

COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION

MODULE SIX

Supplementary Feeding to Manage MAM in the Context of CMAM

LEARNING OBJECTIVES

1. Describe Some Types of Programmes to Manage MAM and How this Component Fits Within CMAM

2. Describe Admission to and Discharge from Supplementary Feeding for the Management of MAM

3. Discuss Medical Treatment and Nutrition Rehabilitation in Supplementary Feeding

4. Practice Making Referrals from Supplementary Feeding to Outpatient or Inpatient Care

Wrap-Up and Module Evaluation

HANDOUTS AND EXERCISES

Handout 6.1 Supplementary Feeding to Manage MAM in Emergencies

Handout 6.2 Principles of Supplementary Feeding for the Management of MAM

Handout 6.3 Admission Procedures in Supplementary Feeding
 Handout 6.4 Admission Criteria and Entry Categories for CMAM
 Handout 6.5 Discharge Criteria and Exit Categories for CMAM
 Handout 6.6 CMAM Classification of Acute Malnutrition
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Handout 6.8 Medical Treatment Protocols for Management of MAM in Supplementary Feeding
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 Handout 6.10 Food Commodities Used in Supplementary Feeding
 Handout 6.11 Supplementary Feeding Ration Card

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FIELD VISIT LEARNING OBJECTIVES

1. Review Admission, Treatment and Discharge Procedures for Supplementary Feeding

2. Observe and Discuss Admission, Treatment, Discharge and Referral Procedures for Supplementary Feeding

HANDOUTS TO TAKE TO THE SUPPLEMENTARY FEEDING FIELD VISIT

Handout 6.2 Principles of Supplementary Feeding for the Management of MAM

Handout 6.4 Admission Criteria and Entry Categories for CMAM
 Handout 6.5 Discharge Criteria and Exit Categories for CMAM
 Handout 6.13 Supplementary Feeding Field Visit Checklist

HANDOUT 6.1

SUPPLEMENTARY FEEDING TO MANAGE MAM IN EMERGENCIES

A. PURPOSE OF SUPPLEMENTARY FEEDING PROGRAMMES (SFPS)

Supplementary feeding implemented in an emergency context is known as an SFP. Its purpose is to treat moderate acute malnutrition (MAM) in children 6-59 months and other vulnerable groups, such as malnourished pregnant women and lactating women with infants under 6 months of age.

Children under 6 months are never admitted to SFPS. However, the mother receives counselling on adequate breastfeeding and, if malnourished, will be admitted to the SFP herself. If the infant shows signs of severe acute malnutrition (SAM, i.e. bilateral pitting oedema, visible wasting), the infant will then be referred to inpatient care for specialised care.

There are two types of supplementary feeding interventions in emergencies:

Blanket supplementary feeding: A supplementary ration is provided for everyone in an identified vulnerable group for a defined period. This might be all children under 3 or 5 years old and/or all pregnant and lactating women, regardless of their nutritional status. Anthropometric criteria are not used for admission. Blanket feeding is used when the prevalence of acute malnutrition is high, numbers of vulnerable people are very large and general food distributions are inadequate. It can also be used during certain peak seasons or shocks.

Targeted supplementary feeding: A supplementary ration is targeted to individuals with MAM in specific vulnerable groups. The vulnerable groups usually include children age 6 to 59 months and malnourished pregnant women and lactating women with infants under 6 months of age. Groups also might include individuals with special needs such as people living with HIV (PLHIV), people with tuberculosis (TB) and the elderly. Specific anthropometric criteria for entry and discharge are usually used.

The supplementary feeding discussed in this module as part of CMAM is a **targeted SFP**.

B. SFPS IN THE CONTEXT OF CMAM

- In emergencies where the population depends on external food assistance, a general ration for the whole population is a priority to reach the maximum number of children. Normally, SFPS should not be set up before a general ration is in place. Also in an emergency, SFPS (to manage MAM in children) should be prioritised over CMAM outpatient care and inpatient care (to manage SAM in children).
- An SFP is implemented through a large number of decentralised treatment sites. These are located at or near the sites chosen for outpatient care and should be within a day's walk (round-trip) for the beneficiaries, which helps facilitate referrals between outpatient care and supplementary feeding.
- When an SFP and outpatient care are provided at the same site, this can lead to very large crowds. Good organisation is necessary to ensure that the crowds do not interfere with outpatient care and other ongoing health facility activities. It is preferable to place the SFP nearby rather than in the health facility, with strong established links for referral.

