

COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION

MODULE FOUR

**Outpatient Care for the Management of
SAM Without Medical Complications**

LEARNING OBJECTIVES

HANDOUTS AND EXERCISES

1. Describe Outpatient Care for the Management of SAM Without Medical Complications	PowerPoint: Overview of CMAM from Module 1 (optional)
2. Describe Admission Criteria in Outpatient Care	Handout 4.1 Admission Criteria and Entry Categories for CMAM Handout 4.2 Outpatient Care: Admission Criteria Exercise 4.1 Outpatient Care Admission
3. Describe Process for Admissions and Outpatient Care Follow-On Sessions	Handout 4.3 Outpatient Care: Admission Process Handout 4.4 Outpatient Care Treatment Card Handout 4.5 RUTF Ration Card Handout 4.6 Using Outpatient Care Treatment Card and RUTF Ration Card Exercise 4.2 Outpatient Care Treatment Card and RUTF Ration Card
4. Explain Medical Treatment for the Management of Children with SAM Without Medical Complications in Outpatient Care	Handout 4.7 Medical Treatment for the Management of SAM in Outpatient Care Handout 4.8 Routine Medicines for SAM in Outpatient Care Handout 4.9 Supplemental Medicines for SAM in Outpatient Care Handout 4.10 Medicine Protocol Rationale for Outpatient Care (Reference)
5. Explain Nutrition Rehabilitation for the Management of SAM Without Medical Complications in Outpatient Care	Handout 4.11 Nutrition Rehabilitation and RUTF
6. Describe the Key Messages for Mothers/Caregivers Used in Outpatient Care	Handout 4.12 Key Messages for Individual Counselling at Outpatient Care
7. Recognizing When Further Action is Needed: Referral to Inpatient Care and Follow-Up Home Visits	Handout 4.13 Outpatient Care Action Protocol Handout 4.14 Referral to Inpatient Care or Follow-Up Home Visits Handout 4.15 Referral Slip Exercise 4.3 Identifying Children Who May Need Follow-Up Home Visits or Referral to Inpatient Care
8. Explain Discharge Criteria and Procedures	Handout 4.16 Outpatient Care: Discharge Criteria Handout 4.17 Discharge Criteria and Exit Categories for CMAM Exercise 4.4 Partially Completed Outpatient Care Treatment Cards
9. Describe Linkages Between Outpatient Care and Other Services, Programs and Initiatives	Handout 1.12 Integrating CMAM into Routine Health Services at the District Level
Wrap-up and Module Evaluation	Handout 4.18 Essentials of Outpatient Care for SAM Without Medical Complications Optional Exercise 4.5 Outpatient Care Admissions Role Play

FIELD PRACTICE

LEARNING OBJECTIVES

HANDOUTS TO TAKE TO OUTPATIENT CARE FIELD PRACTICE

1. Assess and Admit a Child to Outpatient Care

Handout 2.4 Assessing Age, Bilateral Pitting Edema, MUAC, Weight and Height (from Module 2)
Handout 4.1 Admission Criteria and Entry Categories for CMAM
Handout 4.2 Outpatient Care: Admission Criteria
Handout 4.3 Outpatient Care: Admission Process
Handout 4.7 Medical Treatment for the Management of SAM in Outpatient Care

2. Assess and Treat a Child During an Outpatient Care Follow-On Session

Handout 4.8 Routine Medicines for SAM in Outpatient Care
Handout 4.9 Supplemental Medicines for SAM in Outpatient Care
Handout 4.10 Medicine Protocol Rationale for Outpatient Care (Reference)
Handout 4.11 Nutrition Rehabilitation and RUTF
Handout 4.12 Key Messages for Individual Counselling at Outpatient Care
Handout 4.13 Outpatient Care Action Protocol
Handout 4.16 Outpatient Care: Discharge Criteria
Handout 4.17 Discharge Criteria and Exit Categories for CMAM
Handout 4.19 Outpatient Care Field Practice Checklist

HANDOUT 4.1

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 edema +++</p> <p>OR Marasmic kwashiorkor: Any grade of bilateral pitting edema with severe wasting (MUAC < 110 mm or WFH < -3 z-score [WHO] or < 70% of median [NCHS])</p> <p>OR Bilateral pitting edema + 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 anemia ▪ 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 edema + 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 edema 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:</p> <p>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 another outpatient care site</p>	<p>Referral from inpatient care:</p> <p>Child's health condition improved in inpatient care and child continues treatment in outpatient care</p> <p>OR</p> <p>Returned after defaulting, or Moved in from another outpatient care site</p>	<p>Referral from outpatient care:</p> <p>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 4.2

OUTPATIENT CARE: ADMISSION CRITERIA

WHO SHOULD BE ADMITTED TO CMAM OUTPATIENT CARE?

- Children age 6-59 months who have severe acute malnutrition (SAM), an appetite (ability to eat ready-to-use therapeutic food [RUTF], passing the appetite test) and no medical complications
- Children whose mother/caregiver refuses inpatient care despite advice; the child will require follow-up home visits and close monitoring while in outpatient care
- Children who a health care provider has determined should be admitted even though they do not meet admission criteria, such as children over 5 years old with bilateral pitting edema or who are visibly severely wasted
- Children referred from inpatient care to complete the treatment according to the protocol
- Children who return after defaulting (absent for three consecutive sessions) and who need to continue the treatment

WHO IS NOT ADMITTED TO OUTPATIENT CARE?

- Children with SAM and medical complications, including no appetite, should be referred to inpatient care
- Children under 6 months who have bilateral pitting edema or visible wasting, and/or whose mother has insufficient breast milk should be referred to inpatient care for SAM with medical complications for specialized treatment of SAM in infants
- Moderately malnourished children should be referred to supplementary feeding or other treatment services for moderate acute malnutrition (MAM), as available
- Children who are sick but do not have SAM should be referred to other appropriate health services ▪

Children with HIV/AIDS and SAM follow the SAM treatment protocol

Note:

Adults and adolescents: To date, outpatient care programs have little experience with adults or adolescents. Care and treatment will depend on the context and national guidelines. Currently, best practice is referral to inpatient care and treatment based on World Health Organization (WHO) and national protocols. In several countries (e.g., Malawi, Zambia, Mozambique), severely malnourished HIV positive adults have been treated as inpatients using F75/F100 and as outpatients using RUTF. Research is ongoing to determine the most effective treatment protocol for HIV-positive adults and adolescents.

Twins: If the first twin meets CMAM admission criteria and the second does not, the second twin is not admitted. However, the second twin receives a weekly RUTF ration because ration sharing must be assumed. An RUTF ration card for the second twin is filled out and stapled to the RUTF ration card of the admitted first twin.

HANDOUT 4.3

OUTPATIENT CARE: ADMISSION PROCESS

A. OVERVIEW OF OUTPATIENT CARE ADMISSION PROCESS

ADMISSION PROCESS FOR CHILD WITH SAM REFERRED TO OR PRESENTED AT THE HEALTH FACILITY WITH OUTPATIENT CARE

(Outpatient Care Follow-On Sessions: Steps 1-15 [except 6] are repeated)

1. Sugar water given
2. Bilateral pitting edema checked
3. Anthropometry checked:
MUAC measured
Weight measured
Length or height measured; WFH verified*
4. Nutritional status recorded
5. DECISION WHETHER CHILD IS ADMITTED FOR SAM OR REFERRED FOR MAM OR OTHER
(In **outpatient care follow-on sessions**: progress of nutritional status monitored)
6. Registration number provided
7. Medical assessment:
Medical history taken and physical examination conducted, all recorded on outpatient care treatment card
8. Appetite tested
9. DECISION WHETHER CHILD IS ADMITTED TO OUTPATIENT CARE OR REFERRED TO INPATIENT CARE (BASED ON ADMISSION CRITERIA) (In **outpatient care follow-on sessions**: decision whether child continues treatment in outpatient care, is referred to inpatient care or tertiary care [based on outpatient care action protocol], needs a follow-up home visit, or is ready for discharge [based on discharge criteria])

CHILD RECEIVES TREATMENT IN OUTPATIENT CARE

10. Routine medication given upon admission (In **outpatient care follow-on sessions**: medication following treatment protocol given)
11. Weekly supply of RUTF given
12. RUTF ration card filled out and RUTF given
(Soap provided if available)
13. Counselling on how to give RUTF (key messages) and antibiotics given upon admission (In **outpatient care follow-on sessions**: counselling on progress, and health and nutrition education given)
14. Explanation of outpatient care schedule and when to return for outpatient care follow-on sessions, and linkage with outreach worker (e.g., CHW, volunteer) given
15. Links with other services, programmes and initiatives made

CHILD IS REFERRED TO INPATIENT CARE

10. First-dose antibiotic given
11. Referral slip provided
(Arrange transportation where possible)

*Note: In countries where bilateral pitting edema and mid-upper arm circumference (MUAC) are used for admission, adjust chart and remove length or height measurement and weight-for-height (WFH) information.

B. IMPORTANT CONSIDERATIONS IN THE ADMISSION PROCESS

- Shade should be provided if mothers/caregivers and children have to wait outside. Organize the flow of patients and the waiting area so that mothers/caregivers have somewhere to sit, and health care providers can see patients and take measurements in an orderly manner.
- Children waiting for admission can be given clean, safe water to drink. Where possible, **sugar water** should be given to help prevent hypoglycaemia.
- Children in a severe condition should be triaged and treated first.
- Water should be available for children who eat the ready-to-use therapeutic food (RUTF) during the appetite test and during the waiting period.
- Soap and water should be available for hand-washing.

