in order to ensure a broad analysis of risks, needs, and priorities, and to make recommendations to ensure that all the health and nutrition needs of an emergency-affected population are met[6].

It is also reasonable to recommend and implement nutrition interventions temporarily based on the rapid nutrition assessment results. However, the assessment should not be taken as a substitute for the standard nutrition assessment. Once an appropriate intervention has been identified, a standard emergency nutrition assessment should be conducted simultaneously with implementation[7].

3.2.2. Repeated surveys

Repeated surveys refer to statistically representative population-based surveys carried out at regular intervals. This category covers national surveys regularly undertaken in stable situations, such as the Ethiopian Demographic Health Surveys, the UNICEF-supported Multiple Indicator Cluster Surveys, SMART survey, partner emergency nutrition surveys, and the World Bank-supported Living Standards Measurement Surveys.

It also includes small-scale surveys that are carried out to guide specific nutrition-related programmes. Repeated small-scale surveys are used in planning, monitoring, and evaluating development projects, and are also commonly used during emergencies:[8] these are mainly based on MUAC measurements and contribute to defining specific situations.

3.2.3. Community-based sentinel site surveillance

Sentinel site surveillance refers to the monitoring of purposively selected communities or service delivery sites. Data are collected on all potential respondents (children 0–59 months of age and PLW) who visit sentinel sites and health clinics. Table 2. below summarize the different nutrition assessment tools that can be used during an emergency

[6] Cluster G.N. A Toolkit for Addressing Nutrition in Emergency Situations. 2008 (June): 1–87. Available from: papers2://publication/uuid/A41A3FB2-C81D-42B9-AB2D-FDDA52DD4DD2

[7] ENCU/DPPA. Guiding Principles for Rapid Nutrition Assessments. 2006 (March): 1–16. Available from: https://www.nutritioncluster.net/sites/nutritioncluster.com/files/2020-01/Tool_-_Rapid_Nutrition_Assessment-_final_version.pdf

[8] Jeremy Shoham, Fiona Watson. The use of nutritional indicators in surveillance systems. Tech Support Facil to FAO's FIVIMS Manag by Nutr Work 2001: 1–49.

Table 2. Summary of nutrition assessment methods during an emergency

Methodology	Appropriate for
SMART ('Full SMART') survey	• usually recommended for an area wider than woreda, such as adjacent woredas (zones) with relatively homogenous population • where there is no recent nutrition data and access to the survey areas is relatively good
Rapid SMART survey	• where a full SMART survey is not feasible • in contexts where access to survey area is limited • small geographic area in delimited zone (e.g. group of villages, IDP/refugee camps or settlements, urban slums, neighbourhoods, and sometimes woredas) in a population that shares similar characteristics (equally affected by crisis, having equal access to services, similar cultural practices, same livelihood zone, etc.)
Rapid nutrition assessment	• where conducting population surveys is not possible • in a very small area such as an IDP settlements and the worst affected areas (to determine the worst-case scenario) • used to determine the need for more thorough assessment using SMART survey methodology
MUAC screening using Centers for Disease Control (CDC) tools	• where conducting population surveys is not possible • concurrently with active case finding for the treatment of acute malnutrition • can be done in small and wider geographic areas, such as through MUAC screening campaigns or routine services delivery • monitoring trends in proportion of acute malnutrition in a defined geographic area

3.3 Early warning

Early warning is the complex process aimed at reducing the impact of the hazard by providing timely and relevant information by monitoring identified indicators.[9] An early warning system produces an alert. This alert is specific to an area or a livelihood zone, and provides advance notice. As a result of the warning, there is time to make substantial adjustments, according to the context. The early warning system includes three components: a process to monitor indicators; a contextualised analysis of their values and trends; and the means to communicate these findings.

Early warning information is generated using real-time, weekly, and monthly reports, and comparison of these with the baseline can help lead to early action/early response. The early action has two dimensions: the disaster risk reduction activities (which are linked with development); and the early response (saving livelihoods, based on the contingency plan).[10]

[9] UNDP. Five approaches to build functional early warning system, 2018.
[10] Ababa, A. National Disaster Risk Management Commission of Ethiopia Guideline for Multi-hazard, Multi-sectoral and . 2017

Section 4

Emergency Food Aid And Nutrition Responses

4. Emergency Food Aid and Nutrition Responses

This chapter describes the range of food aid and nutrition interventions that are commonly employed in emergencies. There is no fixed blueprint for which interventions to employ in nutrition emergencies; however, it is useful to consider the following:

- The severity of the situation (including the mortality, the food security situation, trends in undernutrition and the likely determinants of undernutrition, and whether the situation is likely to get better or worse) – this dictates the urgency of the response;
- The sub-groups of the population that are at greatest nutritional risk;
- Whether the community understands the situation and their levels of capacity; and
- The cost and feasibility of possible responses.

In an emergency setting, emergency food aid and nutrition interventions are programmes set up to

- General food distribution to all affected community with the full basket commodities
- Integrate management of acute malnutrition (SAM and MAM) as per the MoH protocol;
- Provide other critical nutrition services (i.e. growth monitoring, micronutrient supplementation, and protection of IYCF practices); and
- Provide food to a population that does not have access to food (both staple and nutrient-dense), while filling the nutrient gap (not only kilocalories).

In essence, the emergency nutrition intervention works to reduce high rates of acute malnutrition of large, vulnerable populations. There are three types of emergency nutritional interventions: general dietary programmes, supplementary, and therapeutic feeding programmes (TFPs). The SFPs are an ideal nutrition intervention for the management of MAM patients, whereas the TFPs are ideal for management of SAM patients.

4.1 General food ration (GFR)

General Food Ration distributions should be introduced only when absolutely necessary, targeted to those most in need, and discontinued as soon as possible. The aim of the emergency food aid response is to deliver rapidly an adequate quantity and quality of food to the affected population to reduce the risk of acute malnutrition and mortality so that communities, households, and individuals can survive and recover from the emergency situation.

If the population is entirely dependent on General Food Rations as a source of food, then the rations must provide at least 2100 kcal per person per day; in most cases, because of limited resources, they do not provide the minimum dietary requirements of micronutrients (vitamin and minerals). This is a challenge, and requires prioritising resources for households with children and PLW in view of the first 1,000 days of life approach.

The food basket for the General Food Ration consists of food commodities in sufficient quantities to meet a family's basic nutritional requirements and to provide a buffer against shortages or spoilage. Adequate fuel, cooking utensils, mills and other grinding facilities must also be available to assisted households and communities. Some bartering and trading of food aid and the sale of small livestock to the local population

to buy other foods should be expected to a certain degree and should not be discouraged; refugees typically set up marketplaces in camps.

The basic food basket (General Food Ration) includes the following:

- Culturally acceptable staple food, such as maize, wheat, rice, millet, sorghum, or oats;
- A pulse or legume, which is a source of complementary protein, such as lentils, beans, peas, or peanuts (groundnuts);
- Red palm oil (a natural rich source of vitamin A), vitamin A-fortified vegetable oil, such as groundnut, soya, sunflower, or rapeseed oil;
- A fortified blended food – the main one distributed by the EFP is corn-soy blend; and
- Iodised salt.

Sugar and locally available meat or fish can also be part of the food basket. Where possible, the food basket should also include locally available and culturally acceptable foods, such as fruits, vegetables, condiments/spices, tea, and coffee, in order to add nutrients, taste, and variety to basic foods, to increase the palatability, familiarity, and acceptability of prepared foods and for the preparation of cultural/traditional foods and dishes. Populations generally will not consume a monotonous diet of three commodities (e.g. wheat, beans, and oil) for months at a time (see Table 5 below).

Dried skim milk should not be part of the food basket and should not be distributed to the population because of the high risk of contamination when prepared with unclean water or under unsanitary conditions, and because of the danger dried skim milk poses for young children in particular. The only safe use of dried skim milk is for therapeutic feeding under strict supervision. Breast milk substitutes should be used only in very exceptional circumstances and when provided as generic, non-brand formula. The International Code of Marketing of Breast milk Substitutes states:

- *No donations of breast-milk substitutes, bottles or teats should be given to any part of the health care system and donations made to institutions outside the health care system to infants who have to be fed on breast-milk substitutes should be continued as long as the infants concerned need them.*

Table 5 presents five examples of General Food Rations that meet minimum energy, protein, fat, and micronutrient requirements, and that provide about 2,100 kcal, which is the established international average minimum energy requirement.

Table 3. General Food Rations (grams)

Food item	**1**	**2**	**3**	**4**	**5**
Cereal	400	450	350	400	400
Pulses	60	60	100	60	50
Vitamin A-fortified oil	25	25	25	30	30
Fortified blended foods	50	40	50	40	45
Iodised salt	5	5	5	5	5
Sugar	15		20		25
Fish/meat		10		30	

4.2 Prevention and treatment of MAM

At present, the most common interventions for the management (prevention and treatment) of MAM in emergencies are SFPs. During emergency situations, SFPs should be a short-term measure and not a means for compensating for inadequate household food security or general rations.[11]

SFPs

The goal of SFPs is to rehabilitate individuals affected by MAM or at risk of becoming malnourished by providing a supplementary food ration which is highly nutritious.

> **SFP:** There are two ways to distribute food commodities during emergencies: **on-site feeding** (or wet ration) and **take-home** (or dry ration). The ideal dry ration supplementary food provides 1000 to 1200 kcal; 35 g to 45 g of protein; and fat supplies 30% of the required energy. On-site feeding supplementary food provides 500 to 700 kcal per beneficiary per day; includes 15 g to 25 g of protein; and fat supplies 30% of the required energy.

When to establish an SFP

The decision about whether to implement SFPs should take into consideration:

1. **Malnutrition rates:** current and previous prevalence of GAM and SAM in children aged 6–59 months, reported in z-scores.
2. **Contextual factors:** including the causes of malnutrition, the socio-economic situation, the food security situation, general ration quantity and coverage, and the presence of other humanitarian interventions.
3. **Public health priorities:** whether other priority needs are already being met (shelter, water healthcare, etc.).
4. **Available human, material, and financial resources** and the objectives of the project.

A decision-making framework relating malnutrition rates and SFPs adapted from WHO by the Government of Ethiopia's Disaster Risk Management and Food Security Sector (DRMFSS) is outlined in Table 8.