C. OBJECTIVES OF AN SFP AND WHEN TO START AND CLOSE AN SFP

- The objectives of an SFP intervention should be measurable and, in most cases, achieved in a defined period. The precise objectives will depend on the context and resources available. The objectives might include:
 - Reducing mortality among children under 5
 - Treating and preventing deterioration in the nutritional status of children with MAM
 - Preventing deterioration in the nutritional status of pregnant and lactating women
- The decision to start supplementary feeding in an emergency context is often based on a high prevalence of MAM and/or the presence of aggravating factors, such as a crude death rate above 1 in 10,000 per day, an epidemic of measles, high prevalence of respiratory or diarrhoeal disease, poor sanitation environment, inadequacy in the relief food basket and/or an unreliable food distribution system.
- Decision charts can be used as guidelines for when to open and close an SFP. They should be used only as a guide and when appropriate for the SFP's context, precise objectives and timeframe.
- The decision to close an SFP will depend on the SFP's objectives. The decision to close ideally should be made after a nutrition survey has clearly shown a decrease in global acute malnutrition (GAM) in the population to below emergency levels and the end of aggravating factors.

D. WHERE THERE IS NO SFP

In some situations, no SFP is available. This is likely to be the case when outpatient care is part of routine health care in non-emergency situations or in a food-secure environment. In non-emergency situations, some form of supplementary feeding for the management of MAM might be part of child survival interventions or a national programme. For example, in Ethiopia, distribution of supplementary food is part of the country's Enhanced Outreach Strategy for Child Survival. It also might be the case after an emergency when resources are no longer available for SFPs and/or where the prevalence of acute malnutrition has been significantly reduced.

Below are some options that should be considered to ensure that children recovering from SAM can continue gaining weight and avoid readmission:

1. In cases where there is high GAM and efforts to set up an SFP have failed, adapt the outpatient care admission and discharge criteria.
 - Admission Criteria: Raise mid-upper arm circumference (MUAC) from < 110 mm to < 115 mm or raise weight-for-height (WFH) as a percentage of the median to < 72% or 75%.
 - Discharge Criteria: Extend length of stay from two to three months or increase WFH as a percentage of the median to > 85%.
2. In an emergency response, advocate for a general food distribution for families of vulnerable or malnourished children or, when there is access to fortified blended food (FBF), provide a family food ration in outpatient care.
 - A ration of FBF can be provided to the mother/caregiver of a child admitted to outpatient care every two weeks (usually 2.5 kg of FBF every two weeks). This is given as a family food ration to prevent sharing of the ready-to-use therapeutic food (RUTF). The ration will likely be provided by the World Food Programme (WFP) or government agencies. This should be a standard part of emergency outpatient care.
3. Provide a food ration on discharge from outpatient care.
 - If access to supplementary foods is secured/allowed, a food ration can be provided upon discharge from outpatient care (equivalent to two months of supplementary rations) to help avoid readmission.

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4. Link to prevention programmes.
 - Once children have been treated for SAM or MAM and have started to recover, they and their mothers/caregivers should be linked with prevention programmes to help prevent them from becoming malnourished again. Many cases of undernutrition could be prevented through other interventions that promote child growth (e.g., community-based programmes such as Positive Deviance/Hearth [PD/Hearth], community-based growth monitoring and promotion (GMP), community-based care groups). These programmes offer nutrition and health counselling, education communication interventions and support for mothers/caregivers.

HANDOUT 6.2

PRINCIPLES OF SUPPLEMENTARY FEEDING FOR THE MANAGEMENT OF MAM

Source: Adapted from the World Food Programme (WFP) *Guidelines for Supplementary Feeding* (WFP 1999)

Blanket Supplementary Feeding	Targeted Supplementary Feeding
<p>A generalised SFP for prevention purposes can be implemented in the absence of a full basic ration under one or a combination of these circumstances:</p> <ul style="list-style-type: none"> ▪ Problems in the delivery/distribution of the general ration ▪ Prevalence of acute malnutrition above 15% to 20% among children under 5 ▪ Prevalence of acute malnutrition above 10% to 15% among children under 5, plus aggravating factors* ▪ Seasonal major food insecurity 	<p>Implementation of SFPs for selected individuals in vulnerable groups is required under these circumstances:</p> <ul style="list-style-type: none"> ▪ Prevalence of acute malnutrition above 10% among children under 5 ▪ Prevalence of acute malnutrition above 5% to 9% among children under 5, plus aggravating factors*
<p>* Aggravating factors to be considered are crude death rates above 1 in 10,000 per day, an epidemic of measles, high prevalence of respiratory or diarrhoeal disease, poor sanitation environments, high levels of food insecurity, and an unreliable food distribution system.</p>	

When to close an SFP

An SFP can be closed when the prevalence of general acute malnutrition (GAM) is below 10% with no aggravating factors and the following conditions are met:

- General food distributions are reliable and adequate or food security is acceptable.
- Effective public health and disease control measures are in place.
- No seasonal deterioration of nutritional status is expected.
- The population size is stable, with no new displacement expected.

Note: In some situations where GAM is below 10%, but the absolute number of malnourished children is still considerable, it might not be appropriate to close the targeted SFP. The same might apply in unstable and insecure situations where the SFP could be needed as a safety net.