C. STEPS FOR ADMISSION

- Children are checked for bilateral pitting edema, their MUAC is taken, they are weighed and their length or height is measured.
- If a child meets the admission criteria for severe acute malnutrition (SAM), the health care provider takes a medical history and conducts a physical examination. The medical history includes information on bilateral pitting edema, diarrhea, vomiting, cough, appetite, frequency of stools and urine, bilateral pitting edema duration, and breastfeeding status. The physical examination includes measurement of respiratory rate, chest retraction and body temperature, and observations of the eyes, ears, lymph nodes, skin, mouth and extremities (see **Handout 4.7 Medical Treatment for Management of SAM in Outpatient Care** for more information).
- All information is recorded on the child's outpatient care treatment card, which is kept on file at the outpatient care site. The health care provider should complete an outpatient care treatment card for all children admitted at the outpatient care site, even those that will be referred to inpatient care. Each child has a unique registration number noted on the outpatient care treatment card.
- The appetite is tested; RUTF is given to the mother/caregiver to give to the child for an observed appetite test. The child's appetite is graded by the health care provider. See **Section D** below for detailed information on the appetite test.
- Based on the appetite test and the medical assessment (i.e. anthropometry, medical history, physical examination), the health care provider determines whether the child should be referred to inpatient care or admitted into outpatient care.
- Routine medication is provided based on the treatment protocol.
- The child will receive a ration of RUTF, and the amount is marked on the outpatient care treatment card and on an RUTF ration card that is given to the mother/caregiver.
- The health care provider counsels the mother/caregiver with key messages on how to feed the child RUTF, how to give the medicines to the child, when to return to outpatient care, and to bring the child to the health facility immediately if his/her condition deteriorates.

Note: Outpatient care includes individual counselling, health and nutrition education, and behavior change communication (BCC) at each session. It is important that the initial counselling session focus only on the messages above so that the mother/caregiver clearly understands the practices that are essential to the successful treatment of SAM. As the child's condition improves, other messages should be given. These messages will be discussed more fully under **Learning Objective 6**.

- The mother/caretaker receives explanation on the outpatient care schedule and when to return for outpatient care follow-on sessions. S/he is also linked with the responsible outreach worker for his/ her community (i.e., name of the community health worker [CHW] or volunteer, how to reach the outreach worker if the introduction was not made during the screening or admission).
- Linkages are made with other services, programs or initiatives as appropriate (e.g., voluntary counselling and testing [VCT], expanded programme of immunization [EPI], reproductive health clinic, food security initiatives).

D. APPETITE TEST TO DETERMINE WHETHER CHILD SHOULD BE TREATED IN OUTPATIENT CARE WITH RUTF

- Appetite is essential for a child to be admitted to and remain in outpatient care. If a child has no appetite, s/he will not be able to eat RUTF at home and therefore needs referral for specialized care in inpatient care for the management of SAM with medical complications.
- An appetite test is given to children ages 6 months and above to determine whether the child can eat the RUTF. The test shows whether the child has appetite, accepts the RUTF's taste and consistency and can swallow (e.g., child is old enough to swallow solids, child has no lesions that prevent him/her from eating). Anorexia, or absence of appetite, is considered to reflect a severe disturbance of the metabolism.
- Children with SAM who pass the test and have no medical complications are treated in outpatient care. Those who do not pass are referred to inpatient care.
- The appetite test is repeated at every outpatient care follow-on session. For children who are used to the RUTF, there is flexibility on when the repeat test can be done (e.g., with supervision in a group, during the waiting time).
- Children who have other medical complications that require referral to inpatient care do not need to take the appetite test at the outpatient care site.
- The Appetite Test
 1. The child is given a packet or pot of RUTF to eat.
 2. The child should eat *at least one third of a packet or three teaspoons from a pot of RUTF* to pass the test.
 3. The health care provider observes the child eating the RUTF and decides whether the child passes or fails.
 4. If the child passes, s/he can be sent home and continues treatment in outpatient care. If the child fails, referral procedures to inpatient care are started.
 5. The health care provider notes on the outpatient care treatment card whether the child passed or "failed" the appetite test.

Note: Many children will eat the RUTF enthusiastically straight away while others might refuse initially. These children should sit quietly with their mothers/caregivers in a secluded place and be given time to become accustomed to the RUTF.

E. STEPS FOR OUTPATIENT CARE FOLLOW-ON SESSIONS

- Depending on the outpatient care site's schedule and the ability of the mother/caregiver to bring in the child, weekly or bi-weekly outpatient care follow-on sessions are scheduled.
- The mother/caregiver is asked to return for each outpatient care follow-on session, and the importance of compliance with this is explained: returning for outpatient care follow-on sessions is critical for the child's treatment as receiving the needed RUTF is vital for the child's nutrition rehabilitation.

- At each outpatient care follow-on session, the child receives a comprehensive evaluation that includes:
 - anthropometry, medical history, and physical examination
 - an appetite test
 - monitoring the progress of the child’s nutritional status
 - decision making for referral to inpatient care or tertiary care depending on the outpatient care action protocol, for a follow-up home visit, or for discharge
 - continuation of drug treatment protocol
 - adequate supply of RUTF
 - individual counselling, and group health and nutrition education.
 - verifying and excluding the presence of medical complications
- The mother/caretaker is linked with services, programs and initiatives as appropriate.

HANDOUT 4.4

OUTPATIENT CARE TREATMENT CARD

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD									
NAME					Reg. N°	/ /			
AGE (months)			SEX	M	F	DATE OF ADMISSION			
ADMINISTRATIVE UNIT					TIME TO TRAVEL TO SITE				
COMMUNITY					FATHER ALIVE				
HOUSE DETAILS/LANDMARKS					MOTHER ALIVE				
NAME OF CAREGIVER					TOTAL NUMBER IN HOUSEHOLD				
ADMISSION (CIRCLE)	self referral	outreach referral	inpatient care referral	health facility referral	TWIN	yes	no		
RE-ADMISSION (relapse)	no	yes	ADDITIONAL INFORMATION						
ADMISSION ANTHROPOMETRY									
BILATERAL PITTING OEDEMA	+	++	+++						
MUAC (mm)			WEIGHT (kg)			HEIGHT (cm)			
ADMISSION CRITERIA	Bilateral pitting oedema	MUAC	Weight for Height	OTHER:					
HISTORY									
DIARRHOEA	yes	no				# STOOLS/DAY	1-3	4-5	>5
VOMITING	yes	no				PASSING URINE	yes	no	
COUGH	yes	no	IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?						
APPETITE	good	poor	none				BREASTFEEDING	yes	no
ADDITIONAL INFORMATION									
PHYSICAL EXAMINATION									
RESPIR. RATE (# min)	<30	30 - 39	40 - 49	50+	CHEST INDRAWING		yes	no	
TEMPERATURE °C					CONJUNCTIVA		normal	pale	
EYES	normal	sunken	discharge	DEHYDRATION		none	moderate	severe	
EARS	normal	discharge	MOUTH		normal	sores	candida		
ENLARGED LYMPH NODES	none	neck	axilla	groin	HANDS & FEET		normal	cold	
SKIN CHANGES	none	scabies	peeling	ulcers / abscesses	DISABILITY		yes	no	
ADDITIONAL INFORMATION									
ROUTINE MEDICATION: ADMISSION									
ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE			
	Amoxicillin								
	Vitamin A (if not in last 6 months)			Measles immunisation	no	yes	date:		
	Malaria treatment			Fully immunised	no	yes			
2nd VISIT:	Mebendazole								
OTHER MEDICATION									
DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE				

FOLLOW UP: OUTPATIENT CARE

NAME		REG.Nº															
Week	ADM.																
	(=0)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Date																	
ANTHROPOMETRY																	
Bilateral pitting Edema (+ ++ +++)																	
MUAC (mm)																	
Weight (kg)																	
Weight loss * (Y/N)				*		*											
Height (cm)																	
Weight for Height																	
* If below admission weight on week 3 refer for home visit; If no weight gain by week 5 refer to inpatient care																	
HISTORY																	
Diarrhea (# days)																	
vomiting (# days)																	
fever (# days)																	
Cough (# days)																	
PHYSICAL EXAMINATION																	
Temperature (°C)																	
Respiratory rate (# /min)																	
Dehydrated (y/N)																	
Anemia / palmar pallor (y/N)																	
Skin infection (y/N)																	
APPETITE CHECK / FEEDING																	
RUTF test (passed/failed)																	
RUTF (# units given)																	
ACTION / FOLLOW UP																	
ACTION NEEDED (y/N)																	
Other medication (see front of card) Name of																	
Examiner visit outcome																	
Ok= Continue A= Absent D= Defaulted for 3 visits R= Referral RR= Refused referral C= Cured NR= Non-recovered HV= home visit X= Died																	
ACTION TAKEN DURING FOLLOW-UP (INCLUDE DATE)																	
Name of outreach worker:																	

HANDOUT 4.5 RUTF RATION CARD

Front of card:

OUTPATIENT CARE RUTF RATION CARD				Registration N°		
Site				Community		
Name of Child				Age	Sex	
Target Weight (kg)				CRITERIA FOR ADMISSION:		
Date	Bilateral pitting oedema	MUAC (mm)	Height (cm)	Weight (kg)	WFH	RUTF ration
Notes:						
OUTCOME: Cured Died Defaulted Non-Recovered Referred						

Back of card:

Date	Bilateral pitting edema	MUAC (mm)	height (cm)	Weight (cm)	WFH	RUTF ration

Notes / Follow-Up home Visits (date/signature by outreach worker)

HANDOUT 4.6

USING OUTPATIENT CARE TREATMENT CARD AND RUTF RATION CARD

A. OUTPATIENT CARE TREATMENT CARD

- The outpatient care treatment card is completed for all children admitted to CMAM at the outpatient care site, including those being referred to inpatient care.
- Each child admitted to CMAM is given a unique **registration number**, which is noted on the outpatient care treatment card. The numbering system starts with the first child admitted at that site e.g., 001/OC/XXX (OC for “outpatient care” and XXX as the code for the health facility). This number remains the same even if the child is referred to inpatient care. The number must appear on referral slips. The hospital or agency running inpatient care should use this number on the slip when the child is returned from inpatient care to outpatient care. The same numbering system applies to programs that manage moderate acute malnutrition (MAM). Note: If a mother/caregiver presents a child directly to inpatient care and the child is admitted, then the inpatient care code is used.
- The **outpatient care treatment card filing system** is a simple data repository system that maintains the most detailed monitoring information of individual treatment. Outpatient care treatment cards are kept in a simple file on site. The file should have dividers with separate sections for defaulters, deaths, recovered (cured children who were discharged) and referrals. This system makes it easy to organize, find the right cards and fill out reports weekly and monthly.
- If a child is referred to inpatient care, the outpatient care treatment card is filed under “referrals to inpatient care” until the child returns to the outpatient care site. Cards in the referral section should be checked weekly, and health care providers should discuss the referral status of the children with the outreach workers (e.g., community health workers [CHWs], volunteers) to be sure that each child returns from inpatient care. If a child dies in inpatient care, the outpatient care treatment card is filed under deaths.
- For health facilities that require registration to meet follow-up and reporting requirements, a simplified registration system using **registration books** can be useful. The health care provider records the child’s number, name, place of origin, admission date, nutrition indicators upon admission (i.e. bilateral pitting edema, mid-upper arm circumference [MUAC], weight, height, weight-for-height [WFH]), date of discharge, and nutrition indicators upon discharge. In stand-alone CMAM services, outpatient care treatment cards can also serve as registration records and no registration book would be required.