Principles of SFPs

- SFPs aim to prevent and rehabilitate acute malnutrition.
- A take-home specialised nutritious food is provided to the patient (children under five and PLW), with follow-up visits conducted at a nearby health facility every two weeks.
- For SFPs to achieve the intended outcomes, it is critical that effective and appropriate links are made with food security interventions to avoid the risk of sharing the specialised nutritious food with other members of the household.

There are two types of SFP: **blanket** and **targeted**.

[11] IASC 2008 A Toolkit for Addressing Nutrition in Emergency Situations.

Blanket SFPs

The main aim of a blanket SFP is to prevent widespread acute malnutrition and to reduce excess mortality among those at risk by providing a food/micronutrient supplement for all members of the vulnerable group (e.g. children under five, people with HIV and AIDS, the elderly, and the chronically ill).

Blanket SFPs may be set up under one or a combination of the following circumstances:

- At the onset of an emergency when general food distribution systems are not adequately in place;
- When there are problems in delivering/distributing the general food ration;
- When large numbers of mild and moderately acute malnourished individuals are likely to become severe due to aggravating factors;
- When there is an anticipated increase in the rates of acute malnutrition due to seasonally induced epidemics; and
- In the event of MND outbreaks, to provide micronutrient-rich food to the target population.

Targeted SFPs

This programme is set up and targeted to specific groups within an affected population, when:

- ❖ There are large numbers of mild and moderately acute malnourished individuals;
- ❖ A large number of children are likely to become mildly or moderately acute malnourished due to aggravating factors, such as serious food insecurity or high levels of disease;
- ❖ There are children discharged from an existing TFPs;
- ❖ There is a high prevalence of people with HIV and AIDS;
- ❖ There is a high prevalence of micronutrient deficiencies; and
- ❖ There is short-term hunger among pre-schoolers.

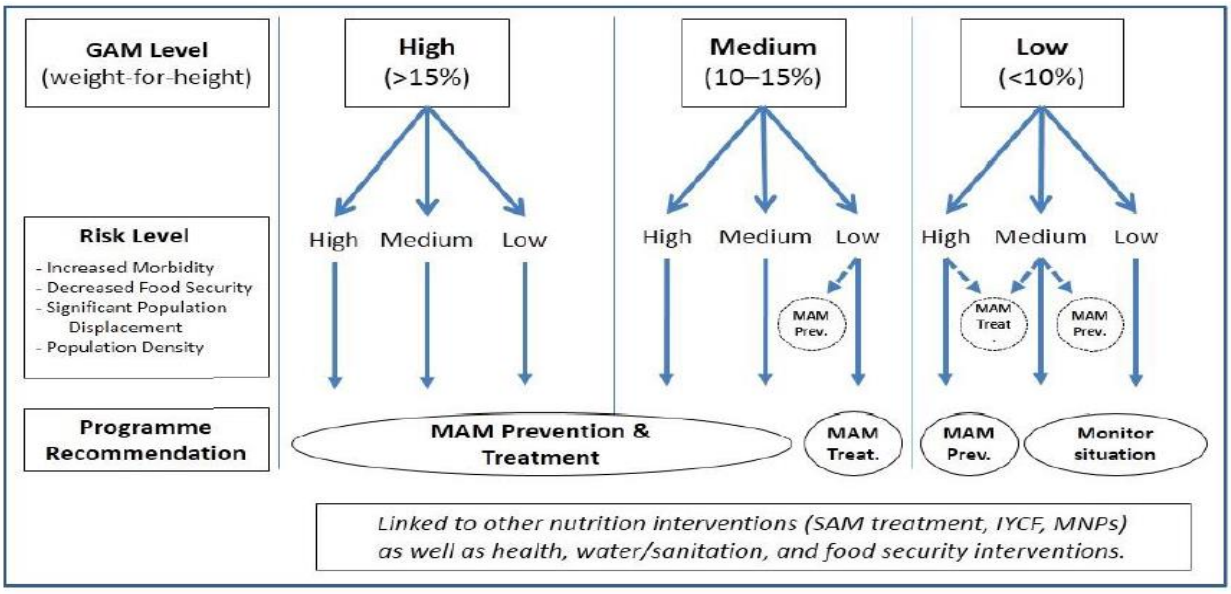

Figure 7. Programme recommendation for the prevention of acute malnutrition and treatment

Duration and closure of SFPs

Closing down nutritional interventions is a complex process involving an overall assessment of health, nutrition, food security, etc. Phase-out criteria must not be seen as a set of strict rules but should be viewed within the context of the situation. The closure of an SFP should be designed in a phased approach in consultation with local authorities. Table 5 below outlines criteria for opening and closing an SFP.

Depending on the magnitude of the emergency situation, SFPs can be phased out in a progressive manner, for example:

⇒ a blanket SFP accompanied by a TFP (with/without GFD), followed by
⇒ a targeted SFP accompanied by a TFP (with GFD), followed by
⇒ return to only GFD and routine PHC activities for management of SAM

The duration of a **blanket SFP** depends on the scale and severity of the emergency, as well as the effectiveness of the initial response.[12] The situation should be assessed at regular intervals and the programme re-oriented as needed, depending on whether the situation has improved (e.g. adequate general rations established, epidemics are under control, and safe and sufficient water is present). The nutritional status of the population should be assessed (for example, through an anthropometric survey) before the decision to close a blanket SFP is taken. At the end of this period, if the situation is still poor, either blanket feeding could be continued, or targeted feeding could replace the programme to ensure that the most vulnerable are treated.

For both blanket and targeted SFPs, partners should assess the situation three months before the end of the programme and ensure proposals to continue are sent to donors in a rapid manner to avoid breaks in supplies or the unintended closure of SFPs. Table 6 below summarises the open and phased closure criteria.

Table 4. When to open and close an SFP

Blanket SFP	Targeted SFPs
When to open	
• At the onset of an emergency if a reliable pipeline for an adequate GFD is not fully in place. • The prevalence of GAM is ≥ 20% or 15–19% among children aged 6–59 months, plus aggravating factors. • An increase in prevalence of acute malnutrition is anticipated due to seasonal deterioration in the underlying causes of undernutrition, e.g. during a lean season in a highly food insecure or difficult-to-reach population.	• There are large numbers of malnourished individuals OR a prevalence of >15% GAM[13] (or 10–14% with aggravating factors) among children aged 6–59 months. • There is an increase in acute malnutrition compared to previous nutritional trends.

[12] Initial planning timeframes generally anticipate a duration of three months for a blanket SFP.
[13] Prevalence of acute malnutrition reflects the proportion of the child population (aged 6–59 months) whose weight-for-height is below -2 z-scores, and/or have bilateral oedema (swelling).

Blanket SFP	Targeted SFPs
• To prevent malnutrition in the most vulnerable part of the population, e.g. aged 6–23 months. • To prevent malnutrition in new-borns through the nutritional support of PLW. • The population is difficult to reach due to logistical and/or security problems when more frequent and targeted SFP is not possible due to time, access, and implementing partner capacity limitations. • In the event of MND outbreaks, to support overall response, through the provision of micronutrient-rich food, fortified commodities, or micronutrient supplementation to the target population.	• There are large numbers of children who are at risk of becoming malnourished due to factors such as poor food security and high rates of disease, i.e. a prevalence of 5–9% acute malnutrition in the presence of aggravating factors.
When to close	
• When the prevalence of GAM among children under 5 is < 15% with no aggravating factors OR when the prevalence of GAM among children under 5 is < 10% in the presence of aggravating factors. • When there is reliable and adequate food accessibility and availability meeting minimum nutritional requirements. Food security may be ensured through general food distribution or local production (GFD should include specific fortified food for children and vulnerable individuals, and continue for a minimum of 4–6 months after SFP closure). • When no seasonal deterioration of nutritional status is expected. • When mortality among children under 5 years is < 2.3/10,000/day AND the crude mortality rate is < 1.14/10,000/day. • When no major population influx is expected. • When there has been a consistent decrease in SFP admissions for two consecutive months. • When disease control measures are effective.	• When there is reliable and adequate food accessibility and availability meeting minimum nutritional requirements. Food security may be ensured through general food distribution or local production (GFD should continue for a minimum of 4–6 months after SFP closure). • When the prevalence of GAM is <10% without aggravating factors. • When control measures for infectious diseases are effective. • When no seasonal deterioration in nutritional situation is expected. • When there are fewer than 30 children remaining in the programme.

4.3 Prevention and treatment of SAM

Objectives and overview of a TFP

TFPs aim to rehabilitate individuals with SAM. SAM is characterised by severe wasting and/or bilateral pitting oedema. The management of SAM includes a package of activities to decrease mortality and morbidity related to acute malnutrition and potentially contributing to a reduction in its prevalence.

Until recently, individuals with SAM were treated exclusively as in-patients in hospitals, health centres and health posts. Developments in ready-to-use therapeutic foods (RUTF) over the past years, however, along with evidence of impact and a new classification of acute malnutrition have resulted in an improved

approach to treatment. In this, depending on the severity of SAM, individuals can be effectively treated on an outpatient basis or through a combination of inpatient and outpatient services. **See Annex 7** for details on the new classification of acute malnutrition; this includes criteria for defining SAM with and without complications.

Components of a TFP

Outpatient care

Patients with appetite and no medical complication or those who have completely recovered from any medical complications can be treated at home on an outpatient basis. The OTP is run from a health centre or health post. In the OTP, the patient visits the health facility every week or every two weeks. During the routine visits, the health worker assesses progress, monitors weight gain, and checks for associated medical complications that may require referral to inpatient care. The patient receives routine medication as necessary and RUTF supplies for the next week (or two weeks in areas where visits are every two weeks). Individual counselling and health and nutrition education in groups is also provided during these visits.

Inpatient care

Complicated cases need medicalised attention in the first phase of recovery. Treatment for inpatient care in Ethiopia is provided through Therapeutic Feeding Units in hospitals or health centres and follows WHO guidance.[14,15] Children aged 6–59 months admitted into inpatient therapeutic care for the stabilisation of their condition will be referred to outpatient care as soon as their medical complications are resolving, their appetite has returned, and any oedema has reduced.