HANDOUT 6.3

ADMISSION PROCEDURES IN SUPPLEMENTARY FEEDING

ADMISSION PROCEDURES

- Children directly admitted to a supplementary feeding are given an individual registration number that is kept the same on all records (i.e. in register book, on treatment and rations cards).
- A supplementary feeding treatment card is filled out for all admissions.
- A supplementary feeding ration card is given to the mother/caregiver or individual on admission. The mother/caregiver keeps the card.
- The amount of information recorded on a supplementary feeding treatment card should be kept to a minimum: registration number, name, place of origin, admission indicators (mid-upper arm circumference [MUAC] or weight-for-height [WFH]), weight and height on admission and discharge, and date of admission and discharge.
- MUAC, weight and/or either WFH z-score (World Health Organization [WHO] standards) or WFH as a percentage of the median (National Centre for Health Statistics [NCHS] standards), depending on the national guidelines, are recorded at every session on the supplementary feeding treatment card. If WFH is used, height is recorded at admission and once a month until discharge.
- Like outpatient and inpatient care, the performance of the supplementary feeding service/programme is measured through monthly reports.

CHILDREN 6-59 MONTHS

- Children are screened by outreach workers (e.g., community health workers [CHWs], volunteers) using MUAC and are referred to supplementary feeding, or they are admitted via self-referrals (mothers/caregivers bring them on their own initiative).
- In community-based management of acute malnutrition (CMAM), children with moderate acute malnutrition (MAM) without medical complications are automatically admitted to supplementary feeding. Moderately malnourished children with medical complications are immediately referred for treatment and/or further investigation to the appropriate health service and should have access to a nutrient-dense supplementary food. They return to supplementary feeding as soon as their medical complication is resolved.
- Admissions also include children discharged from outpatient care as cured who are admitted to supplementary feeding for a defined period of time to continue their recovery irrespective of their current anthropometrical status.
- MUAC is often used for community screening, referral and admission to supplementary feeding. However, WFH (either z-score [WHO standards] or as a percentage of the median [NCHS standards]) is more commonly used. Hence, some agencies use dual criteria, i.e. community screening using MUAC and admission using WFH. Using different criteria increases the number of children who are refused admission, which can compromise access and uptake of MAM services.

- The global community has not yet endorsed MUAC as an independent criterion for admission to supplementary feeding. Research is ongoing, and a joint statement by international organisations is expected.

INFANTS UNDER 6 MONTHS WITH MAM

- Infants under 6 months are never included in supplementary feeding. If an infant under 6 months is malnourished (with or without medical complications) or the mother has insufficient breast milk and the child is at high risk for undernutrition, the mother and infant are both referred to inpatient care.

HIV-POSITIVE CHILDREN WITH MAM

- Children who are moderately malnourished and HIV-positive may be referred to outpatient care or inpatient care, depending on national guidelines. It is unknown if these children have more specific energy and nutrient needs and whether or not they would do well in supplementary feeding. Research in the treatment of malnourished HIV-positive children is ongoing.

PREGNANT AND LACTATING WOMEN

- In emergencies, malnourished pregnant and lactating women are included in SFPs, usually using MUAC as the criterion for admission.

HANDOUT 6.4

ADMISSION CRITERIA AND ENTRY CATEGORIES FOR CMAM

ADMISSION CRITERIA FOR CMAM

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
ADMISSION CRITERIA FOR CHILDREN 6 - 59 MONTHS*		
<p>Bilateral pitting oedema +++</p> <p>OR Marasmic kwashiorkor: Any grade of bilateral pitting oedema with severe wasting (MUAC < 110 mm or WFH < -3 z-score [WHO] or < 70% of median [NCHS])</p> <p>OR Bilateral pitting oedema + or ++ or MUAC < 110 mm or WFH < -3 z-score (WHO) or < 70% of median (NCHS) with any of the following medical complications:</p> <ul style="list-style-type: none"> ▪ Anorexia, no appetite ▪ Intractable vomiting ▪ Convulsions ▪ Lethargy, not alert ▪ Unconsciousness ▪ Lower respiratory tract infection (LRTI) ▪ High fever ▪ Severe dehydration ▪ Severe anaemia ▪ Hypoglycaemia ▪ Hypothermia <p>OR</p> <ul style="list-style-type: none"> ▪ Referred from outpatient care according to action protocol ▪ Other: e.g., infant ≥ 6 months and < 4 kg 	<p>Bilateral pitting oedema + and ++</p> <p>OR MUAC < 110 mm</p> <p>OR WFH < -3 z-score (WHO) or < 70% of median (NCHS)</p> <p>AND</p> <ul style="list-style-type: none"> ▪ Appetite ▪ Clinically well ▪ Alert 	<p>MUAC ≥ 110 mm and < 125 mm</p> <p>OR WFH ≥ -3 z-score and < -2 z-score (WHO) or ≥ 70% and < 80% of median (NCHS)</p> <p>AND</p> <ul style="list-style-type: none"> ▪ Appetite ▪ Clinically well ▪ Alert <p>ALSO: Children recovering from SAM, after discharge from outpatient care, regardless of their anthropometry</p> <p><i>Note: Children with MAM and medical complications are admitted to supplementary feeding (receive supplementary food ration) but are referred for medical treatment and return when medical complications are resolved.</i></p>