B. READY-TO-USE THERAPEUTIC FOOD (RUTF) RATION CARD

- Information provided on RUTF ration cards include:
 - Name of Child
 - Age
 - Sex
 - Community
 - Registration number
 - Health facility with outpatient care site

- Target weight
 - Criteria for admission
 - Date and nutrition indicators: bilateral pitting edema assessments, measurements of MUAC, height, weight, WFH
 - Sizes of rations and dates given
 - Notes
 - Follow-up home visits
 - Outcome (e.g., referred, defaulted)
- The mother/caregiver keeps the RUTF ration card until discharge.
 - The amount of RUTF given is determined according to the child's weight and visit frequency and is recorded on the RUTF ration card.
 - At the time of discharge, date and discharge criteria are recorded on the RUTF ration card.

Note: Monitoring of individual children is based on the outpatient care treatment cards, which feed information into the monitoring system of the services (see **Module 8: Monitoring and Evaluation of CMAM**). Individual and service data collection must be adapted to the existing monitoring system of individual cases at the health facility and the health management information system (HMIS) at the district level. The existing systems should be reviewed first to determine how to best integrate the CMAM outpatient care treatment cards into an HMIS that is already in place.

HANDOUT 4.7

MEDICAL TREATMENT FOR MANAGEMENT OF SAM IN OUTPATIENT CARE

A. EVALUATION OF THE HEALTH AND NUTRITION STATUS

- **When a child with severe acute malnutrition (SAM) first presents** at the health facility, the health care provider assesses the nutritional status: bilateral pitting edema is checked and anthropometry is measured.
- The medical assessment includes a medical history and physical examination and determines whether the child with SAM has any medical complications, including Integrated Management of Childhood Illness (IMCI) danger signs, that might require inpatient care. The medical assessment includes: asking the mother/caregiver about the child's general condition in the past week (e.g., diarrhea, vomiting, cough, appetite, passing stools and urine, edema, breast feeding); examining the eyes, ears, lymph nodes, mouth, extremities and skin; checking for bilateral pitting edema, fever, anemia and superficial infections; checking respiration rate and chest retraction, alertness and hydration status.
- **At every outpatient care follow-on session**, a health care provider evaluates the child's nutritional status and medical condition. The medical assessment determines the severity of the case and serves as the basis for deciding whether to continue the course of treatment, refer to inpatient care or perform a follow-up home visit to monitor the child's progress.
- A health care provider, educator or trained volunteer counsel's mothers/caregivers individually on the child's nutritional and medical status and progress, and provides health and nutrition education, including guidance on optimal infant and young child feeding (IYCF) practices, among other health topics.

B. ROUTINE MEDICAL TREATMENT IN OUTPATIENT CARE

- Routine medicines are given to all children admitted to outpatient care whether or not they show symptoms because ill children with SAM might have suppressed immune systems and not show symptoms until they begin to recover from SAM.
- Treatment is based on World Health Organization (WHO) guidelines for the treatment of SAM and should be adapted to national treatment protocols and based on the national Essential Drugs List (EDL).
- The recommended first-line antibiotic is **amoxicillin**. The child's mother/caregiver gives the first dose of amoxicillin at admission to outpatient care, under the guidance of the health care provider. The health care provider should clearly explain how to continue treatment of antibiotics at home and should ask the mother/caregiver to repeat the instructions to make sure they were understood.
- **vitamin A** is given in a single dose at admission to children who do not have bilateral pitting edema and who have not received it in the past month. Children who are admitted with bilateral pitting edema should receive Vitamin A ONLY upon discharge unless there are signs of Vitamin A deficiency (e.g., night blindness, Bitot's spots, corneal xerosis), if there is currently a measles outbreak or if there is a high prevalence of Vitamin A deficiency in the area.

- **Deworming:** Mebendazole (or albendazole) is provided as a single dose at the second visit. This ensures that the child does not take too many medications on the first day and increases the effectiveness of the medications by reducing the likelihood of vomiting. By the second session, the antibiotics will have taken effect and absorption of the deworming medication will be higher.
- **Iron and folic acid are not given routinely.** Ready-to-use therapeutic food (RUTF) contains iron and folic acid. If anemia is identified, it should be treated according to IMCI guidelines, and treatment should begin after 14 days in the CMAM service. Cases of severe anemia should be referred to inpatient care. Malaria testing and treatment should be done before the iron and folic acid treatment is given.
- In areas where malaria is endemic, malaria testing and/or treatment should be given to all children on admission. Rapid malaria tests (e.g., PARACHECK) are conducted systematically in malaria-endemic areas to verify the presence of malaria. In the absence of malaria tests, routine antimalaria treatment is given. Note: Artemisinin-based combination therapy (ACT) is provided only to confirmed cases.
- The child's vaccination status is checked upon admission. If the child has not been vaccinated for measles, the vaccination is given to the child on the fourth session. If the child's vaccinations are incomplete, arrangements should be made to complete them, and the vaccination status is recorded on the outpatient care treatment card and the vaccination card.

C. SUPPLEMENTAL MEDICINES

- Supplemental medicines are given based on the clinical diagnosis of individual children upon admission or during the medical assessment. Second-line antibiotics might be required if a child continues to have signs of infection after the first-line routine antibiotic is given. Some children might need additional treatment for conditions such as skin lesions, mouth infection and parasitic infections.

HANDOUT 4.8

ROUTINE MEDICINES FOR SAM IN OUTPATIENT CARE

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

4.8

Name of Product	When	Age/Weight	Prescription	Dose
VITAMIN A*	At admission (EXCEPT children with bilateral pitting oedema*)	< 6 months	50,000 IU	Single dose on admission (single dose on discharge for children with bilateral pitting oedema)
		6 months to 12 months	100,000 IU	
		> 12 months	200,000 IU	
		DO NOT USE WITH BILATERAL PITTING OEDEMA ON ADMISSION*		
AMOXICILLIN	At admission	All beneficiaries	See protocol	3 times a day for 7 days
ANTIMALARIAL (follow national protocol)	At admission in malarial areas	All beneficiaries > 2 months old and > 2 kg	See protocol	Follow national protocol. (when using ACT, treat only confirmed/positive cases [malaria test])
MEBENDAZOLE**	Second session	< 12 months	DO NOT GIVE	None
		12-23 months	250 mg	Single dose on second session
		≥ 24 months	500 mg	
MEASLES VACCINATION***	On week 4	From 6 months	Standard	Once on week 4

* VITAMIN A: Do not give if the child has already received Vitamin A in the past month. Do not give to children with bilateral pitting oedema until discharge from OUTPATIENT CARE, unless there are signs of Vitamin A deficiency (e.g., night blindness, Bitot's spots, corneal xerosis), if there is currently a measles outbreak or if there is a high prevalence of Vitamin A deficiency in the area.

** MEBENDAZOLE: Give mebendazole or other antihelminth according to national guidelines (e.g., albendazole 12-23 months 200 mg or ≥ 24 months 400 mg [both can be given again after 3 months if signs of reinfection appear]).

*** MEASLES vaccination at 6 months; a second dose should be given around 9 months.

Iron and folic acid should not to be given routinely. Where anaemia is identified according to Integrated Management of Childhood Illness (IMCI) guidelines, treatment should begin ONLY after 14 days in the CMAM service and given according to national and World Health Organization (WHO) guidelines (INACG 1998). For severe anaemia, refer to inpatient care.

Always consult the national treatment protocols and adapt (e.g., IMCI, malaria protocols, other relevant protocols).

AMOXICILLIN DOSAGES

- Systematic treatment for all beneficiaries EXCEPT for children under 2 kg
- Give 3 times a day for 7 days (or 10 days if needed)

SYRUP – 125 mg/5 ml	
Weight of Child (kg)	Dose
≤ 9.9	125 mg (5 ml) 3 times per day
10.0 - 30.0	250 mg (10 ml) 3 times per day
> 30.0	Give tablets
SYRUP – 250 mg / 5 ml	
Weight of Child (kg)	Dose
≤ 9.9	125 mg (2.5 ml) 3 times per day
10.0 - 30.0	250 mg (5 ml) 3 times per day
> 30.0	Give tablets
TABLETS – 250 mg	
Weight of Child (kg)	Dose
≤ 9.9	125 mg (½ tablet) 3 times per day
10.0 - 30.0	250 mg (1 tablet) 3 times per day
> 30.0	500 mg (2 tablets) 3 times per day

NOTE: Always check label on bottles for dosages and dilution of syrups, as different manufacturers might use different levels.

ARTESUNATE AND FANSIDAR DOSAGES (for Artemisinin-Based Combination Therapy [ACT])

- Give Artesunate 3 days + Fansidar single dose on day 1
- Artesunate tablet = 50 mg
- Fansidar tablet = 525 mg

Note: Only for confirmed cases of malaria

Weight of Child (kg)	DOSE	
	Artesunate Days 1-3	Fansidar Day 1 Tablets
< 5	1/4	1/4
5 – 7	1/2	1/2
7.1 – 12	1	1/2
12.1 – 20	2	3/4
20.1 – 30	2	1
30.1 – 40	3	1½
40.1 – 50	4	2
50.1 – 60	4	2½
> 60	5	3

NOTE: Always check label on bottles for dosages and dilution of syrups, as different manufacturers might use different levels.