Children suffering from SAM have delayed mental and behavioural development. To address this, sensory stimulation should be provided to the children throughout the period they are in inpatient care.

Community mobilisation

The quality of engagement with communities is a vital determinant of the success of the OTP. Community mobilisation – a range of activities that help implementers understand the affected communities, build relationships with them, and foster their participation in programme activities – is crucial for effective early case finding. Early case finding and the quality of service provision are the two most important determinants of case fatality rates, programme coverage, and impact. Sensitisation messages should provide essential information about the programme's aims and methods.

For additional information on the steps and procedures for treating severely malnourished children a Therapeutic Feeding Unit, hospital or in the community, see:

🕮 ***FMOH (2019), Guidelines for the Management of Acute Malnutrition***

[14] WHO (1999) *Management of severe malnutrition: a manual for physicians and other senior health workers*, Geneva, WHO.
[15] WHO (2003) *Guidelines for the inpatient treatment of severely malnourished children*, Geneva, WHO.

4.4 Infant and Young Child Feeding in Emergencies

In the context of humanitarian assistance for nutrition, Infant and Young Child Feeding in Emergencies (IYCF-E) refers to a range of nutrition and care interventions that improve child survival and growth. These include appropriate and evidence-based support for (exclusive) breastfeeding and counselling, formula or emergency feeding interventions, when necessary, nutrient-dense complementary feeding interventions for children > six months, and support for improved care practices, child development, and child protection. Special attention should be paid to address any cultural practices surrounding breastfeeding and feeding that may discriminate against girls.[16]

While the focus is on reinforcing good IYCF practices that are also advocated in non-emergency situations, there is a greater sense of urgency in emergencies as the consequences of poor IYCF practices are heightened. Population displacement, overcrowding, food insecurity, poor water and sanitation, the decreased availability of caregivers, and an overburdened healthcare system all negatively impact on a mother's capacity to feed and care for her young infants and children and may overwhelm the capacity of the family to provide adequate support.

Infants who are not breastfed are especially at risk: recent research reveals that breastfeeding has the potential to reduce mortality in children under five years old by 12%[17] to 20%,[18] which is more than any other preventative measure.[19]

The Mini-Ethiopian Demographic Health Survey in 2019 found that 59% of children under six months are exclusively breastfed and 71% of infants six to nine months are given complementary foods. A strong intervention in an emergency can be a catalyst for improvement in IYCF practices over the longer term.

A rapid, appropriate response on IYCF-E relies on policy development and implementation, coordination, strong communication and advocacy, assessment and monitoring, technical capacity and resources. The prevailing IYCF practices of an emergency-affected population should inform the IYCF-E response.

When are IYCF-E interventions implemented during an emergency?
In every emergency context, a minimum or basic level of IYCF intervention is indicated, even in areas where economic, nutrition, and health indicators are relatively good pre-crisis. Initial rapid assessments should always include key information on IYCF and be supported by informed observation and discussion.

Early assessment should establish pre-crisis feeding practices based on standard indicators: the exclusive breastfeeding rate in 0–<6 months; the proportion of infants currently not breastfed; the conspicuous availability of breast milk substitutes, milk products, or bottles; and any reported issues by the population (mothers/caregivers) and health professionals regarding IYCF.

[16] Addressing Undernutrition in Emergencies; European Commission; Brussels, 12 March 2013, SWD (2013), 72 final.
[17] R Black *et al*. (2008) Maternal and child undernutrition: global and regional exposures and health consequences. *The Lancet*, 371: 243–60.
[18] Save the Children UK (2009) *Hungry for Change.*
[19] Black, R.E., *et al*. (2003) Where and why are 10 million children dying every year? The Lancet 361.

Artificial feeding in emergencies

Any support of artificial feeding in an emergency should be based on a need's assessment by skilled technical staff, including a risk analysis on whether it is acceptable, feasible, affordable, sustainable, and safe. This applies both in the context of HIV, where replacement feeding may have been established pre-crisis, or in any population where infants may be artificially fed. Infants and young children supported in these programmes must be monitored closely and acceptable, feasible, affordable, sustainable, and safe criteria reassessed periodically.

Acceptable, feasible, affordable, sustainable, and safe criteria

Acceptable: The mother perceives no problem in replacement feeding. Potential problems may be cultural or social, or due to the fear of stigma and discrimination.
Feasible: The mother (or family) has adequate time, knowledge, skills, resources, and support to correctly mix the formula or milk and feed the infant up to 12 times in 24 hours.
Affordable: The mother and family, with community or health system support, if necessary, can pay the cost of replacement feeding without harming the health or nutrition status of the family.
Sustainable: There is availability of a continuous supply of all ingredients needed for safe replacement feeding for children up to one year of age (or older).
Safe: Replacement foods are correctly and hygienically prepared and stored, and fed preferably by cup.

IYCF-E core interventions

1. Establishment of supportive spaces (IYCF corner and/or mother and baby area)
2. Basic frontline feeding support
3. Group education and information sharing
4. Nutrition care and counselling for PLWs
5. Support for early initiation of exclusive breastfeeding
6. Skilled IYCF counselling (one-on-one)
7. Further IYCF support for particularly vulnerable children, e.g. orphans, LBW, acutely malnourished
8. Access to safe, adequate, and appropriate complementary foods
9. Support safe and adequate feeding for non-breastfed infants less than 6 months old, while minimizing the risks of artificial feeding

Table 5. IYCF-E indicators

	Indicator	Short name	Age group	Definition
Breastfeeding indicators				
1	Ever breastfed	EvBF	Children born in the last 24 months	Percentage of children born in the last 24 months who were ever breastfed
2	Early initiation of breastfeeding	EIBF	Children born in the last 24 months	Percentage of children born in the last 24 months who were put to the breast within one hour of birth
3	Exclusively breastfed for the first two days after birth	EBF2D	Children born in the last 24 months	Percentage of children born in the last 24 months who were fed exclusively with breast milk for the first two days after birth
4	Exclusive breastfeeding under six months	EBF	Infants 0–5 months of age	Percentage of infants 0–5 months of age who were fed exclusively with breast milk during the previous day
5	Mixed milk feeding under six months	MixMF	Infants 0–5 months of age	Percentage of infants 0–5 months of age who were fed formula and/or animal milk in addition to breast milk during the previous day
6	Continued breastfeeding 12–23 months	CBF	Children 12–23 months of age	Percentage of children 12–23 months of age who were fed breast milk during the previous day
Complementary feeding indicators				
7	Introduction of solid, semisolid or soft foods 6–8 months	ISSSF	Infants 6–8 months of age	Percentage of infants 6–8 months of age who consumed solid, semi-solid or soft foods during the previous day
8	Minimum dietary diversity 6–23 months	MDD	Children 6–23 months of age	Percentage of children 6–23 months of age who consumed foods and beverages from at least five out of eight defined food groups during the previous day
9	Minimum meal frequency 6–23 months	MMF	Children 6–23 months of age	Percentage of children 6–23 months of age who consumed solid, semi-solid or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more during the previous day
10	Minimum milk feeding frequency for non-breastfed children 6–23 months	MMFF	Children 6–23 months of age	Percentage of non-breastfed children 6–23 months of age who consumed at least two milk feeds during the previous day
11	Minimum acceptable diet 6–23 months	MAD	Children 6–23 months of age	Percentage of children 6–23 months of age who consumed a minimum acceptable diet during the previous day

12	Egg and/or flesh food consumption 6–23 months	EFF	Children 6–23 months of age	Percentage of children 6–23 months of age who consumed egg and/or flesh food during the previous day
13	Sweet beverage consumption 6–23 months	SwB	Children 6–23 months of age	Percentage of children 6–23 months of age who consumed a sweet beverage during the previous day
14	Unhealthy food consumption 6–23 months	UFC	Children 6–23 months of age	Percentage of children 6–23 months of age who consumed selected sentinel unhealthy foods during the previous day
15	Zero vegetable or fruit consumption 6–23 months	ZVF	Children 6–23 months of age	Percentage of children 6–23 months of age who did not consume any vegetables or fruits during the previous day

Other indicators

16	Bottle feeding 0–23 months	BoF	Children 0–23 months of age	Percentage of children 0–23 months of age who were fed from a bottle with a nipple during the previous day
17	Infant feeding area graphs	AG	Infants 0–5 months of age	Percentage of infants 0–5 months of age who were fed exclusively with breast milk, breast milk and water only, breast milk and non-milk liquids, breast milk and animal milk/formula, breast milk and complementary foods, and not breastfed during the previous day

Messages to support effective breastfeeding

- Your breast milk is providing essential food and is protecting your baby against illness.
- When feeding, hold the baby close and keep the baby's head, neck, and body in a straight line.
- Breastfeed frequently, day and night (at least eight times a day if the baby is less than six months old).
- Hold the baby close to your breast against your skin, even when not feeding.
- Using a baby sling/wrap can help keep your baby close and will help the baby feel secure (local context dependent – assess whether this is practised in the area or not).
- Feed your baby whenever s/he shows you they want to drink, including at night.
- If baby is less than six months, they need only breast milk and nothing else. Do not give water, tea, other milk or any other food to the baby before six months of age.
- If baby is more than six months, continue to provide breast milk as the main source of fluid
- Let the baby finish one breast; then offer the other breast.
- Avoid giving baby feeding bottles or pacifiers.

4.5 Prevention and control of micronutrient deficiencies during an emergency

Micronutrient deficiencies can easily develop during an emergency or be made worse if they are already present. This happens because livelihoods and food crops are lost; food supplies are interrupted; diarrhoeal diseases break out, resulting in malabsorption and nutrient losses; and infectious diseases suppress the appetite whilst increasing the need for micronutrients to help fight illness. For these reasons it is essential to ensure that the micronutrient needs of people affected by a disaster are adequately met. For this to happen it is critical that general food-aid rations are adequate and well balanced to meet nutrient needs, and that they are distributed regularly and in sufficient quantities.

The diagnosis of some MND types is possible through simple clinical examination (such as iron deficiency anaemia and vitamin A). Deficiencies of micronutrients such as vitamin C (scurvy), niacin (pellagra), thiamine (beriberi) and riboflavin (ariboflavinosis) are the most commonly observed in food aid-dependent populations.[20]

Over 10% of deaths among children under five years of age are attributed to deficiencies in vitamin A, zinc, iron, and iodine.[21]

A low diversity diet without micronutrient-fortified foods is a strong predictor of MDDs. Appropriate ration planning and the monitoring of food assistance programmes can greatly reduce the risk of micronutrient malnutrition; ensuring that MDDs are monitored as part of the health information system is important for effective surveillance.

