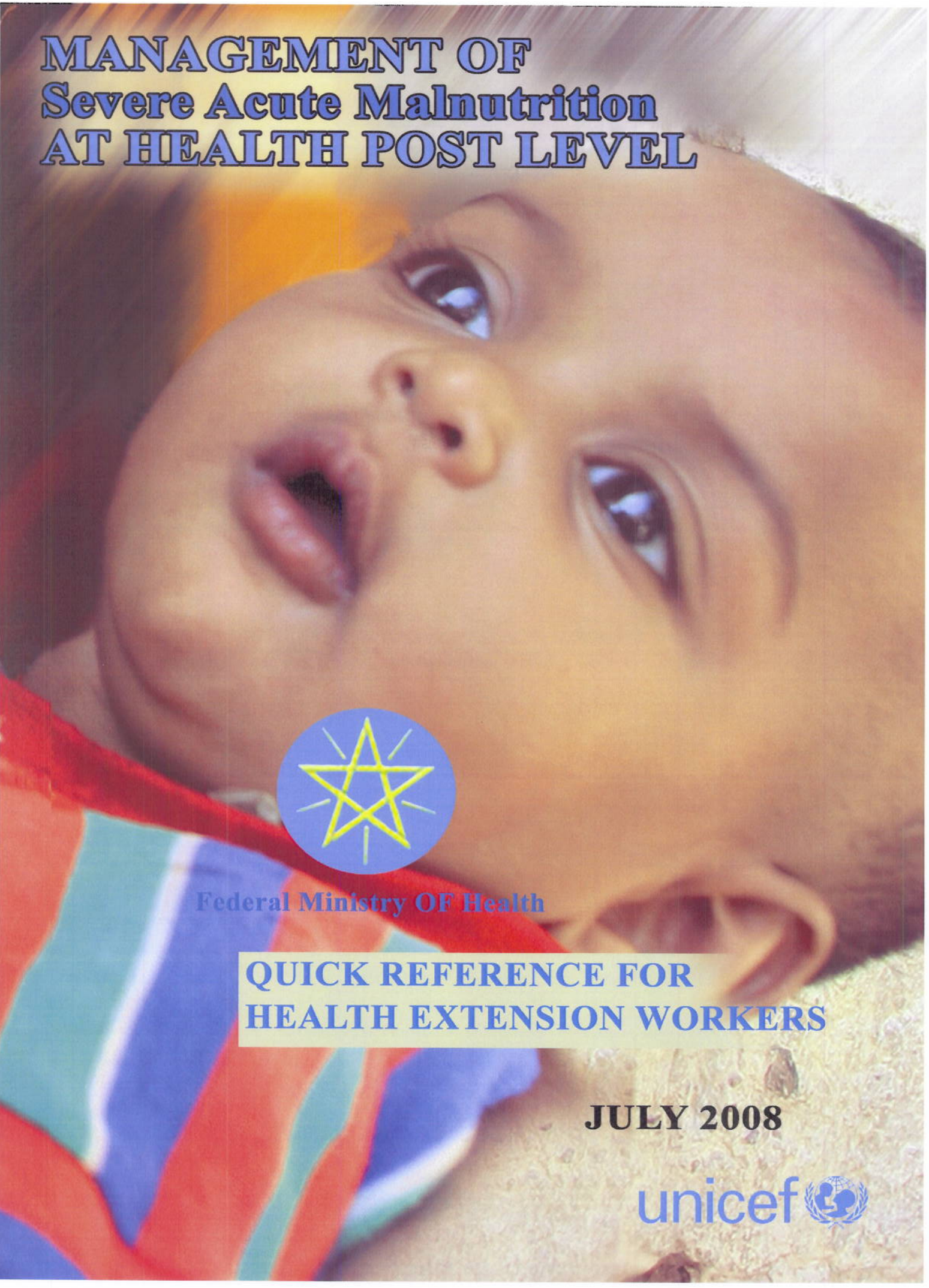
MANAGEMENT OF Severe Acute Malnutrition AT HEALTH POST LEVEL



Federal Ministry OF Health

QUICK REFERENCE FOR HEALTH EXTENSION WORKERS

JULY 2008

unicef

Acronym

HEW - Health extension workers

MUAC - Mid Upper Arm Circumference

OTP - Out Patient Therapeutic Program

RUTF - Ready -To -Use-Therapeutic Food

SAM - Severe Acute Malnutrition

SC - Stabilization Center

TFU - Therapeutic Feeding Unit

TSFP - Targeted Supplementary Food Program

Table of Contents

Contents page *Page*

Acronym I

Table of Contents II

Introduction III

I. Preparation 1

II. OTP Procedures 2

1. Screening and Admission 2

2. Management of SAM in OTP 6

3. Follow Up 7

III. Provision of Basic preventive services 10

Annexes 11

Annex 1: Techniques of Anthropometric Measurement 11

1.1 Steps to Measure MUAC 11

1.2 Steps to measure weight 12

1.3 Checking for Oedema 13

Annex 2: Appetite Testing Techniques 14

Annex 3: Amount of RUTF to Give 15

Annex 4: Routine Medicine Dosage 15

Annex 5: Target Discharge Weight 16

Annex 6: Monthly Statistics Report - Management of Severe Acute Malnutrition - Therapeutic Feeding Programme 18