HANDOUT 4.9

SUPPLEMENTARY MEDICINES FOR SAM IN OUTPATIENT CARE

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

4.9

Name of Product	When to Give	Prescription	Special Instructions
CHLORAMPHENICOL	To be given as second-line antibiotic for children not responding to amoxicillin, e.g. with continued fever that is not due to malaria	See separate protocol	Continue for 7 days
TETRACYCLINE EYE OINTMENT	For treatment of eye infection	Apply 3 times a day, morning, afternoon and at night before sleep	Wash hands before and after use; Wash eyes before application; Continue for 2 days after infection is gone
NYSTATIN	For treatment of candida albicans	100,000 units (1 ml) 4 times a day after food (use dropper and show mother/caregiver how to use it)	Continue for 7 days
PARACETAMOL	For children with fever over 39°C	See separate protocol	Single dose only—DO NOT give to take home
BENZYL BENZOATE	For treatment of scabies	Apply over whole body; Repeat without bathing on following day; Wash off 24 hours later	Avoid eye contact; Do not use on broken or secondary infected skin
WHITFIELDS	For treatment of ringworm or other fungal infections of the skin	Apply twice a day	Continue treatment until condition has completely resolved
GENTIAN VIOLET	For treatment of minor abrasions or fungal infections of the skin	Apply on lesion	Can be repeated at next session and continued until condition resolved
QUININE	Second-line antimalarial treatment for children who have not responded to Fansidar	See separate protocol	
FERROUS SULPHATE/ FOLATE	Treatment of anemia identified according to Integrated Management of Childhood Illness (IMCI) guidelines	According to World Health Organization (WHO) protocols (INACG 1998 and Donnen et al. 1998)	To be given ONLY after 14 days in CMAM service

CHLORAMPHENICOL DOSAGES

- Use for second-line antibiotic treatment for children who have not responded to amoxicillin, e.g., with continued fever that is not due to malaria
- Give 3 times a day for 7 days

Syrup - 125 mg / 5 ml	
Weight of Child (kg)	Dose
2.0 - 5.9	62.5 mg (2.5 ml) 3 times per day
6.0 - 9.9	125 mg (5 ml) 3 times per day
10.0 - 30.0	250 mg (10 ml) 3 times per day
Capsules – 250 mg	
Weight of Child (kg)	Dose
2.0 - 5.9	Give syrup
6.0 - 9.9	125 mg (1/2 capsule) 3 times per day
10.0 - 30.0	250 mg (1 capsule) 3 times per day

NOTE: Always check label on bottles for dosages and dilution of syrups, as different manufacturers might use different levels.

PARACETAMOL DOSAGES

For severely malnourished children, use for symptomatic treatment of fever but with extreme caution. Give one-time treatment only and start an antibiotic or antimalarial immediately. Monitor the child; if the fever is 39° C or greater, refer him/her to inpatient care where possible. If inpatient care is not available, give a single dose of paracetamol and sponge the child with tepid water until the fever subsides. Have the mother/caregiver return to outpatient care if the high fever continues at home.

SYRUP – 125 MG / 5 ML	
Weight of Child (kg)	Dose
< 4.0	25 mg (1 ml) single dose
4.0 - 7.9	60 mg (2.5 ml) single dose
8.0 - 14.9	120 mg (5 ml) single dose
> 15.0	240 mg (10 ml) single dose
TABLETS – 100 MG	
Weight of Child (kg)	Dose
< 4.0	25 mg (1/4 tablet) single dose
4.0 - 7.9	50 mg (1/2 tablet) single dose
8.0 - 14.9	100 mg (1 tablet) single dose
> 15.0	200 mg (2 tablets) single dose

NOTE: Always check label on bottles for dosages and dilution of syrups, as different manufacturers might use different levels. Remember to give ONE DOSE only and start antibiotic or antimalarial.

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

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HANDOUT 4.10

MEDICINE PROTOCOL RATIONALE FOR OUTPATIENT CARE (REFERENCE)

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

4.10

vitamin A

Vitamin A should be given only if it has not been received in the past 30 days (World Health Organization [WHO] 2000/a). Vitamin A should not be given to children with bilateral pitting edema related to undernutrition. Research has concluded that children with kwashiorkor who receive high-dose Vitamin A therapy suffer five times greater mortality than the control group (Donnen et al. 1998; Donnen et al. 2003). Ready-to-use therapeutic food (RUTF) has enough Vitamin A (0.91 mg/100 g) to satisfy a daily low-dose requirement. Therefore, children with bilateral pitting edema should be given Vitamin A ONLY if they show any signs of Vitamin A deficiency (e.g., night blindness, Bitot's spots, corneal xerosis), if there is currently a measles outbreak or if there is a high prevalence of Vitamin A deficiency in the area.

Dosages should follow WHO or national guidelines (WHO 1999/b).

Amoxicillin

Amoxicillin is given routinely on admission to treat underlying infections that might be masked due to immunosuppression, which limits response such as fever. Amoxicillin is also effective in reducing the overgrowth of bacteria in the gastrointestinal (GI) tract (Meyers et al. 2001), which is commonly associated with severe acute malnutrition (SAM). Amoxicillin can cross the wall of the GI tract into the bloodstream passively and does not rely on active transport mechanisms that might be inefficient in severely malnourished individuals. If signs and symptoms of infection continue beyond the initial treatment, a second-line antibiotic should be started.

Chloramphenicol

While the simultaneous use of several antibiotics might be justified in an inpatient setting, a simpler regime is required in an outpatient setting. Chloramphenicol is an antibiotic with a sufficiently broad spectrum to fulfil this need. It is given as a second-line treatment if amoxicillin fails to cure the infection. Dosage and timing are dependent on the specifically identified infection (WHO 1999/a and WHO 1999/b). The use of chloramphenicol is associated with a very small risk of aplastic anemia, leading to lethal bone marrow failure. Because the medicine is used in the United Kingdom and is believed to be a valuable treatment for dangerous conditions, its use is appropriate for treating potentially life-threatening infections in malnourished children.

Additional Antibiotics

Antibiotics other than those mentioned above should be given only when specifically indicated by the presence of an infection and should be given according to the drug protocol and in consideration of national drug protocols. In cases where severe infections require referral to an inpatient unit, second-line antibiotics may be added to amoxicillin according to standard WHO inpatient protocols (WHO 1999/a). National protocols or local antibiotic resistance information will indicate which additional antibiotics to use.

Measles vaccination

Evidence shows that an early two-dose strategy from the age of 6 months is very effective. All children entering inpatient care (except those in shock or those with evidence of previous vaccination) should be given the vaccination immediately and again on discharge from **outpatient care**. This should be coordinated with the expanded programme of immunization (EPI) where applicable. The first vaccination

in the inpatient setting is to ameliorate the severity of both incubating measles and the episode if the child is exposed to measles in inpatient care. However, the first vaccination does not provide adequate immunity in many children requiring inpatient care due to insufficient antibody response, so the second injection is needed for future protection.

In outpatient care, children are at less risk of exposure to active measles cases and are less severely affected by undernutrition. It is recommended that they receive one measles vaccination only after they have sufficiently recovered from their undernutrition to ensure a sufficient antibody response to produce immunity (i.e., on week four).

Outpatient care also can provide an opportunity for referring the children's siblings for measles vaccination, which can reduce the mortality of household members who are unvaccinated.

Antimalarial Therapy

National protocols should guide the antimalarial therapy used. It is recommended that a PARACHECK (rapid malarial test) is done on all children in a malaria-endemic area. Artemisinin-based combination therapy (ACT) (e.g., Fansidar in combination with Artesunate) usually is given for positive cases only. However, ACT can be given without PARACHECK if there is a strong indication of malaria and the signs and symptoms cannot be attributed to any other cause. In other areas, testing should be done only on those with a strong indication of malaria. This protocol is designed to prevent overuse of the anti-malarial therapy, which could cause the malarial parasite to become resistant to the drug regimen. Note: Do not give Fansidar with folic acid (see below).

Folic Acid

The folic acid in RUTF and F75 is sufficient for a malnourished child. Folic acid should be given only to children showing signs of anemia. However, if these children receive Fansidar as part of the malaria therapy on admission, they should not be given folic acid until the second session at outpatient care. Giving folic acid within seven days of Fansidar can make the antimalarial ineffective as the malarial parasite can use folic acid to overcome the effect of Fansidar (Wang et al. 1999). Because folic acid is present in RUTF, priority is given to treating life-threatening malaria.

Iron

High-dose iron tablets should not be given to the severely malnourished because it can increase the risk of severe infections. The presence of free iron in the blood is often a limiting substrate to infective organisms. In a normal functioning liver, the enzyme transferrin can "mop up" this free iron. In the severely malnourished, poor liver function and the reduced levels of transferrin allow iron to remain free for use by the infective organisms. Although there is some iron content in RUTF, the levels are lower than in high-dose tablets and insufficient to allow the formation of free iron in the same way.

There is currently no research to document the bioavailability of iron in RUTF. RUTF is given only to those with an appetite. However, good appetite correlates with good liver function and consequently with transferrin activity.

Where moderate anemia is identified according to Integrated Management of Childhood Illness (IMCI) guidelines, treatment should be provided according to WHO guidelines (INACG 1998) after day 14 in the CMAM service. Where anemia is severe, the child should be referred to inpatient care according to the action protocol.

Mebendazole/Albendazole

Mebendazole/albendazole is actively absorbed from the intestine and, because it is more effective when the GI tract is free of other infections, is given on the second session. Indications are that mebendazole/ albendazole is metabolized efficiently by children over 12 months (Montresor et al. 2003), so routine treatment should be given only to those children. Worm infection is less common in infants due to reduced exposure to potential contaminants (e.g., soil).

Paracetamol

Paracetamol should be used with caution in severely malnourished children because it is metabolized by the liver and there is a high possibility of reduced liver function with SAM. Irreversible liver damage and death can occur even with relatively small overdoses in susceptible people, so paracetamol should not be given unless there is a documented fever of 39° C or higher. A low-grade fever of less than 39° C is a normal immune response that usually helps the body fight infection; paracetamol should not be given in these cases. Paracetamol also should never be dispensed to take home.

IMPORTANT NOTE ON ORAL REHYDRATION SALTS

Oral rehydration salts are not part of the CTC protocols. The pathophysiology of SAM causes an inability to regulate and excrete sodium normally that can lead to bilateral pitting edema, fluid retention and heart failure. This deterioration can happen very quickly. Oral rehydration salts are therefore contraindicated for all children with SAM.