When micronutrient deficiencies are not only due to infections, the dietary component has to be carefully observed, and the ration composition (micronutrients) provided in the relief interventions has to be checked.

On the basis of assessed needs, the following nutrition strategies to both treat and prevent MND during emergencies is recommended. The combination of response options adopted depends on the level and severity of the problem:

- The provision of fresh food items that are complementary to a General Food Ration (e.g. through fresh food vouchers);
- The provision of fortified food aid commodities,[22] such as fortified cereal, CSB+/++ (corn soya blend), lipid-based nutrient supplement and iodised salt, and/or powders or sprinkles for home fortification in the general ration;
- Special attention to the quality of complementary feeding for children under two years of age;
- The distribution of micronutrient supplements,[23] either as single micronutrient (e.g. Vitamin A for children, iron/folic acid for pregnant women) or population-level supplementation[24] in the case of

[20] Micronutrient Initiative Toolkit, Micronutrient Initiative, Ontario, Canada 2005
[21] See Table 6 in: Black, R.E. *et al*., Maternal and Child Undernutrition Study Group. Lancet 2008; 371: 243.
[22] See WHO/FAO 2006: http://www.who.int/nutrition/publications/micronutrients/9241594012/en/ and WHO 2009: http://www.who.int/nutrition/publications/micronutrients/wheat_maize_fortification/en/
[23] See WHO (2006): http://www.who.int/making_pregnancy_safer/publications/Standards1.8N.pdf
[24] See WHO/WFP/UNICEF 2007: http://www.who.int/nutrition/publications/micronutrients/WHO_WFP_UNICEFstatement.pdf

widespread deficiencies of specific micronutrients, such as scurvy (vitamin C deficiency), pellagra (niacin deficiency), and beriberi (vitamin B and thiamine deficiencies);

- The integration of micronutrients in the prevention and treatment of certain diseases; zinc has been shown to be effective in the management of diarrhoeal diseases (the prevention of future episodes as well as reduction in the duration of current episodes), which in turn can have serious nutritional consequences; and
- The provision of vitamin A alongside, for example, measles vaccinations, can help to protect children against infection; the EDRMC therefore supports interventions aimed at incorporating zinc and vitamin A into delivery of healthcare services, e.g. through the provision of zinc with low-osmolality oral rehydration salts.

The distribution of micronutrient supplement is critical approach in combating micronutrient malnutrition. Vitamin A capsules for children, and iron and folic acid tablets for pregnant women are well established components of preventative public health programmes.

Vitamin A supplementation

Xerophthalmia (clinical signs of deficiency) is often reported during nutritional emergencies. Supplementation reduces mortality among children aged 6–59 months by roughly 23% in populations with clinical signs of Vitamin A Deficiency.

A standard prophylactic supplementation regimen in emergencies is recommended in the early-stage emergency response. The recommended doses for preventative use are given in Table 7. Due to the toxic effect of excess doses, those known to have received a routine high-dose vitamin A supplement within the 30 days previous to a supplementation intervention should **not** receive an additional dose. It is important to monitor the supplementation of vitamin A in children discharged from TFPs, in children re-admitted to SFPs, and in children who have recently participated in mass measles vaccination campaigns where vitamin A was distributed.

Table 6. Supplementation to prevent vitamin A deficiency[25]

Population group	Oral dose	Frequency of dose
Infants 0–6 months	50,000 IU	Once
Infants 6–12 months	100,000 IU	Every 4–6 months
Children > 1 year	200,000 IU	Every 4–6 months*
Pregnant and other women aged 15–49	Not more than 10,000 IU	Daily
Breastfeeding women	200,000 IU	Once during the first 8 weeks after delivery**

*Adequate protection can also be achieved with smaller, more frequent doses, e.g. 10,000 IU weekly or 50,000 IU monthly.
**If the mother is not breastfeeding, the supplement should be given within six weeks of delivery to prevent any risk of teratogenicity (malformation of the baby) in a subsequent pregnancy.

[25] Source: World Health Organization (2000) The Management of Nutrition in Major Emergencies, WHO, Geneva.

4.6 Disease-related undernutrition

There are strong linkages between health and nutrition status, and consequently programming in the two sectors should be well-coordinated. A number of priority health interventions will significantly impact the nutritional status of the population, while many nutrition interventions are conducted through the healthcare system.

In emergencies, with displaced, overcrowded populations and often a breakdown in health services, infectious diseases become more prevalent and risks of epidemics are elevated. The most important interventions to prevent epidemics are:

1. Improving sanitary conditions through ensuring clean and adequate water supplies, personal and food hygiene, and sanitation;
2. Avoiding overcrowding;
3. Providing vector control (such as mosquito nets and residual spraying); and
4. Providing essential health services to treat new cases of disease and vaccinating against measles and meningitis.

The major causes of excess morbidity and mortality in emergencies are acute respiratory infections, diarrhoeal diseases, malaria (where prevalent), measles, and undernutrition.

 ***See EPHI/PHEM (2011) Guidelines on Public Health Emergency Management***

Common diseases related to undernutrition

Undernutrition can be caused and aggravated by diseases; therefore, supporting free access to healthcare and promoting a healthy environment is an essential component of the prevention and treatment of acute undernutrition. The synergistic relationship between undernutrition, micronutrient deficiencies, and various infectious and parasitic diseases is well known (including diarrhoeal diseases, HIV/AIDS, tuberculosis, intestinal helminthic infection, respiratory infections, malaria and measles).

Undernutrition and micronutrient deficiencies facilitate infection, and some infections may result, directly or indirectly, in the development of undernutrition and micronutrient deficiencies. However, in the current programmatic structure of nutritional programmes, the importance of underlying diseases is often unaddressed.

Considering the specific needs of children below five years of age and their mothers as well as pregnant women; the following interventions are needed:

- Deworming as part of integrated child health programmes;
- Prevention and early treatment of diarrhoeal diseases;
- Prevention and early treatment of measles and malaria.
- Prevention and early treatment of measles and malaria.

Acute lower respiratory tract infections are a major cause of morbidity and mortality in emergencies. It is estimated that 25–30% of deaths in children under five years old are due to acute lower respiratory tract infections, and 90% of these deaths are due to pneumonia.[26]

4.7 Food safety during emergencies

In the emergency context, displaced or devastated communities are often dependent on the provision of food aid to meet their basic nutritional requirements. In an emergency, food-borne illnesses are common due to inadequate hygiene and poor infrastructure. The link between food safety and malnutrition is very clear, with poor food handling leading to diarrhoea and other gastro-intestinal complaints, which in turn can set up the viscous cycle of infection and malnutrition.

The ease of preparation of food aid commodities is especially important during the early stages of an emergency. People are often weak and malnourished due to the emergency situation and need rapid access to appropriate food that is easy to prepare and consume despite the possible lack of fuel and cooking facilities.

Food handling, preparation, and storage

Food handling, preparation, and storage cover how food aid is packaged, delivered, prepared, and stored. Standards that detail the quality of food commodities and a system of quality control for all commodities must be implemented to ensure that food distributed to beneficiaries is of good quality; is safe for human consumption; and meets the required nutritional specifications (WFP, 2005). It is very important to follow one of the protection principles of Sphere Standards[27] – to enhance the safety, dignity, and rights of people, and avoid exposing them to harm.

Sphere standard and key indicators

- Food commodities conform to national (recipient country) and other internationally accepted standards.
- All imported packaged food has a minimum six-month shelf life on arrival in the country and is distributed before the expiry date, or well within the ‘best before’ period.
- There are no verifiable complaints about the quality of food distributed.
- Food packaging is sturdy, convenient for handling, storage and distribution, and not a hazard for the environment.
- Food packages are labelled in an appropriate language with, for packaged foods, the date of production, the ‘best before’ date, and details of the nutrient content.
- Storage conditions are adequate and appropriate, stores are properly managed, and routine checks on food quality are carried out in all locations.
- There are no adverse health effects resulting from inappropriate food handling or preparation at any distribution site.
- The recipients of food aid are informed about and understand the importance of food hygiene.

[26] World Health Organization, Ed. Connolly, M.A. (2005) *Communicable disease control in emergencies: A field manual*, Geneva, WHO.
[27] The Sphere Project (2018) *Humanitarian Charter and Minimum Standards in Humanitarian Response*

- There are no complaints concerning difficulties in storing, preparing, cooking, or consuming the food distributed.
- Every household has access to appropriate cooking utensils, fuel, and hygiene materials.
- Individuals who cannot prepare food or cannot feed themselves have access to a carer who prepares appropriate food promptly and administers feeding where necessary.
- Where food is distributed in cooked form, staff have received training in safe storage, handling of commodities, and the preparation of food, and understand the potential health hazards caused by improper practices.

4.8 Psychosocial considerations during emergency nutrition response

Psychosocial support: This refers to actions that address both the psychological and social needs of individuals, families, and communities. Psychosocial support is essential for maintaining good physical and mental health, and provides an important coping mechanism for people during difficult times.

Mental health and psychosocial problems in emergencies are highly interconnected. The problems may be predominantly social or psychological in nature.

Significant problems of a predominantly social nature include:

- Pre-existing (pre-emergency) social problems (e.g. extreme poverty; belonging to a group that is discriminated against or marginalised; political oppression; women, children);
- Emergency-induced social problems (e.g. family separation; disruption of social networks; destruction of community structures, resources and trust; increased gender-based violence); and
- Humanitarian aid-induced social problems (e.g. undermining of community structures or traditional support mechanisms) during food and non-food item distribution.

Similarly, problems of a predominantly psychological nature include:

- Pre-existing problems (e.g. severe mental disorder; alcohol abuse);
- Emergency-induced problems (e.g. grief, non-pathological distress, depression and anxiety disorders, including post-traumatic stress disorder); and
- Humanitarian aid-related problems (e.g. anxiety due to a lack of information about food distribution).