*Subject to adaptations according to national guidelines; mid-upper arm circumference (MUAC) cutoffs for severe acute malnutrition (SAM) and mild acute malnutrition (MAM) are being debated.

ADMISSION CRITERIA FOR INFANTS < 6 MONTHS		
Infants < 6 months with bilateral pitting oedema or visible wasting (or e.g., insufficient breastfeeding in vulnerable environment)		
ADMISSION CRITERIA FOR PREGNANT AND LACTATING WOMEN		
		<p>Pregnant women In second and third trimester with MUAC < 210 mm</p> <p>Lactating Women MUAC < 210 mm with infants < 6 months</p>

ENTRY CATEGORIES FOR CMAM

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
ENTRY CATEGORY: NEW ADMISSIONS OF CHILDREN 6-59 MONTHS		
New SAM cases of children 6-59 months meet admission criteria -including relapse after cure	New SAM cases of children 6-59 months meet admission criteria -including relapse after cure	New MAM cases of children 6-59 months meet admission criteria -including relapse after cure and referral from outpatient care
ENTRY CATEGORY: OTHER NEW ADMISSIONS		
New SAM cases of infants, children, adolescents or adults (< 6 months or ≥ 5 years) need treatment of SAM in inpatient care	New SAM cases not meeting pre-set admission criteria need treatment of SAM in outpatient care	New MAM cases not meeting pre-set admission criteria need treatment of MAM
ENTRY CATEGORY: OLD CASES: REFERRAL FROM OUTPATIENT CARE AND INPATIENT CARE		
<p>Referral from outpatient care: Child's health condition deteriorated in outpatient care (according to action protocol) and child needs inpatient care</p> <p>Returned after defaulting Moved in from other outpatient care site</p>	<p>Referral from inpatient care: Child's health condition improved in inpatient care and child continues treatment in outpatient care</p> <p>OR Returned after defaulting, or Moved in from other outpatient care site</p>	<p>Referral from outpatient care: Returned after defaulting, or Moved in from other supplementary feeding site</p>

Note: MUAC is the preferred indicator for admission to CMAM. MUAC is used for children age 6-59 months. MUAC cutoffs for SAM and MAM are being debated. The cutoff for SAM could increase to 115 mm, however, this had not been put in practice at the time these materials were published. In some countries, the MUAC cutoff for MAM has been set at < 120 mm.

Depending on national guidelines, weight-for-height (WFH) is expressed as standard deviations (SDs) below the median of the World Health Organization (WHO) child growth standards (WFH < - z-score) or as a percentage of the median of the National Centre for Health Statistics (NCHS) child growth references (WFH < % of median).

HANDOUT 6.5

DISCHARGE CRITERIA AND EXIT CATEGORIES FOR CMAM

DISCHARGE CRITERIA FOR CMAM

6.5

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
DISCHARGE CRITERIA* FOR CHILDREN 6 - 59 MONTHS		
<p>DISCHARGED TO OUTPATIENT CARE:</p> <p>Appetite returned (passed appetite test)</p> <p>AND medical complication resolving</p> <p>AND bilateral pitting oedema decreasing</p> <p>AND clinically well and alert</p> <p>(If marasmic kwashiorkor admission: bilateral pitting oedema resolved)</p>	<p>DISCHARGED CURED:</p> <p>If bilateral pitting oedema admission:</p> <ul style="list-style-type: none"> ▪ No bilateral pitting oedema for 2 consecutive sessions ▪ MUAC ≥ 110 mm ▪ WFH ≥ -2 z-score (WHO) or ≥ 80 % of the median (NCHS) ▪ Child clinically well and alert <p>If MUAC admission:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment ▪ MUAC ≥ 110 mm ▪ No bilateral pitting oedema ▪ Child clinically well and alert <p>If WFH admission:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment and WFH ≥ -2 z-score (WHO) or WFH ≥ 80 % of the median (NCHS) for 2 consecutive sessions** ▪ No bilateral pitting oedema ▪ Child clinically well and alert <p>If marasmic kwashiorkor admission:</p> <ul style="list-style-type: none"> ▪ No bilateral pitting oedema for 2 consecutive sessions ▪ If MUAC admission: minimum 2 months in treatment and MUAC ≥ 110 mm ▪ If WFH admission: WFH ≥ -2 z-score (WHO) or $\geq 80\%$ of the median (NCHS) for 2 consecutive sessions ▪ Child clinically well and alert <p>Children are discharged to supplementary feeding if available</p>	<p>DISCHARGED CURED:</p> <p>If MUAC admission:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment ▪ MUAC ≥ 125 mm <p>If WFH admission:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment ▪ WFH ≥ -2 z-score (WHO) or $\geq 85\%$ of median (NCHS) for 2 consecutive sessions <p>DISCHARGED AFTER RECOVERING FROM SAM:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment ▪ MUAC ≥ 125 mm