Annex 7: OTP Registration book 19

Annex 8: Referral Slip from OTP to Inpatient Care 20

Annex 9: Discharge Certificate From OTP 21

Introduction

This document is intended to provide a quick reference material to HEWs on how to do screening for malnutrition; how to identify SAM cases; and how to conduct Out Patient therapeutic Program for Severe Acute Malnutrition in order to maximize the coverage and improve the quality of services provided to SAM cases at the community level.

Guidance Note for HEWs to manage Severe Acute Malnutrition as an Out Patient (OTP)

I. Preparation

The HEW need to undertake planning for the OTP and avail the necessary equipments and supplies to deliver the OTP services to the targeted beneficiaries. Some of the activities as a preparation for OTP include:

- Mobilization of the Volunteer Community health workers to support in screening, community mobilization and crowd control.
- The Volunteer Community health workers will be provided on-job- training on screening and provided with MUAC tape.
- Community mobilization to enable identification of all severely malnourished children in the community through active screening by the Volunteer.
- Fix one day in a week for OTP services at the health post
- Make sure the following equipments and supplies are available at the health post

Item	Minimum stock/month
Plumpy'Nut or BP 100	4 cartoon/week or 16 cartoon/month
Amoxicillin	½ tin
Mebendazole 100mg	1tin
Folic Acid	15 tabs
Vitamin A capsule	30 capsule
Measles vaccine	
Plastic cups	2
Drinking water	1 Jerry can
Salter scale (25kg) plus pants or plastic basin	1
MUAC tape	2
Thermometer	1
Soap for hand washing	1
OTP card	30
Registration book	1
Stock card/supply register	1

II. OTP Procedures

1. Screening and Admission

Step 1:

Do the anthropometric measurements and check for oedema. Give priority to severely ill patients.

- For children 6 months to 18 years, assess for Oedema, MUAC, and weight
- For children less than 6 months, assess for oedema and Visible severe wasting

Step 2:

Decide the child has Acute Malnutrition or not.

- An infant aged less than 6 months has SAM if there is oedema of both feet or visible severe wasting. Refer the child for inpatient care without checking for complication and appetite test.
- For children between 6 months to 18 years:

  - If the MUAC is between 11 to 12cm and no oedema, the child has Moderate acute malnutrition.

    - **Action:** Counsel the mother on child feeding and care, and refer to Targeted Supplementary Food program if available in the area.

  - If the MUAC is <11cm or there is oedema of both feet, the child has Severe Acute Malnutrition (SAM).
    - **Action:** Follow the next steps for those with SAM.

Step 3:

For t children between 6 months to 18 years with SAM, look for the following Complications. If one of the complications is present, refer the patient to inpatient care(TFU/SC)

Complication:	**Referral to in-patient care when:**
General Danger sign	If one of the following is present: Vomiting everything, convulsion, lethargy, unconscious, or unable to feed
Pneumonia/ **severe pneumonia**	• Chest in-drawing • Fast breathing: - For child 6 month to 12 months . 50 breaths per minute and above - For a child 12 months up to 5 years . 40 breaths per minute and above - For a child older than 5 years . 30 breaths per minute and above
Dysentery	• If blood in the stool
Fever or Low body temperature	• T ≥ 37.5 or febrile to touch • T ≤ 350c or cold to touch

Step 4:

Do appetite test for those children aged 6 months to 18 years who don't have one of the above complications. See Annex 2 for the appetite test steps and interpretation.

a. If fail the test, refer the patient to inpatient care
b. If pass the test , do the next steps

Step 5:

Decide to treat in OTP or refer for inpatient care

- Classify the child based on age, anthropometric criteria, complications, and appetite test using the assessment and classification table below.

- Decide whether the child needs to be admitted to the OTP or referred to the nearest health centre/hospital for inpatient care in TFU/SC (use the chart below).

- Refer all patients classified as Severe and complicated malnutrition to the nearest health centre/hospital for inpatient care in TFU/SC. Give the referral slip.