Thus, mental health and psychosocial problems in emergencies encompass far more than the experience of post-traumatic stress disorder. **What are the psychosocial components of nutrition?**

Nutrition has extremely close links with care practices and a child's nutritional status is often determined as much by feeding practices, the home environment, and the attention received from the primary caregiver as by the food s/he eats.

Why are psychosocial issues key in emergencies?

In emergency situations, the social, physical, and psychological damage produces changes in behaviour and emotion, impacting on feeding practices.

The poor nutritional, mental, or physical health of caregivers in an emergency context may render them unable to provide psychosocial stimulation to their children and may affect their own and their children's feeding practices. Similarly, the capacities to care for children or any other vulnerable groups within the population might be overwhelmed, increasing the risk of malnutrition, and potentially limiting the efficiency of nutrition treatment. As a result, emergencies can provoke and aggravate cases of chronic or acute malnutrition and micronutrient deficiencies through the impact they have on psychosocial wellbeing.

When should psychosocial issues be addressed?

Psychosocial issues should be addressed in all emergency programmes wherever possible and during and even post emergencies since psychological time is not directly correlated with chronological time: people may still be affected years after the end of the war by a specific and traumatic event.

How are psychosocial issues addressed during emergency nutrition interventions?

Strengthening the traditional care system in the community, even in emergency settings, can be ideal in terms of cultural appropriateness, empowerment, and sustainability. Solutions within the families can often provide the best opportunities to support care practices and survival.

Within emergency nutrition programmes, different activities to support the psychosocial aspects of nutrition may be put in place. These can include:

- Stimulating the children and helping the families to favour the child's development, including the psychological and emotional aspects of this;
- Supporting play sessions for mother and child, and ensuring that a play area with toys is available to parents and staff to interact with malnourished children;
- Offering social and psychological support to the families or caregivers;
- Ensuring that PLW with malnutrition are screened for mental disorders and linked to Mental Health and Psychosocial Support service (Psychological First Aid, counselling, psychotropic medication, etc.);
- Providing staff training in psychosocial issues to improve their knowledge, understanding, and attitude towards patients and their families;
- Offering breastfeeding corners for pregnant and breastfeeding women to provide mothers with a space to share experiences, and to receive advice and reinforce self-esteem;
- Collaborating and networking with local services and/or specialised organisations to assist and support especially vulnerable groups (PLW, girls, those with disabilities, etc.); and
- Facilitating discussions between the families and the staff when a severely malnourished child has to be treated in an inpatient facility to clarify who will take care of the rest of the family and the household in the absence of the mother (this emphasises the need for processes that support mothers and family structures).

Even if some activities target the caregiver and/or the child specifically, it is essential to work closely with the whole family.

Section 5

Nutrition Supply Management

5. Nutrition Supply Management

Emergencies, such as conflict situations or flooding, can happen suddenly and cause large casualties and significant damage to society.

Large-scale emergency nutrition response will require mobilisation of metric tonnes of bulk supplies, such as RUTF, RUSF, F75, F100, treatment kits, and other essential medicines. The delivery is time-sensitive to avert excess mortality. This section guides with steps to be taken to ensure that logistic and supply mobilisation is rapid and streamlined as much as possible, while maintaining national standards. There is no fixed blueprint but it is useful to consider the following essential steps during planning and response:

1. Needs assessment;
2. Resource mapping and mobilisation;
3. Procurement;
4. Prepositioning, warehouse, and storage;
5. Transport; and
6. Distribution

1. Needs assessment

Needs assessments in nutrition emergencies involve systematically gathering and analysing information relating to the needs, conditions, and capacities of an affected population – diverse women, men, girls, and boys of all ages, including those with specific needs – in order to determine gaps between a current situation and minimum national standards.

- Carry out a rapid nutrition assessment on the scope and scale of emergency, the geographical areas, and the number of affected people.
- Determine needs and formulate response requirements in close coordination with all relevant stakeholders.
- Assess and determine the existing capacities at different administrative levels (kebele, woreda, zonal, regional, federal).
- Assess the available supplies, warehouses, vehicles, means of transport, and contractors.
- Determine additional needs based on gaps identified.
- Determine existing transport infrastructure: road, air, donkey/camel.
- Differentiate appropriate entry points: sea, air, and land.

2. Resource mapping and mobilisation

Resource mobilisation involves fund raising for the humanitarian response against humanitarian response plans. Ensuring an effective emergency response and positive nutrition outcomes for crisis-affected populations requires substantial funding. Successful resource mobilisation will thus rely on an understanding of the humanitarian financing landscape in Ethiopia during the time of crisis, together with the resources available to the government, and the transparent mapping of other actors, their priorities, and their resources commitment. The government's commitment to protecting lives of the citizens will facilitate the accelerated mobilisation of logistics and resources through the following steps.

- Develop response plan, led by the government showing all needs, funding, human resource, logistics, supplies, and quantities.
- Identify available resources and gaps, and explore on who will contribute what.
- Conduct stakeholder analysis to identify actors among government partners (UN, INGOs, etc.) and other actors, including the private sector.
- Assign key tasks linked to the response plan based on the stakeholder analysis.
- Establish coordination forum for regular updates (daily, weekly, biweekly, as needed).

3. Forecasting and procurement

The qualities of successful humanitarian response include the ability to rapidly identify needs and engage in fundraising, forecasting, procuring, transporting, distributing, and delivering products and services to people in need. The procurement of products (e.g. medicines, food, or non-food-items) and services (e.g. transport, warehousing, and data collection and analysis) is a critical activity for emergency nutrition response. A huge proportion of humanitarian response budgets go on procurement; thus, strict ethical guidelines must be followed while striving to simplify procurement process to ensure accountability and integrity of supplies, and to protect against the misuse of national guidelines. The following benchmarks are to be observed:

- Establish rapid procurement processes appropriate to the emergency situation to ensure the country has the resources needed to meet identified needs.
    - Establish a list, specification, and quantity of the items required for the emergency response.
    - Maintain pre-qualified suppliers of standard essential items for emergency response locally/internationally. Assess their delivery capacity/time for appropriate follow-up action.
    - Place emergency procurement and notify the government authorities organising the emergency response.
    - Ensure that the lead government authority coordinates with regulatory bodies (customs agencies and the Ethiopian Food and Drug Authority) to expedite the process.

4. Prepositioning, warehouse, and storage

As a preparedness measure, the Government of Ethiopian and emergency nutrition response actors must pre-position emergency supplies at the national, regional, zonal, and woreda levels in preparation for humanitarian responses. The goal is to ensure that supplies and logistics are closer to the affected areas for rapid response.

- In the response plan, ensure that different items needed, and in the right quantities, and in the geographic area where they are needed, are clearly mapped and that a delivery plan is in place.
- Ensure that a minimum stock to cover three months is maintained at all times.
- Map existing warehouse capacity, including EPSA hubs, RHB stores, Woreda health office, health facilities, partners, and selected temporary storage sites.
- Make arrangement for warehousing and storage to protect supplies and ensure accountability through an organised system, until they can be delivered to their ultimate recipients.
- Ensure standard documentation using standard recording and reporting formats.

- Coordinate with the security authority for safeguarding and protecting supplies.
- Ensure coordinated transport and delivery to maximise efficiency.
- Update regularly on prepositioning provided at various levels and red flags on depleting stocks for urgent replenishment.

6. Transport

- Put in place transport arrangements to ensure supplies reach the places where they are needed.
- Develop a transport strategy that considers the need for different types of transport to deliver supplies from one place to another.
- Define your transport requirements for personnel and supplies.
- Consider all transport modes and always establish alternative options.
- Identify what supplies or people need to be moved and to where.
- Identify feasible, available transport options, requirements, and route and schedule planning.
- Arrange contracts with transport providers.
- Ensure insurance terms are included.
- Ensure all appropriate transport documents are in place.
- Ensure appropriate controls are in place at the sending and receiving stages.
- Consider and develop a strategy for back transport of equipment and material after the emergency is over.

5. Distribution

The ultimate objective of the process in the logistics management process is to ensure that the supplies get into the hands of the intended recipients when and where they need it. This is end-user delivery, and all bottlenecks must be consciously removed to achieve this objective. For emergency nutrition response the following steps will be followed:

- Clearly establish channels of distribution, including health system, MHNTs, and local administration.
- Link distribution channels to key actors based on established cluster database maintained by the nutrition cluster.
- Establish new partnerships where gaps are identified (i.e. where there is a lack of key actors).
- Link key actors with prepositioning sites.
- Deliver the response to the people affected by a disaster (or to partners entrusted with the distribution of relief supplies) according to the plan, through well-organised distribution systems that ensure accountability to prevent misuse or wastage.
- Use standard recording, reporting, and requesting formats and procedures to ensure stock monitoring.

Section 6

Monitoring and Evaluation

6. Monitoring and Evaluation

Monitoring and evaluation (M&E) activities form an integral part of nutrition interventions to improve quality, accountability, and to provide opportunities for learning.

Monitoring is the periodic oversight of the implementation of an activity to establish the extent to which input deliveries, work schedules, other required actions, and targeted outputs are proceeding according to plan, so that rapid action can be taken to correct deficiencies detected.
Evaluation is a process to determine, as systematically and objectively as possible, the relevance, effectiveness, efficiency, and impact of activities in the light of specified objectives.

🕮 See **the Sphere Project (2018)** ***Humanitarian Charter and Minimum Standards in Humanitarian Response, Chapter 3: Food Security and Nutrition*****.**

6.1 Monitoring GFD

A good monitoring system should determine:

1. **Appropriate targeting:** whether the decision to target food within a certain geographical area is appropriate.
2. **Verify if the most vulnerable received the food aid:** whether the groups in greatest need were identified in the assessment and received the food aid.
3. **Realistic objectives:** whether the objectives of the GFD were achievable and realistic.
4. **Effects:** whether (and to what extent) the adverse effects of food assistance were avoided and whether asset depletion of households was halted.

Box 1: Sphere Standards and key indicators relevant to GFD

Food Security, Food Transfers Standard 1: General nutrition requirements
Ensure that the nutritional needs of the disaster-affected population, including those most at risk, are met.
Key indicators

- There is adequate access to a range of foods, including a staple, pulses (or animal products) and fat sources that together meet nutritional requirements.
- There is adequate access to iodised salt for the majority (>90%) of households.
- There is adequate access to additional sources of niacin (e.g. pulses, nuts, dried fish, etc.) if the staple is maize or sorghum.
- There is adequate access to adequate sources of riboflavin where people are dependent on a very limited diet.
- There are no cases of scurvy, pellagra, beriberi, or riboflavin deficiency.
- The prevalence of vitamin A deficiency, iron deficiency anaemia. and iodine deficiency disorders are not of public health significance.