*Subject to adaptations according to national guidelines; mid-upper arm circumference (MUAC) cutoffs for severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) are being debated.

** If there is no supplementary feeding, discharge criteria may be adjusted to weight-for-height (WFH) $\geq 85\%$ of median (National Centre for Health Statistics [NCHS]).

DISCHARGE CRITERIA FOR INFANTS < 6 MONTHS		
Discharged cured if successful re-lactation and appropriate weight gain (minimum 20 grams weight gain per day on breastfeeding alone for 5 days) and clinically well and alert (if no access to breastfeeding, alternative method of replacement feeding based on national guidelines is required).		
DISCHARGE CRITERIA FOR PREGNANT AND LACTATING WOMEN		
		Pregnant and lactating women MUAC ≥ 210 mm or infant ≥ 6 months of age

EXIT CATEGORIES FOR CMAM

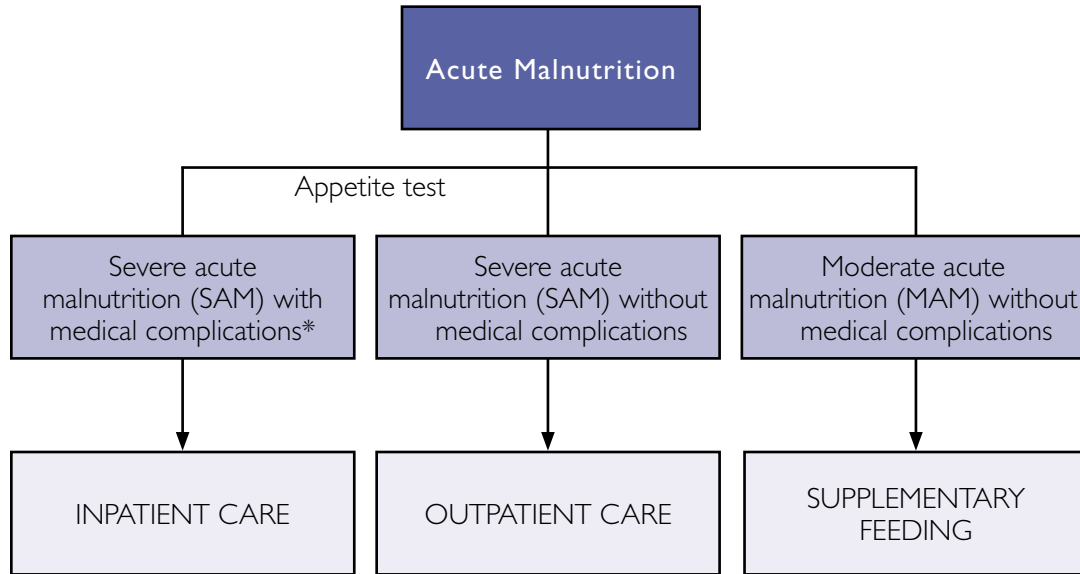
INPATIENT CARE for the Management of SAM with Medical Complications	OUTPATIENT CARE for the Management of SAM without Medical Complications	SUPPLEMENTARY FEEDING for the Management of MAM
EXIT CATEGORY: CURED		
Child 6-59 months meets outpatient care discharge criteria Infant < 6 months meets inpatient 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 dies while in supplementary feeding
EXIT CATEGORY: DEFAULTED		
Child is absent for 2 days	Child is absent for 3 consecutive sessions (e.g., 3 weeks)	Child is absent for 3 consecutive sessions (e.g., 6 weeks)
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 does not reach discharge criteria after 4 months in treatment (medical investigation previously done)
EXIT CATEGORY: REFERRED TO OUTPATIENT OR INPATIENT CARE		
Referred to Outpatient Care Child's health condition is improving and child is referred to outpatient care to continue treatment	Referred to Inpatient Care Child's health condition is deteriorating (action protocol)	Referred to Outpatient or Inpatient Care Child's health condition is deteriorated and child meets outpatient or inpatient care admission criteria (action protocol)

Note: MUAC is the preferred indicator for admission to CMAM. MUAC is used for children age 6-59 months. MUAC cutoffs for SAM and MAM are being debated. The cutoff for SAM could increase to 115 mm, however, this had not been put in practice at the time these materials were published. In some countries, the MUAC cutoff for MAM has been set at < 120 mm.