Children with SAM and dehydration are treated in inpatient care with an oral rehydration solution of electrolytes and minerals called **ReSoMal** (Rehydration Solution for Malnutrition). Children with SAM are deficient in potassium and need a solution that contains less sodium and more potassium. These children are usually also deficient in other minerals like magnesium, copper and zinc. ReSoMal, which should be taken orally, is composed of:

- Glucose 125 mmol/l
- Sodium 45 mmol/l
- Potassium 40 mmol/l- Chloride 70 mmol/l
- Magnesium 3 mmol/l
- Zinc 0.3 mmol/l
- Copper 0.045 mmol/l
- Citrate 7 mmol/l

HANDOUT 4.11

NUTRITION REHABILITATION AND RUTF

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

4.11

READY-TO-USE THERAPEUTIC FOOD (RUTF)

- RUTF is high-energy, nutrient-dense food used for nutrition rehabilitation in outpatient care in combination with systematic medical treatment. It should not be used alone to treat severe acute malnutrition (SAM).
- Some characteristics of RUTF:
 - Similar in composition to F100 (except RUTF contains iron and is about five times more energy nutrient dense)
 - Soft lipid-based paste (e.g., Plumpy'nut®) or crushable nutrient bar (e.g., BP100)
 - Ideal for outpatient care because it does not need to be cooked or mixed with water, which prevents growth of bacteria
 - Easy to distribute and carry
 - Easy to store (in a clean dry place) and can be kept for some time even when opened
 - Available locally through either imports or local production
- Lipid-based RUTF² is most commonly used in outpatient care. It has a caloric value of 545 kilocalories (kcal) per 100 g of product. The ration given is 200 kcal per kg per day on average. - 1 packet of Plumpy'nut® = 92 g = 500 kcal
 - 1 packet of locally produced RUTF = 100 g = 545 kcal
 - 1 locally produced pot = 250 g = 1,362 kcal
- Lipid-based RUTF is composed of:
 - 25% peanut butter
 - 26% milk powder
 - 27% sugar
 - 20% oil
 - 2% combined mineral and vitamin mix (CMV)
- Non-lipid-based RUTF,³ such as BP100, might be available, especially in emergencies. BP100 is a solid but crushable biscuit-like food based on F100. It is very dry, and children age 2 years or older should take it with plenty of clean water. For children under 2, it is recommended that BP100 be crushed and mixed with clean water and eaten as porridge. However, this raises serious problems with contamination as the mix contains water and mothers/caregivers tend to want to keep the unfinished portion. To avoid these problems, younger children ideally should not be given RUTF that is not lipid based.

¹ Lipid-based RUTF: e.g., Plumpy'nut® is produced by Nutriset, France; similar RUTF products are produced by other companies in several countries, e.g., Ethiopia, Niger, Malawi, DRC.

² Non-lipid-based RUTF: e.g., BP100, is produced by Compact, Sweden.

RUTF's low water content means that children should be offered clean water when eating it.

- In the first weeks of nutrition rehabilitation, the child should not be offered any food other than breastfeeding and RUTF.
- RUTF should be eaten after breastfeeding and before any other food.
- Allergic reactions to RUTF in children with SAM who are immunosuppressed have not been recorded.

PROCEDURES FOR NUTRITION REHABILITATION

- The health care provider asks the mother/caregiver of a child returning for the outpatient care follow on session how many packets the child has eaten in the past week and how many are untouched at home. The health care provider then subtracts the number of untouched packets from this week's ration. This is to make sure the child is eating well at home. If the child is not eating well, the health care provider discusses this with the mother/caregiver and reinforces the importance of RUTF. If needed, the health care provider performs a follow-up home visit to investigate the reduced RUTF intake.
- Note: If the child has not gained weight in the past week (approximately 5g/kg/day can be expected), it is very likely that the child did not consume the required amount of RUTF.
- Key messages should be given to the mother/caregiver on how to use the RUTF, including the importance of regular feeding in small amounts. These messages are important. The mother/caregiver should repeat the key messages so the health care provider can be sure they are understood.
- The health care provider fills out an RUTF ration card and gives it to the mother/caregiver.
- Mothers/caregivers are asked to return empty packets of RUTF. This is to avoid littering and help discourage the sale of the RUTF. This measure is not intended to be a means to control how much is eaten.

CONSIDERATIONS IN PROVIDING RUTF AND OTHER RATIONS IN OUTPATIENT CARE

- If a twin is admitted to outpatient care and the other is not, sharing is assumed. The twin without SAM should be given an equal amount of RUTF ration.
- To prevent sharing of the RUTF, a family ration of fortified blended food (FBF) can be provided to the mother/caregiver of a child admitted to outpatient care. This might be possible during periods of high food insecurity when supplementary feeding is available.
- The mother should be encouraged to continue breastfeeding especially if the child is 2 years old or younger.
- The child should complete the daily ration of RUTF before being given any other foods (except for breast milk).
- On discharge from outpatient care, each child receives seven packets of RUTF to help transition the child to family food. Children are referred to supplementary feeding for continuing nutrition rehabilitation. If no supplementary feeding services or programs are available, a ration of FBF can be provided to the mother/caregiver upon discharge.

RUTF RATION

- The number of packets of RUTF the child eats in a day is determined by the child's weight.

- The number of packets of RUTF provided is determined by the child’s weight and the frequency of the child’s session to the health facility.

RUTF Rations* in Outpatient Care: Plumpy’Nut® (92 g packets containing 500 kcal)

Weight of Child (kg)	Packets per Day	Packets per Week
3.5 - 3.9	1.5	11
4.0 – 5.4	2	14
5.5 – 6.9	2.5	18
7.0 – 8.4	3	21
8.5 – 9.4	3.5	25
9.5 – 10.4	4	28
10.5 – 11.9	4.5	32
≥ 12	5	35

*Based on average nutrition rehabilitation ration of 200 kcals/kg/day

RUTF Rations* in Outpatient Care: Locally Produced RUTF (100g packets containing 545 kcal)

Weight of Child (kg)	Packets per Day	Packets per Week
3.5 - 3.9	1.3	9
4.0 – 5.4	1.5	11
5.5 – 6.9	2	15
7.0 – 8.4	2.5	18
8.5 – 9.4	3	22
9.5 – 10.4	3.5	25
10.5 – 11.9	4	28
≥ 12	4.5	32

*Based on average nutrition rehabilitation ration of 200 kcals/kg/day

RUTF Rations* in Outpatient Care: Locally Produced RUTF (250g pots containing 545 kcal/100g)

Weight of Child (kg)	Pots per Day	Pots per Week
3.5 - 3.9	0.5	4
4.0 – 4.9	0.66	5
5.0 – 5.9	0.75	5
6.0 – 7.9	1	7
8.0 – 9.4	1.25	9
9.5 – 10.9	1.5	11
11.0 – 11.9	1.75	12
≥ 12	2	14

*Based on average nutrition rehabilitation ration of 200 kcals/kg/day

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

Manual

HANDOUT 4.12

KEY MESSAGES FOR INDIVIDUAL COUN

Key messages should explain to mothers/caregivers:

- How to feed ready-to-use therapeutic food (RUTF) to the child
- When and how to give the medicines to the child
- When to return to outpatient care
- That the child should be brought to the health facility immediately if his/her condition deteriorates

The health care provider should ask the mother/caregiver to repeat the messages to be sure they were understood. Key messages include:

- RUTF is a food and medicine for very thin children only. It should not be shared.
- Sick children often do not like to eat. Give small regular meals of RUTF and encourage the child to eat often (if possible eight meals a day). Your child should have ___ packets a day.
- RUTF is the only food sick and/or thin children need to recover during their time in outpatient care. However, breastfeeding should continue, when applicable.
- For young children, continue to breastfeed regularly.
- Always offer the child plenty of clean water to drink or breast milk while he or she is eating RUTF.
- Wash children's hands and face with soap before feeding if possible.
- Keep food clean and covered.
- Sick children get cold quickly. Always keep the child covered and warm.
- When a child has diarrhea, never stop feeding. Continue to feed RUTF and (if applicable) breast milk.

These key messages can be supplemented with more detail and more messages if time allows.

NOTE: In some circumstances, mothers/caregivers are given a ration of supplementary food for the other children in the family to prevent sharing of the RUTF. The health care provider should make it clear that the supplementary food is for the other children in the family and that the severely malnourished child should only eat RUTF (preceded by breast milk, when applicable).

As soon as the child is improving and has increased appetite, mothers/caregivers can start giving the child other foods (e.g., supplementary food, local food) in addition to — but after — breast milk and the RUTF.

Health and Nutrition Education

Individual counselling and group sessions on health and nutrition education are essential. In some contexts, existing messages can be adapted (e.g., Essential Nutrition Actions [ENA]¹). Every attempt should be made to use the same or similar messages disseminated in other programs.

Messages must be reinforced by *practice*. They should focus on:

- Basic hygiene
- Continuation of optimal breastfeeding behaviors, especially with infants and young children age 6-23 months
- The importance of frequent and active feeding
- What local foods to give young children, while reinforcing that the child in outpatient care **MUST** finish eating all the RUTF **BEFORE** other foods (except breast milk) are given
- Identifying undernutrition (recognizing when to bring children to outpatient care)
- Managing diarrhea and fever
- Recognizing danger signs

The outreach workers (e.g., community health workers [CHWs], volunteers) should be encouraged to give the same health and nutrition education messages to the communities.

¹ The ENA approach, which has been adopted in several African countries, identifies the key nutrition actions that can be promoted at key contact points in the life cycle through research-based messages that are contextually appropriate. The seven key action areas are: 1) promotion of optimal breastfeeding practices during the first six months; 2) promotion of optimal complementary feeding beginning at six months with continued breastfeeding to 2 years and beyond; 3) promotion of feeding of the child during and after illness; 4) prevention of Vitamin A deficiency (e.g., breastfeeding, consumption of fortified and Vitamin A-rich foods, maternal and child Vitamin A supplementation); 5) prevention of anaemia (e.g., maternal and child iron supplementation, deworming, malaria control, consumption of fortified and iron-rich foods); 6) promotion of iodized salt consumption by all families; and 7) promotion of improved women's nutrition (e.g., increase food intake during pregnancy and lactation, iron and/or folic acid supplementation, treatment and prevention of malaria, deworming during pregnancy, postpartum Vitamin A supplementation). Visit <http://www.linkagesproject.org> for more information.