See DRMFSS (2011) National Guidelines on Targeting Relief Food Assistance

6.2 Monitoring interventions for the treatment of MAM

Monitoring of MAM interventions can be divided into individual case monitoring and programme performance monitoring. The supply system (management and transport of equipment, materials, drugs, and therapeutic foods) will also require monitoring and reporting.

Box 2: Sphere key indicators for MAM

These indicators are primarily applicable to the 6–59-month age group, although other age groups may be part of the programme.

- More than 90% of the target population is within a one day's return walk (including time for treatment) of the programme site for dry ration supplementary feeding programmes, and no more than one hour's walk for on-site supplementary feeding programmes.
- Coverage is >50% in rural areas, >70% in urban areas, and >90% in a camp situation.
- The proportion of discharges from targeted supplementary feeding programmes who have died is <3%, recovered is >75%, and defaulted is <15%.

 Refer to ***Guidelines for the management of moderate acute malnutrition 2011*** for available tools.

6.3 Monitoring interventions for the treatment of SAM

Monitoring enables health workers, supervisors, and managers to ensure that appropriate treatment is given to individuals and that the services provided are effective. The box below summarises the Sphere key indicators against which interventions for the management of SAM should be monitored and evaluated.

Box 3: Sphere key indicators for interventions for the management of SAM

These indicators are primarily applicable to the 6–59-month age group, although others may be part of the programme.

- More than 90% of the target population is within a one day's return walk (including time for treatment) of the programme site.
- Coverage is >50% in rural areas, >70% in urban areas, and >90% in camp situations.
- The proportion of discharges from therapeutic care who have died is <10%, recovered is >75%, and defaulted is <15%.

Routine data are collected for monthly reporting on:

- The number of new admissions;
- The number of discharges by category: cured, died, defaulted, non-recovered; and
- The number of children in treatment (beneficiaries registered).

In Ethiopia, the TFP Performance Monitoring Score Card is used by the Federal Ministry of Health and partners for monitoring the OTP during site visits. This comprehensive monitoring tool collects information on both process and performance indicators, as well as recording stock requirements and relevant issues affecting programme performance. It also provides a framework for mentoring health extension workers during the monitoring visit.

🕮*See **MOH (2019) Guidelines for the Management of Severe Acute Malnutrition***

6.4 Monitoring IYCF-E interventions

The relevant Sphere minimum standards and key indicators against which interventions should be monitored are found in the box below.

Box 5: Sphere minimum standards and key indicators for IYCF interventions in emergencies

Infant and young child feeding standard 1: Policy guidance and coordination

Safe and appropriate infant and young child feeding for the population is protected through the implementation of key policy guidance and strong coordination.

Key indicators:

- A national and/or agency policy is in place that addresses IYCF and reflects the Operational Guidance on Infant and Young Child Feeding in Emergencies.
- A lead coordinating body on IYCF is designated in every emergency.
- A body to deal with any donations of breast milk substitutes, milk products, bottles, and teats is designated.
- Code violations are monitored and reported.

Infant and young child feeding standard 2: Basic and skilled support

Mothers and caregivers of infants and young children have access to timely and appropriate feeding support that minimises risks and optimises nutrition, health and survival outcomes.

Key indicators:

- Measurement of standard WHO indicators for early initiation of breastfeeding, exclusive breastfeeding rate in children <6 months, and continued breastfeeding rate at one and two years.
- Caregivers have access to timely, appropriate, nutritionally adequate. and safe complementary foods for children 6–<24 months.
- Breastfeeding mothers have access to skilled breastfeeding support.
- There is access to Code-compliant supplies of appropriate breast milk substitutes and associated support for infants who require artificial feeding.

🕮 *Refer to the **Operational guidance on infant and young child feeding in emergencies, developed by the inter-agency Infant Feeding in Emergencies Core Group**.*

6.5 Monitoring of micronutrient interventions

Box 4: Sphere indicators for M&E of micronutrient interventions in emergency

- Cases of micronutrient deficiencies are treated according to current best clinical practice.
- Micronutrient interventions accompany public health interventions to reduce common diseases associated with emergencies such as measles (vitamin A) and diarrhoea (zinc).

As for other nutrition interventions, M&E of micronutrient interventions and their impact is important to identify:

- Whether the intervention is functioning adequately;
- Whether the intervention is available, affordable, and acceptable to the target population;
- To what extent the intervention is being used by the population, i.e. coverage; and
- The impact of the intervention on the micronutrient status of target population.

Guidance for monitoring interventions relating to vitamin A, iodine, and iron, as well as the identification of the public health significance of deficiencies can be found in:
🕮*See **FMOH (2004) National guidelines for control and prevention of micronutrient deficiencies**.*

6.6 Monitoring performance indicators

The performance of SAM and MAM services can be analysed from the weekly and monthly reports and outcomes compared to international Sphere Standards.

- **Indicators**

The outcomes are calculated as a proportion of SAM or MAM programme discharges over the period (usually monthly, quarterly, or annually). The following outcomes are monitored.

1. **Cure rate:** Proportion discharged from SAM or MAM treatment having reached the cure discharge criteria.

$$Cure\ rate\ (\%) = \frac{Total\ disharged\ cured}{Cured + Died + Defaulted + Non\ responders} \times 100$$

2. **Default rate:** Proportion discharged having defaulted.

$$Default\ rate\ (\%) = \frac{Total\ disharged\ defaulters}{Cured + Died + Defaulted + Non\ responders} \times 100$$

3. **Deaths:** Proportion discharged having died while registered for SAM or MAM treatment.

$$Death\ rate\ (\%) = \frac{Total\ disharged\ died}{Cured + Died + Defaulted + Non\ responders} \times 100$$

4. **Non-cured:** Proportion discharged having not achieved the cure discharge criteria.

$$Non\ responder\ rate\ (\%) = \frac{Total\ disharged\ non\ responders}{Cured + Died + Defaulted + Non\ responders} \times 100$$

- **Other service indicators**

Average length of stay: The period in number of days that a patient spends in treatment from admission to discharge. Length of stay is calculated only for child patients cured. It should be calculated separately for patients with wasting and bilateral pitting oedema since these will have different lengths of stay.

$$Average\ Length\ of\ Stay = \frac{Sum\ Length\ of\ Stay}{Number\ of\ cards\ or\ cases\ in\ the\ sample}$$

Average Weight Gain: The rate of weight gain per kilogram of body weight per day. Average Weight Gain is calculated only for patients who have been cured and discharged.

$$Weight\ Gain = \frac{Discharge\ weight\ in\ grams - minmum\ weight\ in\ grams}{Minimum\ weight\ in\ kg\ \times\ number\ of\ days\ between\ minimum\ weight\ and\ discharge\ day}$$

$$Average\ Weight\ Gain = \frac{Sum\ of\ weight\ gains\ (in\ grams\ per\ kg\ bodyweight\ per\ day)}{Number\ of\ cards\ or\ cases\ in\ the\ sample}$$

- **Outcome indicators**

Table 7. SAM and MAM Management performance outcome indicators

Indicator	**Management of SAM**	**Management of MAM**
Cured	> 75%	> 75%
Defaulted	< 15%	< 15%
Died	< 10%	< 3%
Non-responder	Not stated	Not stated
Length of stay	60 days	
Average Weight Gain	*****>5 g/kg/day	Not applicable
Coverage: urban	> 70%	> 70%
Coverage: rural	> 50 %	> 50 %

M&E indicators

In addition to benchmark indicators for assessing efficiency and effectiveness of SFP and TFP listed in the preceding sections, below are examples of currently used indicators in refugee and non-refugee situations.[19]

Table 8. Exit categories for therapeutic and supplementary feeding

INPATIENT CARE for the Management of SAM with Medical Complications	**OUTPATIENT CARE** for the Management of SAM without Medical Complications	**SUPPLEMENTARY FEEDING** for the Management of MAM
EXIT CATEGORY: CURED		
Child 6–59 months meets outpatient care discharge criteria Infant < 6 months meets inpatient care discharge criteria	Child 6–59 months meets discharge criteria	Child 6–59 months meets discharge criteria
EXIT CATEGORY: DIED		
Child dies while in inpatient care	Child dies while in outpatient care	Child/PLW dies while in supplementary feeding
EXIT CATEGORY: DEFAULTED		
Child is absent for two consecutive days	Child is absent for three consecutive visits	Child/PLW is absent for three consecutive visits
EXIT CATEGORY: NON-RECOVERED		
Child does not reach discharge criteria after 4 months in treatment (medical investigation previously done)	Child does not reach discharge criteria after 4 months in treatment (medical investigation previously done)	Child/PLW does not reach discharge criteria after 4 months in treatment (medical investigation previously done)

Indicators for inpatient TFP

Table 9. Summaries of indicators used for therapeutic feeding

Indicators for TFPs for children aged 6–59 months				
Indicator	**Description**	**Formula**	**Units**	**Standard**
Mean length of stay	Average length stays for recovered children	Sum no. days of admission of recovered children 6–59 months/ No 6–59 months exists due to recovery		Inpatient care till full recovery 1 month Inpatient and outpatient care combined < 2 months

Average weight gain	Average no. grams that recovered children gained per kg per day since admission into TFP	Sum [(weight on exit (g) minus minimum weight (g))/(weight on admission (kg)) x duration of treatment (days)] / No recovered children	g/kg/day	Inpatient care till full recovery >= 8g/kg/day Inpatient and outpatient care combined >=4g/kg/day
Recovery rate	Proportion of under-five exits from TFP due to recovery	No. of 6–59 months recovered/total no. of under-five exits (recovered, died, defaulted) x 100	%	> 75%
Death rate	Proportion of under-five exits from TFP due to death	No under-five deaths/total no. of under-five exists (recovered, died, defaulted) x 100	%	< 10%
Default rate	Proportion of under-five exits from TFP due to default	No of under-five defaulters/total no. of under-five exits (recovered, died, defaulted) x 100	%	< 15%