Depending on national guidelines, weight-for-height (WFH) is expressed as standard deviations (SDs) below the median of the World Health Organization (WHO) child growth standards (WFH < - z-score) or as a percentage of the median of the National Centre for Health Statistics (NCHS) child growth references (WFH < % of median).

HANDOUT 6.6

CMAM CLASSIFICATION OF ACUTE MALNUTRITION



*Medical complications include: Severe bilateral pitting oedema, marasmic kwashiorkor, anorexia/no appetite, intractable vomiting, convulsions, lethargic, lower respiratory tract infection (LRTI), high fever, severe dehydration, severe anaemia, hypoglycaemia, and hypothermia.

Note: Children with moderate acute malnutrition (MAM) and medical complications are admitted to supplementary feeding (receive supplementary food ration) but are referred for medical treatment and return when the medical complication is resolved.

HANDOUT 6.7

SUPPLEMENTARY FEEDING TREATMENT CARD

SUPPLEMENTARY FEEDING TREATMENT CARD FOR CHILDREN, EXAMPLE

				Registration no.:				
Name of Child:			Age:		Sex: M / F			
Caregiver's Name:				Name of Community Leader:				
Community:				Supplementary Feeding Site:				
ENTRY	Direct New Admission		New Admission, Referred from Inpatient care/ Outpatient care		Referred from Other Supplementary Feeding Site		Re- Admission after Defaulting	
	ADMISSION				DISCHARGE			
	Date			Date				
	Weight			Weight				
Height			Height					
WFH			WFH					
MUAC (mm)			MUAC (mm)					
				Length of Stay (days)				
				Status	1. Cured 4. Non-recovered 2. Died 5. Referral 3. Defaulted			
DRUGS GIVEN ONCE				DATE		OTHER		
Vitamin A								
Mebendazole								
Measles Vaccination								
EPI update								
#	DATE	WEIGHT	HEIGHT	MUAC	WFH	IRON	REMARKS	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								

HANDOUT 6.8

MEDICAL TREATMENT PROTOCOLS FOR THE MANAGEMENT OF MAM IN SUPPLEMENTARY FEEDING

Source: *Community-based Therapeutic Care (CTC): A Field Manual*

6.8

ROUTINE MEDICINES FOR MODERATE ACUTE MALNUTRITION (MAM)

VITAMIN A

Children 6-59 months:

- Routine supplementation should be given on admission except where Vitamin A has been given in the past month or health campaigns have ensured good coverage.
- Children referred from outpatient care, inpatient care or other health facility where Vitamin A has already been given should not be given Vitamin A.
- Children showing clinical signs of Vitamin A deficiency should be referred for treatment according to World Health Organization (WHO) guidelines.

Pregnant and lactating women: Pregnant women should NOT be given Vitamin A. Vitamin A is given postpartum, within six weeks after delivery only.

ANTHELMINTHS

To ensure adequate weight gain, **all children 12-59 months** must be routinely treated (every six months) for worm infections with mebendazole or albendazole (or other appropriate antihelminth).

IRON AND FOLIC ACID

Children 6-59 months: Children with anaemia should be treated according to WHO and Integrated Management of Childhood Illness (IMCI) guidelines; this should include malaria testing and treatment in endemic areas. Children with severe anaemia should be referred to a health facility for treatment.

Pregnant and lactating women: Supplementation should be given according to WHO and national guidelines.

OTHER TREATMENTS

Other medical treatments, including vaccination for measles and expanded programme of immunisation (EPI) update, should be provided through referral to clinic services and administered according to national guidelines.

HANDOUT 6.9

NUTRITION REHABILITATION PROTOCOLS FOR THE MANAGEMENT OF MAM IN SUPPLEMENTARY FEEDING

FOOD SUPPLEMENTS IN SUPPLEMENTARY FEEDING

Food supplements may be distributed as either take-home rations (e.g., dry rations, ready-to-use supplementary food [RUSF]) or on-site rations (wet rations):

- **Dry rations** are provided as raw ingredients and are not prepared for the recipients at the SFP site, but are taken home. The ration is usually a fortified blended food (FBF, e.g., corn-soy blend [CSB], UNIMIX, SF450)¹ with sugar and oil, pre-mixed or distributed separately. Other commodities that might be distributed through an SFP include high-energy biscuits, beans, lentils, and bulgur wheat. The dry, take-home ration is usually distributed on a biweekly or monthly basis.
- **RUSF** is a high-energy nutrient dense food product designed for the nutritional rehabilitation of moderate acute malnutrition (MAM). It comes in a crushable form (e.g., BP 5 from Compact, Norway) or in a soft lipid-based form (e.g., Supplementary Plumpy® from Nutriset, France).
- **Wet rations** are cooked once or twice daily in the kitchen of a feeding centre and consumed on-site. The child must be brought to the feeding centre daily if s/he is prescribed wet rations.