- If the caretaker refuses to take a child who needs referral for inpatient care, take time and counsel to convince. If the caretaker still refuses, treat as outpatient with the OTP protocol. In this case write on the outcome section of the OTP card as "refuse transfer".

Assessment and Classification of a Child with Acute Malnutrition

Assess	Classify	Action to take
• If age up to six months and - Visible severe wasting or - Oedema of both feet • If age six months and above and - MUAC <11cm or oedema of both feet and one of the following ▪ Danger sign or ▪ Fail appetite test or ▪ pneumonia/severe pneumonia or ▪ blood in the stool or ▪ fever/ hypothermia	Severe Complicated Malnutrition	Refer urgently to TFU/SC for an in-patient management
• If age six months or above and - MUAC <11cm or oedema of both feet - And pass appetite test	Severe uncomplicated Malnutrition	Manage in OTP using the Health Post OTP protocol[1]
• If MUAC 11cm to <12cm and no oedema of both feet	Moderate Acute Malnutrition	Refer to supplementary feeding program if available Counsel on child feeding/care
• If MUAC > 12 cm and no oedema of both feet	No acute malnutrition	Counsel the mother and congratulate her

[1] Follow the procedures of treatment presented in this guideline

2. Management of SAM in OTP

Step 6: Register the Patient on the registration book and fill out the OTP Card (see Annex 7).

Step 7: Explain to the mother/Caretaker the OTP treatment as follows:

- Give one week supply of RUTF based on the child weight (see Annex 3 page 17)
- Counsel the mother/carer on the following Key education messages:

  - RUTF is a food and medicine for malnourished children only. It should not be shared.
  - For breast-fed children, always give breast milk before the RUTF and on demand
  - RUTF should be given before other foods. Give small regular meals of RUTF and encourage the child to eat often, every 3-4 hours
  - Always offer plenty of clean water to drink while eating RUTF
  - Use soap and water for the caretaker to wash her/his hands before feeding
  - Keep food clean and covered
  - Sick children get cold quickly, always keep the child covered and warm

  NB – Check the mothers understanding using appropriate checking questions.

- Give routine medication (see Annex 4 on page 18 for the dosage)

Drug	Treatment
Vitamin A	- Ask if it is given in the last 6 month -Give 1 dose at admission[2] if not given
Folic Acid	- 1 dose at admission
Amoxicillin	- 1 dose at admission + give treatment for 7 days to take home -The first dose should be given in the presence of the supervisor
Deworming	- 1 dose on the 2nd week (2nd visit)
Malaria	- According to national protocol
Measles (from 9 months old)	- Ask if the child was vaccinated - Give 1 vaccine on the 4th week (4th visit) if not given before
Iron	- No - iron is already in all RUTF

[2] On the day of admission (day 1), give vitamin A for all children except those with oedema or those who received vitamin A in the past 6 months.

Step 8: Give the weekly appointment for follow up

3. Follow Up

All OTP beneficiaries need to have a follow up visit weekly at the health post. The HEW should fix one day in a week for the OTP activity including follow up. She has to use the regular house to house visit for follow up of the severe cases The HEW has to assess for the following conditions during every follow up visit:

Step 1: Ask about

- Diarrhoea, vomiting, fever or any other new complaint or problem
- If the child is finishing the weekly ration of RUTF

Step 2: Assess for:

- Check for complications
- Temperature, RR
- Weight, MUAC and oedema
- Do appetite test

Step3: Decide on action to take based on the above follow up assessment

Refer if there is any one of the following are present:

- Develop complication
- Fail appetite test
- Increase/development of oedema
- Weight loss for 2 consecutive visit
- Failure to gain weight for 3 consecutive visit
- Major illness or death of the main caretaker so that the child can't be managed at home.

If there is no indication for referral, provide the weekly follow up OTP services:

- Complete routine drugs
- Weekly ration of Plumpy'Nut
- Appointment for next weekly follow up
- Record the information on the OTP card

If the child is absent for any follow up visit:

• Ask the community Volunteer to do home visit and report back to the HEW

Discharge the patients from OTP follow up if the following criteria are fulfilled:

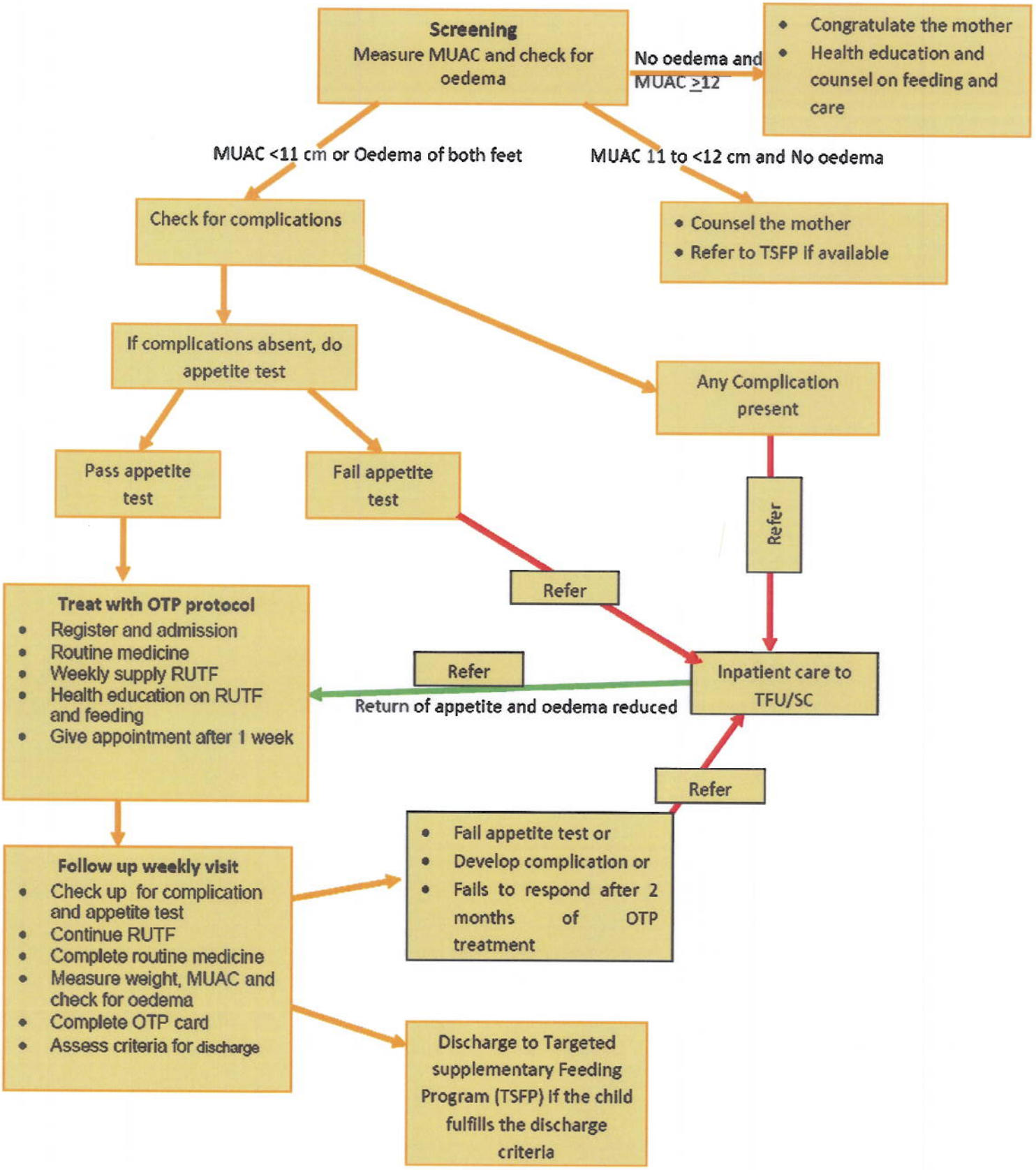
a. For those who were admitted based on oedema: - discharge if there is no oedema for 2 consecutive visits (14 days).

b. For those who were admitted without oedema: - discharge when the patient reaches discharge target weight as indicated in Annex 5 on page 19.

c. If the child fails to reach the discharge criteria after 2 months of OTP treatment, refer for inpatient care.

On discharge make sure:

- Counseling on child feeding and care is given to the mother/caretaker
- Give a discharge certificate to the caretaker and referral to Supplementary Feeding Program (Whenever available)
- A child is registered appropriately on the registration book on date of discharge



Flow Chart for Assessment and Action for children between 6 months and 18 years

III. Provision of Basic preventive services

The HEWs are responsible for explaining and promoting disease prevention and control, Family Health, hygiene and environmental sanitation, and health education and communication packages in their kebele during house to house visit, community outreach, and health post visit. The OTP would be a good contact point for assessing and providing these preventive services to the mothers/caretakers and children. Thus, in addition to providing the OTP services for severe Acute Malnutrition, the HEWs should assess for and provide these preventive services:

- **Hygiene and Environmental sanitation**

  - Excreta disposal
  - Food hygiene and safety
  - Personal hygiene
  - Water supply and safety measures
  - Health home environment