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8. Annexes

Annex 1. Emergency treatment of SAM

CONDITION	IMMEDIATE ACTION
Dehydration	**If a patient with SAM and acute diarrhoea or severe vomiting has any signs of dehydration (e.g. sunken eyes with recent onset of diarrhoea), and is <u>not</u> lethargic or unconscious:** **DO NOT GIVE IV FLUID; rehydrate orally as follows:** • Give 50 ml 10% glucose or sugar water (infants 25 ml) orally or by nasogastric tube (NGT). • Give ReSoMal 5 ml/kg every 30 minutes for 2 hours orally (if child is too ill, give ReSoMal by NGT). • Monitor pulse and respiration rates every 30 minutes during rehydration. • Then, give ReSoMal 5–10 ml/kg every 2 hours in alternate hours with F-75 10 ml/kg every two hours for up to 10 hours. **STOP if patient displays signs of hydration:** clinically well and an alert, normal eye, tears, moist tongue, and drinks normally. **STOP if patient shows signs of over-hydration (which may lead to congestive heart failure):** fast breathing, increase in both respiratory rate (≥5 breaths/min) **AND** pulse rate (≥25 beats/min).
Shock	**If the patient has signs of shock** (cold hands with slow capillary refill (longer than three seconds) and/or weak or fast pulse) **and is lethargic or unconscious:** • Give oxygen, 1–2 litres/minute. • Keep the patient warm. • Give sterile 10% glucose 5 ml/kg IV. • Give IV fluid at 15 ml/kg for 1 hour, using one of the following solutions (in order of preference): o Ringer's lactate with 5% dextrose* ** Add sterile potassium chloride (20 mmol/L).* (Or if above not available, use 0.45% saline with 5% glucose*) **DO NOT GIVE AS A BOLUS** • Monitor pulse and respiration rates every 10 minutes. • Give antibiotics. **STOP IV if the child shows signs of over-hydration (may lead to congestive heart failure):** fast breathing, increase in both respiratory rate (≥ 5 breaths/min) **AND** in pulse rate (≥ 25 beats/min). Other signs of heart failure are: distension of the jugular veins, enlarged liver, eyelid oedema, gallop rhythm, fine crackling in the lungs. **If there are signs of improvement after giving IV fluid for an hour**, continue to give IV fluid 15 ml/kg for a second hour.

	If there are NO signs of improvement after the first hour of IV fluid, assume patient has septic shock. In this case: • Give maintenance fluids 4 ml/kg/hour while waiting for blood. • Order 10 ml/kg fresh whole blood and when blood is available, stop oral intake and IV fluids. • Give Furosemide 1 ml/kg IV at the start of the transfusion. • Transfuse whole fresh blood 10 ml/kg slowly over three hours. If there are signs of heart failure, give 7 ml/kg packed cells instead of whole blood.
	If the patient with SAM has signs of shock, but is <u>not</u> lethargic or unconscious: • Keep the patient warm. • Give 10% glucose 5 ml/kg or 50 ml 10% glucose or sugar water (infants 25 ml) orally or by NGT. • Give antibiotics. • Proceed immediately to full assessment and treatment; initiate oral or nasogastric feeding with F-75.
Hypoglycaemia	**If the patient with SAM has hypoglycaemia** (blood glucose < 3 mmol/L or < 54 mg/dl)**:** • Give sterile 10% glucose 5 ml/kg IV, then 50 ml 10% glucose or sugar water (infants 25 ml) by NGT, or what is first available. • Keep the patient warm. • Give antibiotics. • Start feeding with F-75.
Hypothermia	**If the patient with SAM has signs of hypothermia** (< 35°C axillary temperature): • Warm the patient. • Give sterile 10% glucose 5 ml/kg IV or 50 ml 10% glucose or sugar water (infants 25 ml) by NGT. • Give antibiotics. • Start feeding with F-75.
Severe pneumonia	**If the patient with SAM has signs of severe pneumonia** (central cyanosis, severe respiratory distress, inability to drink or retain fluids (i.e. vomiting up everything), convulsions, low chest wall in-drawing, stridor (in a calm child), or fast breathing): • Give oxygen, 1–2 litres/minute. • Keep the child warm. • Give antibiotics. • Initiate cautious feeding by NGT.
Convulsions	**If the patient with SAM has signs of convulsions:** • Give Diazepam or Paraldehyde rectally.

	• Turn the unconscious child onto his/her side to reduce the risk of aspiration and stabilise the body position. • Give sterile 10% glucose 5 ml/kg by IV.
Severe anaemia	**If the patient with SAM has very severe anaemia** (Hb < 4 g/dl *or* < 6 g/dl with respiratory distress), a blood transfusion is required: • Give whole fresh blood 10 ml/kg body weight slowly over three hours. If there are signs of anaemic heart failure, give 7 ml/kg packed cells over three hours rather than whole blood. • Stop all oral intake and IV fluids during the transfusion. • Give Furosemide 1 ml/kg IV at the start of the transfusion.
Congestive heart failure	**If the patient with SAM develops signs of fluid overload or heart failure during rehydration** (the first sign is fast breathing; other danger signs are increases in respiratory rate (≥ 5 breaths/min) and in pulse rate (≥25 beats/min), distension of the jugular veins, an enlarged liver, eyelid oedema, gallop rhythm, and fine crackling in the lungs): • Stop all food intake and IV fluids. Do not give any fluids until the heart failure has improved. • Give Furosemide 1 mg/kg IV. Monitor the patient closely when giving furosemide and reassess the child frequently until symptoms improve. Give Digoxin 15 µg/kg IV only if the diagnosis of heart failure is unmistakable (elevated jugular venous pressure).
Signs of Blindness	**If the patient with SAM has dry conjunctiva or cornea, corneal clouding or ulceration, Bitot's spots, or keratomalacia:** • Give vitamin A immediately (< 6 months 50,000 IU, 6–12 months 100,000 IU, > 12 months 200,000 IU) and repeat on Day 2 and Day 14. • For corneal ulceration, instil 1 drop of Atropine (1%) into the affected eyes for pain and to prevent the lens from pushing out. • Administer Chloramphenicol eye drops every three hours or apply Tetracycline eye ointment every four hours and bandage the child's eyes when he/she is stable. NOTE: Children with vitamin A deficiency are likely to be photophobic and will keep their eyes closed. It is important to examine the eyes very gently to prevent corneal rupture.

Annex 2. Monthly nutritional screening reporting form for children 6–59 months

Region	Zone	Woreda	Year (Gregorian)	Month (Gregorian)	Implementation modality (HEP, CHD, EOS)	Total population	Screening target pop (6–59 mo) 13.94%	# 6–59 mo with bilateral oedema	# 6–59 mo MUAC <11.5cm	# 6–59 mo MUAC 11.5–12.5cm	# 6–59 mo MUAC >=12.5cm	Total # of 6–59 mo screened	% 6–59 mo screening coverage

Annex 3. Monthly nutritional screening reporting form for PLW

Region	Zone	Woreda	Year (Gregorian)	Month (Gregorian)	Implementation modality (HEP, CHD, EOS)	Total population	Screening target pop PLW (3.9%)	#PLW with MUAC <23cm	Total # PLW screened	% PLW screening coverage	% PLW with MUAC <23cm

Annex 4. Vitamin A supplementation and deworming reporting form for children 6–59 months

Region	Zone	Woreda	Year (Gregorian)	Month (Gregorian)	Total population	Target population for VAS (6–59 months) 13.94%	# 6–11 months supplemented with Vit A	# 12–59 months supplemented with Vit A	Total # 6–59 months supplemented with Vit A	Vit A supplementation coverage (6–59 months)	Target population for deworming (24–59 months) 10.43%	# of children dewormed (24–59 months)	Deworming coverage (%)

Annex 5. Essential commodities for the management of SAM and MAM

Essential commodities for the management of inpatients

Item or product	Unit	Quantity
Adhesive plaster	Packet	
Paediatric cannula	Packet	
Feeding syringe (60ml)	Packet	
Syringe with needle (5ml)	Packet	
NG tube-6	Packet	
NG tube-8	Packet	
NG tube-12	Packet	
Thermometer	Piece	
Mebendazole or Albendazole	Tablet	
Amoxicillin	Tablet	
Ampicillin IV	Vial	
Water for injection (5ml)	Vial	
Gentamicin IV	Vial	
Paracetamol	Bottle	
Ceftriaxone IV	Vial	
Glucose Solution IV	Packet	
ReSoMal	Packet	
F-75	Tin	
F-100	Tin	
RUTF	Packet	
Inpatient Care Multi-Chart	Piece	
Referral Slip	Piece	
Monthly Statistics Report for Acute Malnutrition	Piece	
Registration Book for SAM	Piece	
Vitamin A	Tablet	
Weighing Scale	Piece	
MUAC Tapes	Piece	
Length/Height Board	Piece	
WFH/WFL Reference Tables	Piece	
Quick Reference Guide	Piece	
Guidelines for the Management of Acute Malnutrition	Piece	
IEC Materials	Set	
Cups/Tumblers	Piece	
Spoons	Piece	
Water Jug with lid	Piece	
Wooden Pallets	Piece	