Sphere Minimum Standards and other guidelines discourage the use of wet supplementary feeding programmes. Wet feeding can be induced at the peak of an emergency, when populations have limited access to fuel and water, where security conditions place people at risk while taking rations home, or for groups who need additional food but cannot cook for themselves.

NUTRITION REHABILITATION IN SUPPLEMENTARY FEEDING

- The ration should provide 1,000-1,200 kilocalories (kcal) per person per day, with 10 percent to 12 percent of energy coming from protein, and should be provided for a long time (i.e. two to three months, according to the national guidelines). The ration accounts for family sharing with a family ration of approximately 500 kcal per day provided to the child's family.
- In emergency situations, SFPs generally use take-home rations. (On-site feeding is very rare and is considered to be a temporary solution ONLY or where security is a concern.) Usually, food is distributed as a pre-mix by weight using a balance or calibrated container. Where possible, mothers/caregivers take the pre-mixed food home in their own containers or receive reusable containers.
- A dry ration is provided every two weeks or every month. The frequency depends on resources, the needs and size of the target population, and access to distribution sites. In some cases—particularly in large-scale national programmes, such as the Enhanced Outreach Strategy for Child Survival in Ethiopia—dry rations might be provided every three months, as long as oil has not been mixed into

¹ UNIMIX is an FBF distributed by the United Nations Children's Fund (UNICEF); it has replaced 5-10% of corn with sugar. SF450 is made of pre-cooked cereal flour including oats, toasted soy flour, vegetable fat and sugar, with added vitamins and minerals, and is produced by Nutriset, France.

the FBF.

SUPPLEMENTARY FOOD RATIONS IN SUPPLEMENTARY FEEDING

- Rations usually consist of an imported or locally produced blended foods, such as CSB or UNIMIX (includes already sugar), which are fortified with vitamins and minerals, hence the term FBF. They contain about 350-400 kcal per 100 g. The ration should include vegetable oil to ensure adequate energy, and the oil should be fortified with Vitamin A. Sugar should be added to the ration when available if it is not already part of the blend.
- A typical basic ration for children with MAM consists of:
 - Daily ration of 200-300g FBF and 25-30g of oil per person per day
 - Two-week ration of 2.5-4kg blended food and about 300g of oil per person(Note: the ration accounts for sharing).
Other commodities such as sugar and powdered milk can be added.
- If ingredients are mixed before distribution, this is known as pre-mix. The aim is to ensure that rations (particularly high-value commodities such as oil) are not used for the general household or sold. However, pre-mixing can be time consuming, and it reduces the ration's shelf life. Once oil and powdered milk are mixed with FBF, the mixture will last a maximum of two weeks before going rancid.
- Pulses and high-energy biscuits may also be distributed with the FBF, depending on what is available.
- Sugar is included in some FBFs, but not those from the United States. Where available, sugar should be added to FBF to increase palatability and energy.
- **Powdered milk is never distributed alone.** It must always be mixed with an FBF before distribution.
- Clear information should be given on the hygienic use of the ration and on how and when it should be consumed. The pre-mix is combined with two portions of water for each portion of pre-mix and is cooked for at least 20 minutes. Practical preparation and cooking demonstrations should be given at the SFP site or in the community. Note that the demonstrations can draw large numbers of mothers/caregivers and provide a good opportunity for health education. The messages should be clear, simple and practical.
- Several types of FBFs and other supplementary foods with a large variety of nutrient and energy densities are currently available on the market. It is recommended to seek advice from specialised agencies on which foods and what quantities are appropriate for the context and for the vulnerable groups that are targeted for supplementary feeding.
- Ration levels are normally determined by the World Food Programme (WFP) and national/local governments, according to needs and available resources. However, all agencies working in nutrition have a role in advocating for adequate supplementary foods and ration levels.

HANDOUT 6.10

FOOD COMMODITIES USED IN SUPPLEMENTARY FEEDING

Fortified blended food (FBF, 25kg bags), 350-400 kilocalories (kcal) per 100g

Blended foods should be fortified. A vitamin and mineral mix should be added to blended foods that have not been fortified before distribution, if possible. FBFs include corn-soy blend (CSB), wheat-soy blend (WSB), UNIMIX, and other national fortified blends. Some contain sugar, which improves palatability. Sugar should be added to FBFs that have not already been sweetened before distribution, if possible.

Note that FBFs' effectiveness in treating moderate undernutrition is under question for several reasons:

- They are not energy-dense
- The mix of ingredients makes valuable nutrients unavailable to the body
- They require cooking
- The prevalence of and intra-household sharing is high

Vegetable oil (four-litre cans), 900 kcal per 100g

Vegetable oil is usually fortified with Vitamin A.