- **Family Health**

  - Family planning
  - Immunization both for the mother and child

- **Disease prevention and control**

  - Malaria prevention and control
  - HIV/AIDS, and TB prevention and control

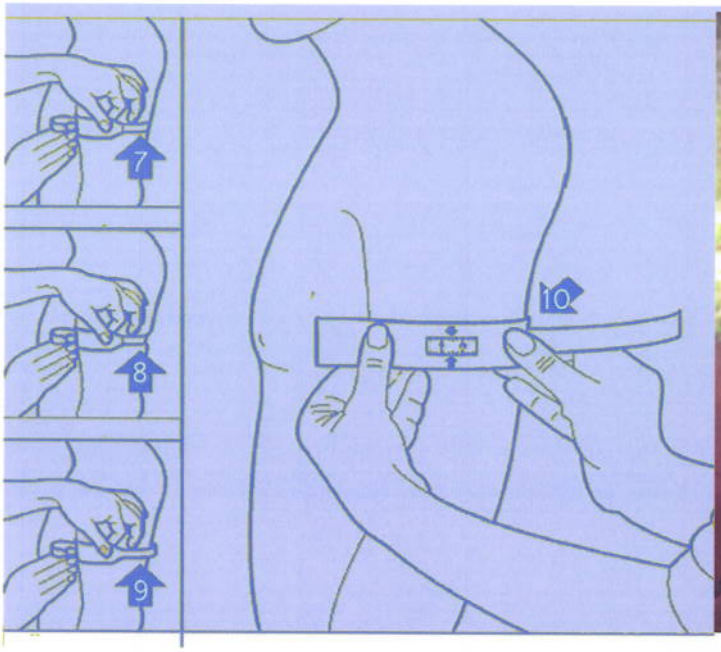
- **Other packages**

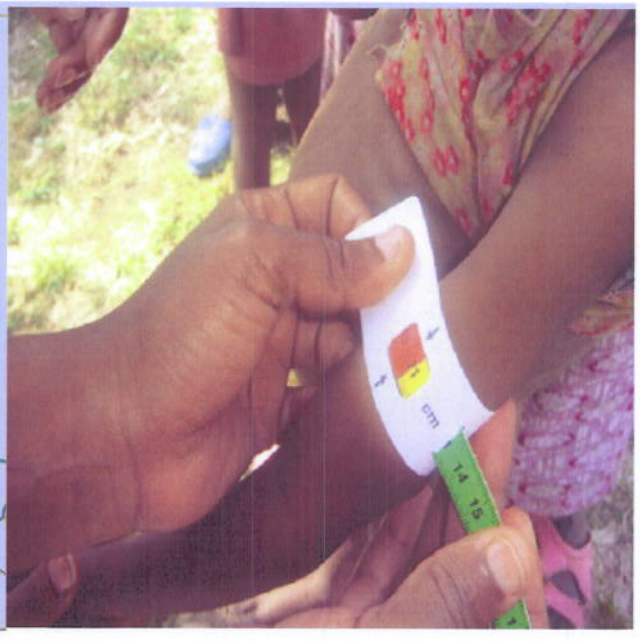
Annexes

Annex 1: Techniques of Anthropometric Measurement

1.1 Steps to Measure MUAC

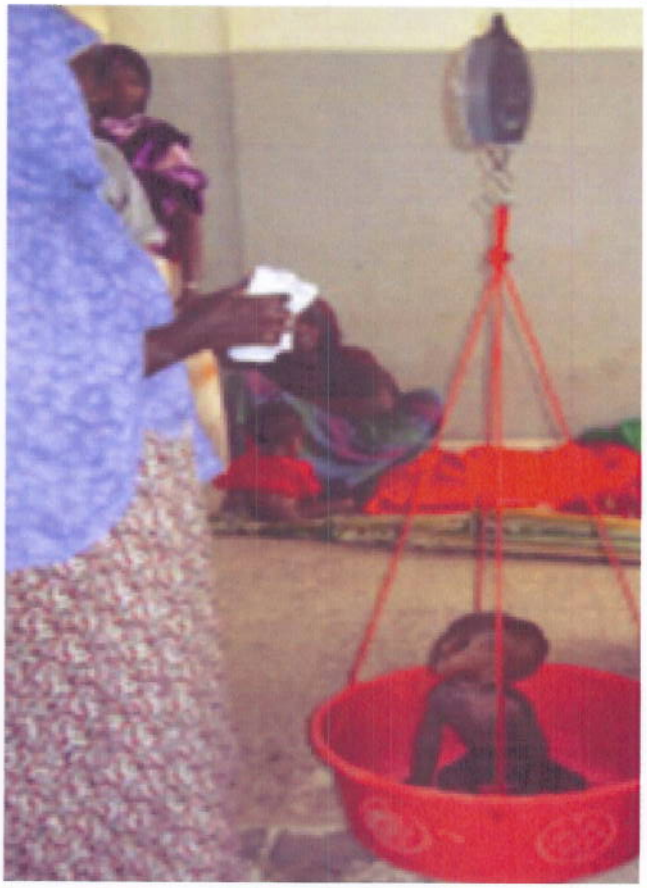
1. Ask the mother to remove clothing that may cover the child's left arm. If possible, the child should stand erect and sideways to the measurer.
2. Estimate the midpoint of the left upper arm (Refer the pictures below)
3. Straighten the child's arm and wrap the tape around the arm at the midpoint. Make sure the numbers are right side up. Make sure the tape is flat around the skin (arrow 7).
4. Inspect the tension of the tape on the child's arm. Make sure the tape has the proper tension (arrow 7) and is not too tight or too loose (arrows 8 and 9). Repeat any step as necessary.
5. When the tape is in the correct position on the arm with correct tension, read and call out the measurement to the nearest 0.1cm (arrow 10).
6. Immediately record the measurement.