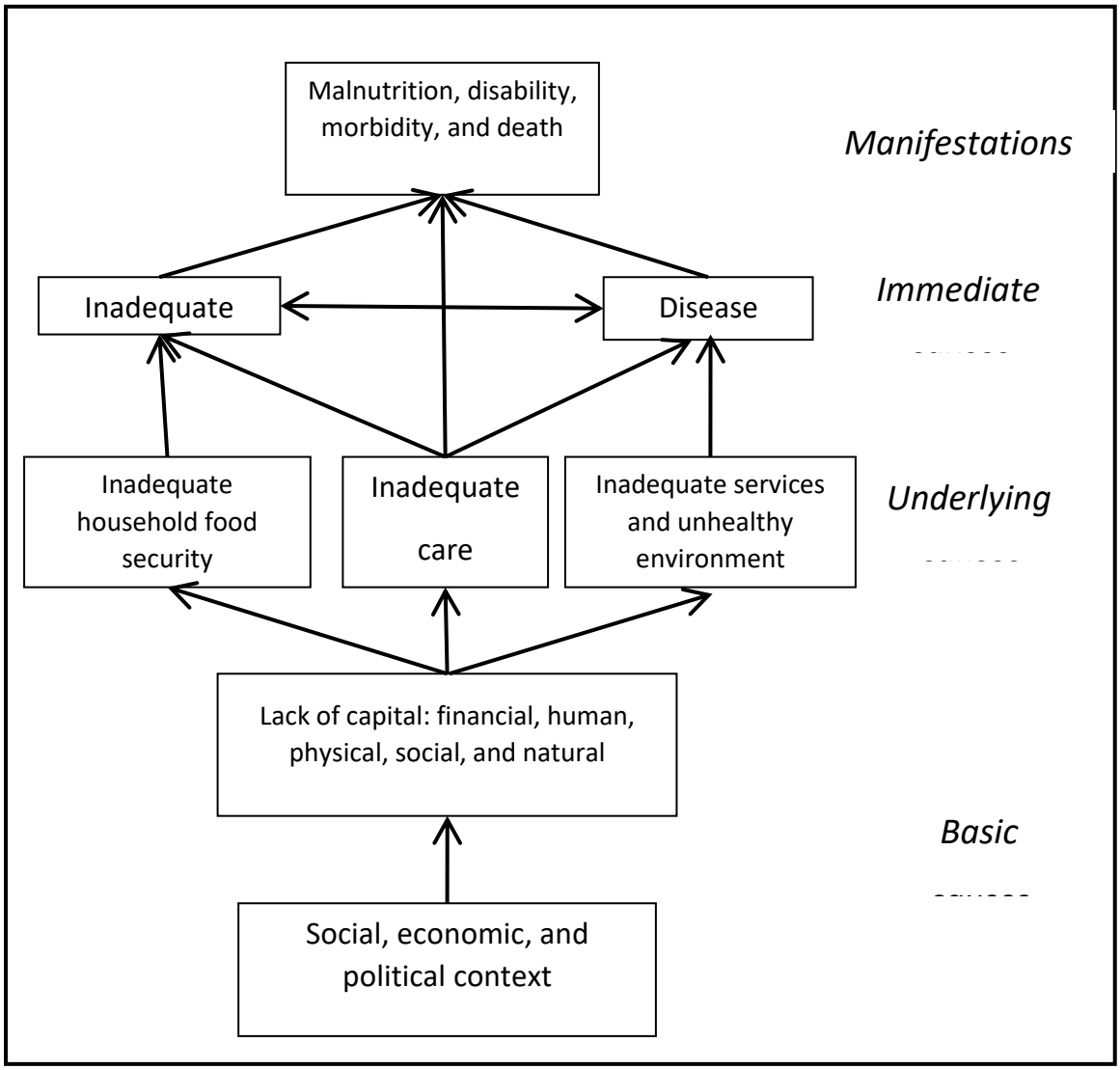
Essential commodities for the management of OTP

Item or product	Unit	Quantity
Mebendazole or Albendazole	Tablet	
Amoxicillin	Tablet	
Thermometer	Piece	
RUTF	Packet	
OTP Card (0–69 months)	Piece	
OTP Card (0–6 months)	Piece	
Ration Card	Piece	
Referral Slip	Piece	
Registration Book for SAM	Piece	
Weighing Scale	Piece	
MUAC Tapes	Piece	
Length/Height Board	Piece	
WFH/WFL Reference Tables	Piece	
Quick Reference Guide	Piece	
Guidelines for the Management of Acute Malnutrition	Piece	
IEC Materials	Set	
Cups/Tumblers	Piece	
Spoons	Piece	
Water Jug with lid	Piece	
Wooden Pallets	Piece	

Essential commodities for the management of MAM

Item or product	Unit	Quantity
Specialised Nutritious Foods (RUSF or Super Cereal)	Packet	
TSFP Treatment and Follow-up Card	Piece	
Specialised Nutritious Food Ration Card	Piece	
Referral Slip	Piece	
Registration Book for MAM – children 6–59 months	Piece	
Registration Book for MAM – PLW	Piece	
Monthly Statistics Report for Acute Malnutrition	Piece	
Mebendazole or Albendazole	Tablet	
Vitamin A	Tablet	
Scorecard for the Management of Acute Malnutrition	Piece	
Weighing Scale	Piece	
MUAC Tapes	Piece	
Length/Height Board	Piece	
WFH/WFL Reference Tables	Piece	
Quick Reference Guide	Piece	
Guidelines for the Management of Acute Malnutrition	Piece	
IEC Materials	Set	
Cooking Demonstration Equipment	Piece	
Cups/Tumblers	Piece	
Spoons	Piece	
Water Jug with lid	Piece	
Wooden Pallets	Piece	

Annex 6. The UNICEF conceptual framework for undernutrition



Annex 7. The IPC reference table

Phase classification		**Key Reference Outcomes** *Current or imminent outcomes on lives and livelihoods. Based on convergence of direct and indirect evidence rather than absolute thresholds. Not all indicators must be present for classification.*
1A	**Generally Food Secure**	***Crude Mortality Rate*** < 0.5 / 10,000 / day ***Acute Malnutrition*** <3 % (w/h <-2 z-scores) ***Stunting*** <20% (h/age <-2 z-scores) ***Food Access / Availability*** usually adequate (> 2,100 kcal ppp day), stable ***Dietary Diversity*** consistent quality and quantity of diversity ***Water Access / Availability*** usually adequate (> 15 litres ppp day), stable ***Hazards*** moderate to low probability and vulnerability ***Civil Security*** prevailing and structural peace ***Livelihood Assets*** generally sustainable utilisation (of six capitals) ***Crude Mortality Rate*** <0.5 / 10,000 / day; U5MR<1 / 10,000 / day
2	**Moderately / Borderline Food Insecure**	***Acute Malnutrition*** >3% but <10 % (w/h <-2 z-score), usual range, stable ***Stunting*** >20% (h/age <-2 z-scores) ***Food Access / Availability*** borderline adequate (2,100 kcal ppp day); unstable ***Dietary Diversity*** chronic dietary diversity deficit ***Water Access / Availability*** borderline adequate (15 litres ppp day); unstable ***Hazards*** recurrent, with high livelihood vulnerability ***Civil Security*** Unstable; disruptive tension ***Coping*** 'insurance strategies' ***Livelihood Assets*** stressed and unsustainable utilisation (of six capitals) ***Structural*** Pronounced underlying hindrances to food security ***Crude Mortality Rate*** 0.5–1 / 10,000 / day, U5MR 1–2 / 10,000 / day
3	**Acute Food and Livelihood Crisis**	***Acute Malnutrition*** 10–15 % (w/h <-2 z-score), > than usual, increasing ***Disease*** epidemic; increasing ***Food Access / Availability*** lack of entitlement; 2,100 kcal ppp day via asset stripping ***Dietary Diversity*** acute dietary diversity deficit ***Water Access / Avail.*** 7.5–15 litres ppp day, accessed via asset stripping ***Destitution / Displacement*** emerging; diffuse ***Civil Security*** limited spread, low intensity conflict ***Coping*** 'crisis strategies'; CSI > than reference; increasing ***Livelihood Assets*** accelerated and critical depletion or loss of access
4	**Humanitarian Emergency**	***Crude Mortality Rate*** 1–2 / 10,000 / day, >2x reference rate, increasing; ***Mortality Rate*** U5MR > 2 / 10,000 / day ***Acute Malnutrition*** >15 % (w/h <-2 z-score), > than usual, increasing ***Disease*** Pandemic ***Food Access / Availability*** severe entitlement gap; unable to meet 2,100 kcal ppp day ***Dietary Diversity*** Regularly three or fewer main food groups consumed ***Water Access / Avail.*** < 7.5 litres ppp day (human usage only) ***Destitution / Displacement*** concentrated; increasing ***Civil Security*** widespread, high intensity conflict ***Coping*** 'distress strategies'; CSI significantly > than reference

		Livelihood Assets near complete and irreversible depletion or loss of access
5	**Famine / Humanitarian Catastrophe**	***Crude Mortality Rate*** > 2 / 10,000 / day (example: 6,000 / 1,000,000 / 30 days) ***Acute Malnutrition*** > 30 % (w/h <-2 z-score) ***Disease*** Pandemic ***Food Access / Availability*** extreme entitlement gap; much below 2,100 kcal ppp day ***Water Access / Availability*** < 4 litres ppp day (human usage only) ***Destitution / Displacement*** large-scale, concentrated ***Civil Security*** widespread, high intensity conflict ***Livelihood Assets*** effectively complete loss; collapse

Annex 8. Standards for population nutritional requirements

Nutrient	Minimum population requirements*
Energy	2,100 kcal
Protein	53 g (10% of total energy)
Fat	40 g (17% of total energy)
Vitamin A	550 µg RAE
Vitamin D	6.1 µg
Vitamin E	8.0 mg alpha-TE
Vitamin K	48.2 µg
Vitamin B1 (Thiamine)	1.1 mg
Vitamin B2 (Riboflavin)	1.1 mg
Vitamin B3 (Niacin)	13.8 mg NE
Vitamin B6 (Pyridoxine)	1.2 mg
Vitamin B12 (Cobalamin)	2.2 µg
Folate	363 µg DFE
Pantothenate	4.6 mg
Vitamin C	41.6 mg
Iron	32 mg
Iodine	138 µg
Zinc	12.4 mg
Copper	1.1 mg
Selenium	27.6 µg
Calcium	989 mg
Magnesium	201 mg

*Expressed as reference nutrient intakes for all nutrients except energy and copper

Source: The Sphere Project (2011). Humanitarian Charter and Minimum Standards in Humanitarian Response. Geneva: The Sphere Project.

Alpha-TE – alpha-tocopherol equivalents
RAE – retinol activity equivalents
NE – niacin equivalents
DFE – dietary folate equivalents

Annex 9. Bin Card

Bin Cards

……

Name of the Health Facility:

_____

Product Name, Strength and Dosage Form

_____

Unit of Issue: _____

Maximum Stock Level: _____ **Emergency Order Point:**

Average Monthly Consumption: _____

Date	Doc. No. (Receiving or Issuing)	Received from or issued to	Quantity				Batch No.	Expiry Date	Remarks
			Received	Issued	Loss/Adj	Balance