High-energy and high-protein biscuits, 450 kcal per 100g

High-energy and high-protein biscuits may be suitable for use in supplementary feeding programmes (SFPs) on a short-term basis. Commonly used biscuits include:

- BP5, which has 458 kcal per 100g and is designed to meet complete daily needs (nine bars in a 500g box)
- High-energy biscuits, which have 450 kcal per 100g, 12g of protein and are fortified with micronutrients (50 percent to 75 percent of adult daily requirements)

These biscuits significantly increase the supplementary diet's energy content and are particularly useful at the beginning of the emergency operation. The biscuits are a valuable commodity; efforts should be made to prevent them from being sold. The biscuits could be crushed or broken before being added to the dry ration pre-mix. Long-term dependence on the biscuits should be avoided.

Ready-to-use supplementary food (RUSF), 500 kcal per 90g packet

RUSF, which is similar to ready-to-use therapeutic food (RUTF) but is designed for supplementary feeding, has been developed for treating moderate acute malnutrition (MAM). RUSF is more expensive than blended foods, but the energy/nutrient density is so high that it might offset the costs because much less of it is needed to achieve the same energy and nutrient comparison. Like RUTF, RUSF might prove to be much more successful than blended foods in achieving better outcomes. This also would make it more cost-effective. Research on the effectiveness of RUSF is ongoing.

Powdered milk (25kg bags) as a supplement mixed with FBFs, 362 kcal per 100g

Powdered milk—also known as dry skim milk (DSM), non-fat dry milk (NFDM) or dry whole milk—should **never be distributed alone in a take-home ration**. The risk of dilution and germ contamination are very high and the milk could be used as a breastmilk substitute (also respecting the International Code of Marketing of Breast-milk Substitutes, see www.enonline.org). Powdered milk can be added to FBFs before distribution but not when FBFs are pre-mixed with oil, unless the client is directed to use the FBF within two weeks to avoid spoilage.

Examples of Supplementary Rations

Commodity	Ration 1 (g)	Ration 2 (g)	Ration 3 (g)
Fortified blended food (FBF)	250	250	140
Sugar		20	30
Oil	25	25	50
Powdered milk			50
Energy (kcal)	1,162	1,250	1,250
Protein % energy	14.5	14.5	14.5

Source: Adapted from the World Health Organization (WHO) 2000

HANDOUT 6.11

SUPPLEMENTARY FEEDING RATION CARD

Name of Child:							Registration Number: / /						
Caregiver's Name:							Sex (M/F):						
Dates of Admission:							Age (Months):						
Community:							Supplementary Feeding Site:						
Admission Criteria:							Discharge Status:						
Week	1	2	3	4	5	6	7	8	9	10	11	12	13
Date													
Weight (kg)													
MUAC (mm)													
WFH													
Ration (type and quantity)													

Adapted from *Community-based Therapeutic Care: A Field Manual*

HANDOUT 6.12 REFERRAL SLIP

Name of child:		Community:	
Age:		Sex:	
Date of Admission:		Site:	
ADMISSION DATA	Weight:	MUAC:	Referral to:
	Height:	WFH:	
Bilateral pitting oedema (circle) None + ++ +++			Registration No:
Date of Referral:			
Criteria for Referral:			
Treatment given:		Comments:	

Adapted from *Community-based Therapeutic Care (CTC): A Field Manual*

HANDOUT 6.13

SUPPLEMENTARY FEEDING FIELD VISIT CHECKLIST

OBSERVE THE FOLLOWING:

	Admission criteria
	Admission procedures
	Discharge criteria
	Discharge procedures
	Individual child's supplementary feeding treatment card (e.g., information collected, progress)
	Ration card
	Referral process
	Food supplies

ASK THE STAFF:

	How they ensure linkages between the supplementary food programme (SFP) and outpatient care
	How they ensure caregivers know how to prepare and give the supplementary food
	What kind of health/nutrition education they offer
	What strategies they use to avoid disrupting outpatient care or ongoing health centre activities
	Where their supplementary food comes from and how they order and store it

EXERCISE 6.1

REFERRAL IN CMAM

CHILD A

Child A was admitted to an SFP with a mid-upper arm circumference (MUAC) of 112 mm, weight of 10 kg and no medical complications. At the second weighing, the child had bilateral pitting oedema on the feet. What action is needed?

CHILD B

Child B was referred to the SFP by the outreach worker with a MUAC of 113 mm. On admission, the nurse finds the child has no appetite and an extremely high fever. What action is needed?

CHILD C

Child C was admitted to the SFP with a MUAC of 111 mm. After four weeks (third weighing), the child has lost weight and MUAC is 109. The child has diarrhoea and some appetite. You want to send the child to outpatient care, but the mother/caregiver refuses to go. How would you deal with this?