1.2 Steps to measure weight

1. Explain the procedure to the child's mother or caregiver before starting.
2. Install a 25kg hanging spring scale (graduated by 100g). If mobile weighing is needed, the scale can be hooked on a tree or a stick held by two people.
3. Attach the washing basin / pants and recalibrate to zero.
4. Remove the child's clothes and place him or her into the basin.
5. Ensure nothing is touching the child and the basin/pant.
6. Read the scale at eye level (if the child is moving about and the needle does not stabilize, estimate weight by using the value situated at the midpoint of the range of oscillations).
7. When the child is steady record the measurement to the nearest 100gm. and record.
8. Calibrate the scale with a material with known weight every week.



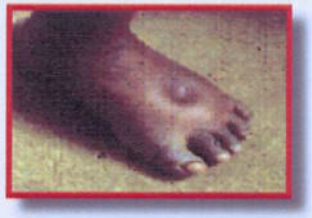
HOW TO IDENTIFY ACUTE MALNUTRITION IN A CHILD

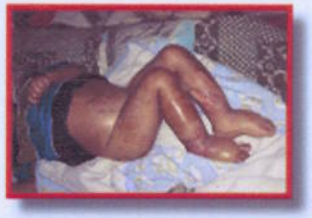
(for children over 6 months)

1 check OEDEMA

using your thumb, gently apply pressure to both feet for 3 seconds

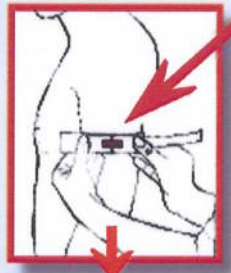
if a shallow print persists on both feet, then the child has oedema



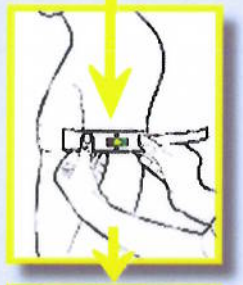


This child is severely malnourished and needs immediate referral to the nearest health center or hospital to receive therapeutic feeding

2 measure MUAC (left arm circumference)



This child is severely malnourished and needs immediate referral to the nearest health center or hospital to receive therapeutic feeding



This child is moderately malnourished and needs additional enriched food (supplementary food)

This child is not malnourished, congratulations to the mother!

Federal Ministry of Health

unicef

Aneex 2: Appetite Testing Techniques

Appetite is a very important indicator of the clinical situation of a patient. A poor appetite means that the child has a serious problem and need to be referred for inpatient care.

Steps to follow

1. The appetite test should be conducted in a separate quiet area.
2. Explain to the care taker the purpose of the appetite test and how it will be carried out.
3. The care taker should wash his/her hand.
4. The care taker should sit comfortably with the child on his lap and should either offer the RUTF from the packet or put a small amount on his finger and give it to the child.
5. The care taker should offer the child the RUTF gently, encouraging the child all the time. If the child refuses then the care taker should continue to quietly encourage the child and take time over the test. The test usually takes a short time but may take up to thirty minutes. The child must not be forced to take the RUTF.
6. The child needs to be offered plenty of water to drink from a cup as he/she is taking the RUTF.

Interpreting the Result of the Appetite Test

See the appetite test table below to determine whether the child passes or fail the test.

Pass appetite test

1. A child that takes at least the amount of RUTF shown in the appetite test table passes the appetite test.
2. Explain to the care taker the treatment option is OTP.
3. Register the result on the OTP card.

Fail appetite test

1. A child that does not take the amount of RUTF shown in the appetite test table fail the appetite test.
2. Explain to the care taker the choice of treatment is inpatient care; and explain the reasons for recommending in-patient care.
3. Refer the patient to the nearest TFU/SC for in-patient management.