HANDOUT 4.13

OUTPATIENT CARE ACTION PROTOCOL

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

Sign	Referral to Inpatient Care	Follow-Up Home visit
BILATERAL PITTING OEDEMA	Grade +++	Bilateral pitting edema not reducing by week 3
	Marasmic kwashiorkor	
	Increase in, or development of, bilateral pitting edema	
APPETITE / ANOREXIA	No appetite or unable to eat	Eats < 75% of the RUTF a week by third session
VOMITING	Intractable	General medical deterioration
TEMPERATURE	Fever: > 39C	
	Hypothermia: < 35 C	
RESPIRATION RATE (RR)	≥ 60 respirations/minute for under 2 months	
	≥ 50 respirations/minute from 2 to 12 months	
	≥ 40 respirations/minute from 1 year to 5 years	
	≥ 30 respirations/minute for over 5 years	
ANAEMIA	Any chest in- drawing	
ANAEMIA	Very pale (severe palmer pallor), difficulty breathing	
SUPERFICIAL INFECTION	Extensive infection requiring intermuscular treatment	
ALERTNESS	Very weak, apathetic, unconscious	
	Fitting/convulsions	
HYDRATION STATUS	Severe dehydration based primarily on recent history of diarrhea, vomiting, fever or sweating and on recent appearance of clinical signs of dehydration as reported by the mother/caregiver	
WEIGHT CHANGES		Below admission weight on week 3
	Weight loss for 3 consecutive weighings	Weight loss for 2 consecutive weeks
	Static weight for 5 consecutive weighings	Static weight for 3 consecutive weeks
GENERAL	Mother/caregiver requests inpatient care	Returned from inpatient care (first 2 weeks)
		Refused referral to inpatient care
NOT RECOVERING	Child that is not recovering is referred to hospital for investigation.	

HANDOUT 4.14

REFERRAL TO INPATIENT CARE OR FOLLOW-UP HOME VISITS

A. REFERRAL TO INPATIENT CARE

Referral system

- Close collaboration between inpatient and outpatient care is essential. Health care providers in inpatient facilities should receive an orientation on outpatient care treatment and visit the site and vice versa.
- Children with severe acute malnutrition (SAM) who are referred to inpatient care are sent to the nearest inpatient care site linked to the referring outpatient care site.
- The mother/caregiver receives appropriate explanations and instructions on what to expect and what to do. If possible, arrangements should be made or facilitated for the mother/caregiver and beneficiary to travel to the health facility and stay for a certain time.
- Mothers/caregivers might refuse to go to inpatient care for a number of reasons: fear that they will have to pay at the hospital, lack of transport, unwillingness to be separated from the family and other children, or a belief that the child might die on the way to or in the hospital. Instead, they choose to stay home. Where possible, these issues should be considered and a careful explanation given to the mother/caregiver. The mothers/caregivers will often need some time to tell the family that they must go to the hospital and to collect things they need. If after careful explanation the mother/caregiver still refuses to go to inpatient care, the child can stay in outpatient care and should receive follow-up home visits according to the outpatient care action protocol (refused referral to inpatient care).

Referral slip

- If children are being referred to inpatient care from outpatient care, the mother/caregiver is given a referral slip with the child's unique registration number, medical history and information on treatment the child has received. The purpose of the referral slip is to keep track of children between outpatient care and inpatient care. The referral slip should also include information on what medications were given and why to avoid giving children medicine that they have already been given.
- Using the child's unique registration number on referral slips helps ensure smooth referrals among services. When inpatient care sites use an already existing system for registration numbers, efforts should be made to use the child's unique CMAM registration number in addition.
- It is important to have effective tracking and reporting systems so that children do not get lost and defaulters and deaths do not go unreported.

Referral to tertiary care

- A child might need to be sent from outpatient care to a higher-level referral center for underlying medical complications. If the child has appetite, the child might be sent to the hospital with a supply of ready-to-use therapeutic food (RUTF) or an arrangement might be made to make sure the hospital has RUTF for children who are referred. Otherwise, F75 and instructions should be made available for inpatient care (in case the hospital does not have specific inpatient care for SAM).

B. FOLLOW-UP HOME VISITS

- The health care provider in collaboration with the outreach worker (e.g., community health worker [CHW], volunteer) should arrange for children who are at-risk based on the outpatient care action protocol to be followed up at home through an outreach visit.
- The follow-up home visit is used to assess what might be hindering the child's recovery and to support the family to help the child recover through counselling, education and close monitoring of the child's progress.
- Follow-up home visits can be made by a health care provider or outreach worker.
- There must be communication channels in place between the health care provider and the outreach worker to ensure that children receive necessary follow-up. Ideally, outreach workers will be present on an outpatient care day so they will know which children need follow-up. But having a communication system can help ensure that those who could not attend the outpatient care day are told which children need follow-up and who is responsible for making the follow-up home visit.

HANDOUT 4.15 REFERRAL SLIP

4.15

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

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

HANDOUT 4.16

OUTPATIENT CARE: DISCHARGE CRITERIA

WHEN ARE CHILDREN DISCHARGED FROM OUTPATIENT CARE?

4.16

- A child is discharged from outpatient care when s/he has recovered from bilateral pitting edema or a low weight, and thus no longer has severe acute malnutrition (SAM).
- The decision to discharge the child is based on the child recovering from the initial SAM condition, consistently gaining weight, and being clinically well and alert.

The decision rules for discharge differ based on the criteria used to admit the child:

- **Children who were admitted for bilateral pitting edema** must have no bilateral pitting edema for more than two consecutive outpatient care follow-on sessions before being discharged. If this condition is met, and the child is clinically well and alert, the child may be discharged from CMAM services after being checked to ensure that his/her mid-upper arm circumference (MUAC) ≥ 110 mm or weight-for-height (WFH) ≥ -2 z-score (World Health Organization [WHO]) or $\geq 80\%$ of the median (National Centre for Health Statistics [NCHS]).
- **Children who were admitted based on a low MUAC** must spend a minimum of two months (or eight weeks) in treatment before being discharged. After two months, if their MUAC ≥ 110 mm, they have consistently gained weight, and they are clinically well and alert, the children may be discharged after being checked to ensure that they have no bilateral pitting edema.

Another option to discharge a child admitted based on a low MUAC, is to discharge the child based on the percentage increase in weight gain. The percentage increase in weight gain is measured from the lowest weight while in treatment (or at the point where the child is without bilateral pitting edema). The child is discharged if s/he has a 20% increase of initial or lowest weight and is clinically well and alert. However, this discharge criterion was not based on evidence at the time this document was published.

- **Children who were admitted based on a low WFH** must achieve WFH ≥ -2 z-score (WHO) or $\geq 80\%$ of the median (NCHS) for more than two consecutive outpatient care follow-on sessions. Once this condition is met, the child may be discharged if he or she has consistently gained weight, is clinically well and alert and has been checked to ensure that s/he does not have bilateral pitting edema. In situations where there is no programme to manage moderate acute malnutrition [MAM], the discharge criterion based on percentage of the median may be changed to WFH $\geq 85\%$ of the median.
- **Children who were admitted with Marasmic kwashiorkor** (bilateral pitting edema and severe wasting) must have no bilateral pitting edema and no severe wasting for more than two consecutive outpatient care follow-on sessions, must have consistently gained weight and must be clinically well and alert before being discharged. If they were admitted using MUAC, they must stay in treatment for at least two months and have a MUAC ≥ 110 mm upon discharge. If they were admitted using WFH, they must achieve WFH ≥ -2 z-score (WHO) or $\geq 80\%$ of the median (NCHS) for more than two consecutive outpatient care follow-on sessions.

HANDOUT 4.17

DISCHARGE CRITERIA AND EXIT CATEGORIES FOR CMAM

DISCHARGE CRITERIA FOR CMAM

4.17

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 edema decreasing</p> <p>AND clinically well and alert</p> <p>(If Marasmic kwashiorkor admission: bilateral pitting edema resolved)</p>	<p>DISCHARGED CURED:</p> <p>If bilateral pitting edema admission:</p> <ul style="list-style-type: none"> ▪ No bilateral pitting edema for 2 consecutive sessions ▪ MUAC \geq 110 mm ▪ WFH \geq -2 z-score (WHO) or \geq 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 \geq 110 mm ▪ No bilateral pitting edema ▪ Child clinically well and alert <p>If WFH admission:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment and WFH \geq -2 z-score (WHO) or WFH \geq 80 % of the median (NCHS) for 2 consecutive sessions** ▪ No bilateral pitting edema ▪ Child clinically well and alert <p>If Marasmic kwashiorkor admission:</p> <ul style="list-style-type: none"> ▪ No bilateral pitting edema for 2 consecutive sessions ▪ If MUAC admission: minimum 2 months in treatment and MUAC \geq 110 mm ▪ If WFH admission: WFH \geq -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 \geq 125 mm <p>If WFH admission:</p> <ul style="list-style-type: none"> ▪ Minimum 2 months in treatment ▪ WFH \geq -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 \geq 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 relaxation 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).		
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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)

HANDOUT 4.18

ESSENTIALS OF OUTPATIENT CARE FOR SAM WITHOUT MEDICAL COMPLICATIONS

ESSENTIALS

4.18

- Children with severe acute malnutrition (SAM) who have an appetite and no medical complications are treated on an outpatient basis at a health facility that offers outpatient care for SAM without medical complications. These children do not have to be admitted to inpatient care at a hospital or health facility with beds. The majority of children with SAM (> 80%) can be treated on an outpatient basis.
- After the child is admitted to outpatient care, the mother/caregiver brings him/her to the health facility or outpatient care site every week or two weeks. At each of these outpatient care follow-up sessions, the health care provider assesses the child's medical condition and nutritional status, provides additional medical treatment if necessary and gives the mother/caregiver the quantity of ready-to-use therapeutic food (RUTF) needed until the child's next outpatient care follow-up session. The amount of RUTF given is determined by the child's weight and frequency of sessions.
- Outpatient care is offered in as many health facilities or treatment points as possible in a given area or district. This ensures that as many malnourished children as possible can access treatment.
- Outpatient care sites are run by health care providers such as a doctor or nurse (depending on the Ministry of Health's [MOH's] policy).
- Outpatient care should be incorporated into the routine health service for children under 5 years old. Depending on the size of the caseload, outpatient care might be offered once a week on a designated day or every day as part of the routine health service (ideally), with patients returning weekly or biweekly.
- Children can be referred to CMAM services by outreach workers (e.g., community health workers [CHWs], community volunteers). They can also be self-referrals, meaning they are brought to the health facility or outpatient care without community referral. Other outpatient care admissions will include children discharged from inpatient care and those who have deteriorated in programs to treat moderate acute malnutrition (MAM).
- Most of the children will first access CMAM services at the outpatient care site and will be examined and referred to inpatient care or MAM programs as needed. Thus, the outpatient care sites are an access point for the majority of SAM cases.
- Children are admitted to CMAM at any time if they present at the health facility. They should be treated when they present and asked to return on the designated outpatient care day, if applicable.
- Community outreach is an essential part of a community-based programme. This ensures that the community understands the services. Outreach workers (e.g., CHWs, volunteers) are used to find and refer children to CMAM services, which increases understanding and coverage.