This is the minimum amount that malnourished patients should take to pass the appetite test

PLUMPY'NUT®		BP 100®	
Body Weight (Kg)	Sachet	Body weight (Kg)	Bars
<4	⅛ - ¼	< 5	¼ - ½
4 – 10	¼ - ½	5 – 10	½ - ¾
11 - 15	½ - ¾	11 – 15	¾ - 1
>15	¾ - 1	>15	1 – 1 ½

Aneex 3: Amount of RUTF to Give

RUTF is given to severely malnourished children based on their weight.

Class of weight (kg)	PLUMPY'NUT®		BP100®	
	sachet per day	sachet per week	bars per day	bars per week
3.0 - 3.4	1 ¼	9	2	14
3.5 - 4.9	1 ½	11	2 ½	18
5.0 - 6..9	2	14	4	28
7.0 - 9. 9	3	21	5	35
10.0 - 14.9	4	28	7	49
15.0 - 19.9	5	35	9	63

Aneex 4: Routine Medicine Dosage

Amxicillin

Weight in Kg	Dosage twice per day	250 mg Capsule/tab
< 5kg	125 mg	½
5 – 10	250mg	1
10 – 20	500mg	2
20 – 35	750mg	3
>35	1000mg	4

Vitamin A

Age in months	Vitamin A (IU) orally in day 1
6 to 11	One blue capsule (100.000 IU = 30 µg)
12 (or 8 Kg) and more	Two blue capsules (200.000 IU = 60 µg)

Folic Acid

When	Amount
At admission	5 mg

De-worming

Age	> = 2 years
Albendazole 400 mg	1 tablet once
Mebendazole 100 mg	5 tablets once

Aneex 5: Target Discharge Weight

Admission Weight	Discharge Weight	Admission Weight	Discharge Weight	Admission Weight	Discharge Weight
3	3.5	5.3	6.2	7.6	8.7
3.1	3.6	5.4	6.2	7.7	8.9
3.2	3.7	5.5	6.3	7.8	9.0
3.3	3.8	5.6	6.4	7.9	9.1
3.4	3.9	5.7	6.6	8	9.2
3.5	4.0	5.8	6.7	8.1	9.3
3.6	4.1	5.9	6.8	8.2	9.4
3.7	4.3	6	6.9	8.3	9.5
3.8	4.4	6.1	7.0	8.4	9.7
3.9	4.5	6.2	7.1	8.5	9.8
4	4.6	6.3	7.2	8.6	9.9
4.1	4.7	6.4	7.4	8.7	10.0
4.2	4.8	6.5	7.5	8.8	10.1
4.3	4.9	6.6	7.6	8.9	10.2
4.4	5.1	6.7	7.7	9	10.4
4.5	5.2	6.8	7.8	9.1	10.5
4.6	5.3	6.9	7.9	9.2	10.6
4.7	5.4	7	8.1	9.3	10.7
4.8	5.5	7.1	8.2	9.4	10.8
4.9	5.6	7.2	8.3	9.5	10.9
5	5.8	7.3	8.4	9.6	11.0
5.1	5.9	7.4	8.5	9.7	11.2
5.2	6.0	7.5	8.6	9.8	11.3

Admission Weight	Discharge Weight	Admission Weight	Discharge Weight	Admission Weight	Discharge Weight
9.9	11.4	15	17.3	36	41.4
10	11.5	15.5	17.8	37	42.6
10.2	11.7	16	18.4	38	43.7
10.4	12.0	16.5	19.0	39	44.9
10.6	12.2	17	19.6	40	46.0
10.8	12.4	17.5	20.1	41	47.2
11	12.7	18	20.7	42	48.3
11.2	12.9	18.5	21.3	43	49.5
11.4	13.1	19	21.9	44	50.6
11.6	13.3	19.5	22.4	45	51.8
11.8	13.6	20	23.0	46	52.9
12	13.8	21	24.2	47	54.1
12.2	14.0	22	25.3	48	55.2
12.4	14.3	23	26.5	49	56.4
12.6	14.5	24	27.6	50	57.5
12.8	14.7	25	28.8	51	58.7
13	15.0	26	29.9	52	59.8
13.2	15.2	27	31.1	53	61.0
13.4	15.4	28	32.2	54	62.1
13.6	15.6	29	33.4	55	63.3
13.8	15.9	30	34.5	56	64.4
14	16.1	31	35.7	57	65.6
14.2	16.3	32	36.8	58	66.7
14.4	16.6	33	38.0	59	67.9
14.6	16.8	34	39.1	60	69.0
14.8	17.0	35	40.3		

Aneex 6: Monthly Statistics Report - Management of Severe Acute Malnutrition - Therapeutic Feeding Programmes