HANDOUT 4.19

OUTPATIENT CARE FIELD PRACTICE CHECKLIST

ANTHROPOMETRY

Assess for bilateral pitting edema
Measure mid-upper arm circumference (MUAC), weight, height
Classify nutritional status
Record Nutrition indicators on outpatient care treatment cards and on ready-to-use therapeutic food (RUTF) ration card

NEW ADMISSIONS

Obtain registration details from mother/caregiver and record anthropometric measurement
Take medical history
Conduct physical examination
Test appetite
Decide if eligible for outpatient care or needs referral to inpatient care
Calculate doses and give routine medicines to child
Explain medical treatment to mother/caregiver
Calculate amount of RUTF for child and record and give the ration
Fill out RUTF ration card
Discuss key messages with mothers/caregivers
Ask mother/caregiver to repeat instructions on how to give medicine and RUTF
Link with outreach worker

OUTPATIENT CARE FOLLOW-ON SESSIONS

Take medical history
Conduct physical examination
Test appetite
Review information on outpatient care treatment card to date and interpret progress (Are they improving? Are they not improving? Why?)
Continue medical treatment as appropriate
Use action protocol to assess need for follow-up home visit and arrange if necessary
Use action protocol to assess need for referral and arrange if necessary
Discuss child's progress with mother/caregiver
Calculate amount of RUTF for child and record and give the ration
Fill out RUTF ration card
Provide health and nutrition counselling
Inform mother/caregiver about linking with other services, programs and initiatives (e.g., expanded programme of immunization [EPI], voluntary counselling and testing [VCT], reproductive health)

DISCHARGES

Identify children ready for discharge

Fill in the outpatient care treatment card upon discharge

Provide appropriate information to mother/caregiver about child's discharge (e.g., when to bring the child back, danger signs)

Give discharge ration of RUTF

Inform mother/caregiver about linking with other services, programs and initiatives, if appropriate (e.g., supplementary feeding programme [SFP])

ACCEPTING REFERRALS FROM INPATIENT CARE

Review referral slip from inpatient care and record relevant information on outpatient CARE treatment card (including medicines)

Review information and medications provided in inpatient care, confirm with mother/caregiver medicines received to date and adjust outpatient care medicines for admission

Follow admission protocols (i.e. do anthropometry, take medical history, do physical examination, test appetite, calculate RUTF ration, discuss key messages, fill out RUTF ration card, link with outreach worker)

DISCUSSION WITH MOTHERS/CAREGIVERS AT SITES

Where have you come from?

How long did it take to get here?

How did you hear about the service?

Why did you bring your child?

EXERCISE 4.1 OUTPATIENT CARE ADMISSION

Note: In countries where presence of bilateral pitting edema and mid-upper arm circumference (MUAC) are used for admission, adjust chart to remove information on weight-for-height (WFH) as a z-score (World Health Organization [WHO]) or % of the median (National Centre for Health Statistics [NCHS]).

EXERCISE 4.2 OUTPATIENT CARE TREATMENT CARD AND RUTF RATION CARD

	Age (months)	Appetite	Bilateral Pitting Edema	MUAC in mm	WFH z-score (WHO)	WFH as a percentage of the median (NCHS)	Admission to outpatient care?
Child 1	7	Yes	No	102	$-3 \leq x < -2$	$70\% \leq X < 80\%$	
Child 2	24	Yes	No	112	$x < -3$	$X < 70\%$	
Child 3	20	Yes	No	98	$x < -3$	$X < 70\%$	
Child 4	16	Yes	++	117	$-3 \leq x < -2$	$70\% \leq X < 80\%$	
Child 5	36	Yes	+	115	$-3 \leq x < -2$	$70\% \leq X < 80\%$	
Child 6	12	No	No	95	$x < -3$	$X < 70\%$	
Child 7	50	Yes	No	102	$x < -3$	$X < 70\%$	
Child 8	45	Yes	No	111	$x < -3$	$X < 70\%$	
Child 9	7	Yes	No	107	$-3 \leq x < -2$	$70\% \leq X < 80\%$	
Child 10	5	No	No	104	$x < -3$	$X < 70\%$	

EXERCISE 4.2

OUTPATIENT CARE TREATMENT CARD AND RUTF RATION CARD

Below is all of the information needed to complete the front and back of an outpatient care treatment card and a ready-to-use therapeutic food (RUTF) ration card.

A CHILD REQUIRING ADMISSION TO OUTPATIENT CARE

First section of admission details

- The next registration number available is 015. The outpatient care site code is
- The child's name is Mohammed Ahmed.
- He lives in Larkana District; his community is Balhreji.
- Mohammed is 17 months old.
- He has come directly from his community after a community volunteer referred him to CMAM services.
- He lives in a house with his mother, father, grandfather and five brothers and sisters.
- It took 20 minutes for his mother to walk with him from their house to the outpatient care site.
- There is no general food distribution where he lives.

Admission anthropometry

- He weighs 6.8 kg.
- His height is 76 cm.
- His mid-upper arm circumference (MUAC) is 104 mm. ▪ He has no bilateral pitting edema.

What are his admission criteria?

Medical History

- His mother says he has had diarrhea for the past week and passes four to five loose stools every day.
- He does not vomit.
- He passes urine with no problem.
- He occasionally has a cough.
- His appetite is generally good.
- He no longer breastfeeds.
- She reports no other problems but says he has been getting thinner for some time.

Physical examination

- He has 38 respirations per minute, and there are no chest retractions.
- His temperature is 36.9° C.
- His conjunctiva is pink.
- His eyes are wet and have no discharge.
- Although his skin is saggy, he shows no apparent signs of dehydration.
- He has a discharge from his left ear.
- His mouth is clear, and there are no enlarged lymph glands.
- He has no apparent disabilities.
- His skin looks good.
- His hands and feet are warm.

Routine admission medication

His mother has his expanded programme of immunization (EPI) card; he was given all his vaccinations and Vitamin A three weeks ago.

RUTF appetite test

By the time Mohammed is seen, he has already eaten half a packet of RUTF.

EXERCISE 4.3

IDENTIFYING CHILDREN WHO MAY NEED REFERRAL TO INPATIENT CARE OR FOLLOW-UP HOME VISITS

CHILD A

Child A is two years old, has a mid-upper arm circumference (MUAC) of 109 mm and has been referred by the community health worker (CHW) to CMAM services. On admission, the child refuses to eat the ready-to-use therapeutic food (RUTF) during the appetite test. You ask his mother to move to a quiet area and try again. After a half-hour, the child still refuses to eat the RUTF. During the medical assessment, you discover that the child has had vomiting for two days. What action is needed?

CHILD B

Child B is presented at the outpatient care site with bilateral pitting edema + and a MUAC of 112 mm. The child has good appetite and no other signs of medical complications. What action is needed?

CHILD C

Child C was admitted to outpatient care with a MUAC of 109 mm and a weight of 10 kg. By the fourth week, the child has lost weight, did not gain any weight for three weeks and now weighs 9.5 kg. What action is needed?

CHILD D

Child D is presented at the outpatient care site with bilateral pitting edema ++ and a MUAC of 108 mm. What action is needed?

CHILD E

Child E is four months old. The grandmother brings the visibly very wasted and dehydrated child to the health facility. On investigation, you find that the mother died shortly after the child was born and that the child has been given cow's milk and tea. What action is needed?

CHILD F

Child F is presented at the outpatient care site with bilateral pitting edema ++++. You want to refer the child to the hospital. But, despite your best efforts to persuade the mother, her family refuses to let her take the child to the hospital. What action is needed?

CHILD G

Child G is above 6 months and was admitted with a MUAC of 109 mm and a weight of 5 kg. The child gained a little weight the first week but has not gained weight for the past two weeks. His medical assessment does not show any signs of illness or medical complications.

**EXERCISE 4.4 PARTIALLY COMPLETED OUTPATIENT CARE
TREATMENT CARDS (EXAMPLES)**

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD									
NAME	Jemma Banda				Reg. N°	LGR / 104			
AGE (months)	24 m	SEX	M	<input checked="" type="radio"/> F	DATE OF ADMISSION	6/12/2007			
ADMINISTRATIVE UNIT	Lusaka				TIME TO TRAVEL TO SITE	25 minutes			
COMMUNITY	Bombali				FATHER ALIVE				
HOUSE DETAILS/LANDMARKS					MOTHER ALIVE				
NAME OF CAREGIVER					TOTAL NUMBER IN HOUSEHOLD	8			
ADMISSION (CIRCLE)	<input checked="" type="radio"/> self referral	<input type="radio"/> outreach referral	<input type="radio"/> inpatient care referral	<input type="radio"/> health facility referral	TWIN	<input type="radio"/> yes	<input type="radio"/> no		
RE-ADMISSION (relapse)	<input type="radio"/> no	<input type="radio"/> yes		ADDITIONAL INFORMATION					
ADMISSION ANTHROPOMETRY									
BILATERAL PITTING OEDEMA	<input type="radio"/> +	<input type="radio"/> ++	<input type="radio"/> +++						
MUAC (mm)	109	WEIGHT (kg)	8.1 kg	HEIGHT (cm)	84 cm	WEIGHT FOR HEIGHT	70%		
ADMISSION CRITERIA	Bilateral pitting oedema	MUAC		Weight for Height		OTHER:			
HISTORY									
DIARRHOEA	<input type="radio"/> yes	<input checked="" type="radio"/> no		# STOOLS/DAY	<input type="radio"/> 1-3	<input type="radio"/> 4-5	<input checked="" type="radio"/> >5		
VOMITING	<input type="radio"/> yes	<input checked="" type="radio"/> no		PASSING URINE	<input type="radio"/> yes	<input checked="" type="radio"/> no			
COUGH	<input type="radio"/> yes	<input checked="" type="radio"/> no		IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?					
APPETITE	<input checked="" type="radio"/> good	<input type="radio"/> poor	<input type="radio"/> none		BREASTFEEDING	<input type="radio"/> yes	<input checked="" type="radio"/> no		
ADDITIONAL INFORMATION									
PHYSICAL EXAMINATION									
RESPIR. RATE (# min)	<input type="radio"/> <30	<input checked="" type="radio"/> 30 - 39		<input type="radio"/> 40 - 49	<input type="radio"/> 50+		CHEST INDRAWING	<input type="radio"/> yes	<input checked="" type="radio"/> no
TEMPERATURE °C	37.2				CONJUNCTIVA	<input checked="" type="radio"/> normal	<input type="radio"/> pale		
EYES	<input checked="" type="radio"/> normal	<input type="radio"/> sunken	<input type="radio"/> discharge		DEHYDRATION	<input checked="" type="radio"/> none	<input type="radio"/> moderate	<input type="radio"/> severe	
EARS	<input checked="" type="radio"/> normal	<input type="radio"/> discharge		MOUTH	<input checked="" type="radio"/> normal	<input type="radio"/> sores	<input type="radio"/> candida		
ENLARGED LYMPH NODES	<input checked="" type="radio"/> none	<input type="radio"/> neck	<input type="radio"/> axilla	<input type="radio"/> groin		HANDS & FEET	<input checked="" type="radio"/> normal	<input type="radio"/> cold	
SKIN CHANGES	<input checked="" type="radio"/> none	<input type="radio"/> scabies	<input type="radio"/> peeling	<input type="radio"/> ulcers / abscesses		DISABILITY	<input type="radio"/> yes	<input checked="" type="radio"/> no	
ADDITIONAL INFORMATION									
ROUTINE MEDICATION: ADMISSION									
ADMISSION:	DRUG	DATE	DOSAGE		DRUG	DATE	DOSAGE		
	Amoxicillin	6.12.2007	100,000 iu						
	Vitamin A (if not in last 6 months)	6.12.2007	5ml tds x 7 days		Measles immunisation	<input type="radio"/> no	<input checked="" type="radio"/> yes	(EPI card) date: 6.10.2007	
	Malaria treatment				Fully immunised	<input type="radio"/> no	<input type="radio"/> yes		
2nd VISIT:	Mebendazole	20.12.2007	500 mg						
OTHER MEDICATION									
DRUG	DATE	DOSAGE		DRUG	DATE	DOSAGE			

FOLLOW UP: OUTPATIENT CARE

NAME	Jamila								REG.Nº	TMK/ 104							
Week	ADM.																
	(=0)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Date	6.12	13.1	20.1	27.1	3.2	10.2	17.2	24.2									
ANTHROPOMETRY																	
Bilateral pitting Edema (+ ++ +++)	N	N	N	N	N	N	N	N									
MUAC (mm)	109	109	109	111	114	114	116	117									
Weight (kg)	8.1	8.4	8.6	8.6	8.8	9.4	9.6	10									
Weight loss * (Y/N)																	
Height (cm)		N	N	N	N	N	N	N									
Weight for Height	84				84												
	70%																
* If below admission weight on week 3 refer for home visit; If no weight gain by week 5 refer to inpatient care																	
HISTORY																	
Diarrhea (# days)		6	2	2	0	0	0	0									
vomiting (# days)		6	0	4	0	2	0	0									
fever (# days)		2	0	0	0	1	0	0									
Cough (# days)		7	0	0	0	0	0	0									
PHYSICAL EXAMINATION																	
Temperature (°C)	37.2	36.2	37.2	37	36.9	36	36.5	36.8									
Respiratory rate (# /min)	36	38	36	35	38	35	36	35									
Dehydrated (Y/N)																	
Anemia / palmar pallor (Y/N)	N	N	N	N	N	N	N	N									
Skin infection (Y/N)	N	N	N	N	N	N	N	N									
	N	N	N	N	N	N	N	N									
APPETITE CHECK / FEEDING																	
RUTF test (passed/failed)	P	P	P	P	P	P	P	P									
RUTF (# units given)	21	21	25	25	25	25	28	7									
ACTION / FOLLOW UP																	
ACTION NEEDED (y/n)	N	N	N	N	N	N	N	Y									
Other medication (see front of card)	N	N	N	N	N	N	N	N									
Name of Examiner	AW	AW	AW	CT	AW	CT	CT	CT									
visit outcome								SFP									
Ok= Continue A= Absent D= Defaulted for 3 visits R= Referral RR= Refused referral C= Cured NR= Non-recovered HV= home visit X= Died																	
ACTION TAKEN DURING FOLLOW-UP (INCLUDE DATE)																	
Child discharged cured to SFP. Given 7 packets of RUTF and mother advised of follow-up care																	
Name of outreach worker:																	

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD									
NAME	Adam Ali				Reg. N°	LGR / 054			
AGE (months)	15 m	SEX	<input checked="" type="radio"/> M	<input type="radio"/> F	DATE OF ADMISSION	6/12/2007			
ADMINISTRATIVE UNIT	Lusaka				TIME TO TRAVEL TO SITE	1 hour			
COMMUNITY	Bombali				FATHER ALIVE				
HOUSE DETAILS/LANDMARKS					MOTHER ALIVE				
NAME OF CAREGIVER					TOTAL NUMBER IN HOUSEHOLD	7			
ADMISSION (CIRCLE)	<input checked="" type="radio"/> self referral	<input type="radio"/> outreach referral	<input type="radio"/> inpatient care referral	<input type="radio"/> health facility referral	TWIN	<input type="radio"/> yes	<input type="radio"/> no		
RE-ADMISSION (relapse)	<input type="radio"/> no	<input type="radio"/> yes			ADDITIONAL INFORMATION				
ADMISSION ANTHROPOMETRY									
BILATERAL PITTING OEDEMA	<input type="radio"/> +	<input type="radio"/> ++	<input type="radio"/> +++						
MUAC (mm)	106	WEIGHT (kg)	5.1 kg	HEIGHT (cm)	68 cm	WEIGHT FOR HEIGHT			
ADMISSION CRITERIA	Bilateral pitting oedema	<input checked="" type="radio"/> MUAC		Weight for Height		OTHER:			
HISTORY									
DIARRHOEA	<input checked="" type="radio"/> yes	<input type="radio"/> no	# STOOLS/DAY		1-3	<input checked="" type="radio"/> 4-5	<input type="radio"/> >5		
VOMITING	<input type="radio"/> yes	<input checked="" type="radio"/> no	PASSING URINE		<input checked="" type="radio"/> yes	<input type="radio"/> no			
COUGH	<input type="radio"/> yes	<input checked="" type="radio"/> no	IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?						
APPETITE	<input type="radio"/> good	<input checked="" type="radio"/> poor	<input type="radio"/> none		BREASTFEEDING	<input type="radio"/> yes	<input checked="" type="radio"/> no		
ADDITIONAL INFORMATION									
PHYSICAL EXAMINATION									
RESPIR. RATE (# min)	<30	<input checked="" type="radio"/> 30 - 39	40 - 49	50+					
TEMPERATURE °C	37.2								
EYES	<input checked="" type="radio"/> normal	<input type="radio"/> sunken	<input type="radio"/> discharge						
EARS	<input checked="" type="radio"/> normal	<input type="radio"/> discharge							
ENLARGED LYMPH NODES	<input checked="" type="radio"/> none	neck	axilla	groin					
SKIN CHANGES	<input checked="" type="radio"/> none	scabies	peeling	ulcers / abscesses					
ADDITIONAL INFORMATION									
ROUTINE MEDICATION: ADMISSION									
ADMISSION:	DRUG	DATE	DOSAGE		DRUG	DATE	DOSAGE		
	Amoxicillin	6.12.2007	100,000 iu						
	Vitamin A (if not in last 6 months)	6.12.2007	5 ml tds x 7 days		Measles immunisation	<input type="radio"/> no	<input type="radio"/> yes	date: 13.12.2007	
	Malaria treatment				Fully immunised	<input type="radio"/> no	<input type="radio"/> yes		
2nd VISIT:	Mebendazole	20.12.2007	500 mg						
OTHER MEDICATION									
DRUG	DATE	DOSAGE		DRUG	DATE	DOSAGE			

FOLLOW UP: OUTPATIENT CARE

NAME		Adam Ali					REG.N ^o		TAY / 054								
Week	ADM.																
	(=0)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Date	6.12	13.1	20.1	27.1	3.1												
ANTHROPOMETRY																	
Bilateral pitting Edema (+ ++ +++)	N	N	N	N	N												
MUAC (mm)	106	106	107	106	105												
Weight (kg)																	
Weight loss * (Y/N)	5.1	5	5.1	5	5												
Height (cm)		Y	N	Y	N												
Weight for Height	68				68												
* If below admission weight on week 3 refer for home visit; If no weight gain by week 5 refer to inpatient care																	
HISTORY																	
Diarrhea (# days)		6	2	2	5												
vomiting (# days)		0	0	4	0												
fever (# days)		0	0	0	0												
Cough (# days)		0	0	0	0												
PHYSICAL EXAMINATION																	
Temperature (°C)	37.2	36.9	37.2	37	36.9												
Respiratory rate (# /min)																	
Dehydrated (Y/N)	36	38	36	35	38												
Anemia / palmar pallor (Y/N)	N	N	N	N	N												
Skin infection (Y/N)	N	N	N	N	N												
APPETITE CHECK / FEEDING																	
RUTF test (passed/failed)	P	P	P	P	P												
RUTF (# units given)	14	14	14	14	14												
ACTION / FOLLOW UP																	
ACTION NEEDED (Y/N)	N	N	N	N													
Other medication (see front of card)																	
Name of Examiner visit outcome	N	N	N	N													
	AW	AW	AW	CT													
Ok= Continue A= Absent D= Defaulted for 3 visits R= Referral RR= Refused referral C= Cured NR= Non-recovered HV= home visit X= Died																	
ACTION TAKEN DURING FOLLOW-UP (INCLUDE DATE)																	
Name of outreach worker:																	