Facility		Implementing agency/ Health facility	
Region		Report prepared by	
Zone		Month / Year of reporting (Ethio calendar)	
Woreda		Type of Programme	in-patient / out-patient / mobile clinic
Opening Date			

Age group	Total begining of the year (A)	New admissions			Re-admission (B4) after defaulting	Transfer in(B5) from another therapeutic	Total admissions (C)	Discharges(D)						Transfer out(E)		Total discharge (F)	Total end of the month (G)
		W/H<70% or MUAC<110mm (Children)or MUAC<180mm (adults) (B1)	OEDEMA (B2)	Relapse (B3)				Cured (D1)	Death (D2)	Unknown (D3)	Defaulter (D4)	Non-Responder (D5)	Medical transfer (D6)	Transfer out (E1) to out-patient	Transfer out (E2) to in-patient		
<6 months																	
6-59 months																	
5-10 years																	
11-17 years																	
>18 years																	
TOTAL																	
								%	%	%	%	%	%	%	%		

New admission = Patient directly admitted to your programme to start the nutritional treatment (new admission to phase 2). Marasmic(B1), Kwashiorkor(B2) or Relapse(B3) admissions are recorded in 3 different columns

Re-admission after defaulting(B4) = Patient that has defaulted from a nutritional therapeutic treatment and he is re-admitted in your unit within a period of less than 2 months.
If the Defaulter is coming back after 2 weeks (in-patient) or after 2 months.

Transfer in(B5) = Patient that has started the nutritional therapeutic treatment in a differnt site and is referred to your programme to continue the treatment. This can be transfers from in-patient to out-patient OR from out-paient to in-patient.

Cured(D1) = patient that has reached the discharge criteria

Death(D2) = patient that has died while he was in the programme. For out-patient programme, the death has to be confirmed by a home visit

Unknown(D3) = patient that has left the programme but his outcome (actual defaulting or death) is not confirmed/ verified by a home visit

Defaulter(D4) = patient that is absent for 2 consecutive weighing (2 days in-patient and 2 weeks in out-patient), confirmed by a home visit

Non-responder(D5) = patient that has not reached the discharge criteria after 40 days in the in-patient programme or 2 months in the out-patient programme

Medical transfer(D6) = patient that is referred to a health facilty/hospital for medical reasons and this health facilty will not continue the nutritional treatment

Transfer out(E) = patient that has started the nutritional therapeutic in your programme and is referred to another site to continue the nutritional treatment

Transfer from in-patient to out-patient(E1) = when a patient was initially admitted in your in-patient programme(phase 1) and is referred to another phase 2/ out-patient programme

Transfer from out-patient to in-patient(E2) = when a patient was initially admitted in your out-patient programme (phase 2) and is referred back to in-patient programme for closer follow-up

Total end of the month(G) = Total begining of the month(A) + Total admissions(C) - Total discharge(F)

Aneex 7: OTP Registration Book

Serial #	Full Name	Address	Age (months/ Year)	Sex (F/M)	New admission (Y/N)	Transfer or Readmission (Y/N)	Admission				Discharge				outcome(cured, dead, unknown, transfer, non- responder)	Remark
							Date	Weight (Kg)	Oedema (y/N)	MUAC (cm)	Date	Weight (Kg)	Oedema (y/N)	MUAC (cm)		
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

Aneex 8: Referral Slip from OTP to Inpatient Care

Reg. No._____
Referring TFP: _____ **OTP/TFU Referred To:** _____ **TFU/OTP**
Name: _____
Age (in months for < 5 Years):_____ **Sex: M/F**
Woreda: _____ **Kebele**_____
Date: _____

Fill the Tables

	Date	Weight	MUAC	Oedema	Appetite test
Admission					
Transfer					

Drugs given	Dose	Date
Vitamin A		
Folic Acid		
Measles Vac.		
Albendazole/Mebendazole		
Amoxicillin		
Malaria treatment		

REASON FOR REFERAL	Put tick Mark(X)
General danger sign	
Fast breathing	
Blood in stool	
Febrile($T° \geqslant 37.5°c$)	
Increase/Development of oedema	
Failed appetite test	
Weight loss for two consecutive visits	
No weight gain for three visits	
Request by care take	

Referred by (Name and Signature) : _____

Aneex 9: Discharge Certificate From OTP

Reg. No._____

Referring TFP: _____**OTP/TFU Referred To:** _____**TSFP**

Name: _____

Age (in months for < 5 Years):_____ **Sex: M/F:** _____

Woreda: _____ **Kebele**_____

Date: _____

Fill the Tables

	Date	Weight	MUAC	Oedema	Appetite test
Admission					
Discharge					