ASSESSMENT AND COMMUNITY MANAGEMENT OF MALNUTRITION

Trainer Guide:

1. Sentences in *italics* are instructions for the trainer. Sentences in *italics* and quotation marks can be read verbatim by the trainer.

2. Before the training, words in brackets [ ] should be replaced by words that match the context; for example, replace [*COUNTRY*] with "Mali" if the training is to be implemented in Mali.

3. The training is organized around different types of activities: brainstorming, simulation/role-plays, practice exercises (individual or group), and case studies.

4. **General training tips:**
   - Encourage the participation of all participants, at all times, and encourage them to comment on different topics.
   - Listen to all answers without judgment and make sure all participants have the opportunity to speak.
   - Encourage participants to share their experiences as a parent or caregiver when applicable.
   - Share a summary statement at the end of an activity to review the important points or the main idea that the activity was intended to highlight.
   - Ask participants regularly if they have any questions or would like a concept to be clarified.
   - For group work:
     - Form groups based on the total number of participants, small enough to encourage participation, but large enough to meet the requirements of the activity.
     - Ask each group to present their work to the other groups.
     - Ask participants to share their reflections about the other groups' work.
     - Point out the strengths and areas for improvement of each group's work.
     - Wrap up the group work by summarizing the key takeaways.

5. **Tips for brainstorming**: Brainstorming is a technique that involves asking questions before presenting concepts to initiate reflection and discussion on the training topic. It allows you to take stock of participants' proficiency in a topic as well as their knowledge gaps in advance in order to frame the training and target certain concepts.
   - Emphasize that the purpose of a brainstorming discussion is to help encourage reflection among participants rather than to identify the best answers.
   - If possible, write participants' answers on a large sheet of paper to encourage discussion and give value to everyone's comments.
   - Ask the questions one at a time, and pause after each question to encourage participation.
   - Make sure that the correct answers are clearly identified after each discussion.

6. **Tips for simulation/role-plays**: Simulation and role-plays put participants in real-life situations to practice a procedure, method, or communication technique. They help create a realistic environment for anticipating and preventing possible errors in a setting with no harmful consequences for the patient.
   - Clearly describe the simulated situation or role-play.
   - Provide time for participants to immerse themselves in the situation/their role.
   - Encourage everyone to participate as realistically possible.
   - Do not intervene until the simulation or role-play is complete.
   - At the end of each role-play, congratulate the actors.
   - Have other actors repeat the role-play again as many times as necessary.

7. **Tips for practice exercises**: practice exercises require participants to apply theoretical concepts to practical situations. They help check participants' level of understanding of an abstract concept in the way that will be expected in the field.
   - Prepare the materials and tools needed for the exercise in advance.
   - Clearly define the instructions for the exercise.
   - Make sure the correct answer is clearly identified at the end of the exercise.

8. **Tips for case studies**: Case studies describe a story/situation to introduce or dig deeper into a theoretical concept. They help illustrate abstract concepts through familiar situations to make them more understandable and easier to remember.
   - Share the case study clearly.
   - Ask the questions one at a time, pausing after each question to encourage participation.
   - Make sure the correct answers are clearly identified after each discussion.
   - Summarize the concept illustrated by the case study.

9. Review the tips for each activity type above before starting an activity of that type.

Abbreviations and Acronyms:

COA	Course of action
CHW	Community health worker
F	False
HV	Home visit
MAM	Moderate acute malnutrition
PEM	Protein-energy malnutrition
RDT	Rapid Diagnostic Test
RUTF	Ready-to-use therapeutic food
SAM	Severe acute malnutrition
T°	Temperature
T	True

Course Introduction:

- ***Inform participants:***
  - *This module covers malnutrition assessment and management.*
  - *In this module, some words, situations, pictures, and/or videos may make participants uncomfortable, be troubling, or cause emotions such as sadness. All these emotions are normal and welcome in the room.*
  - *If a participant feels uncomfortable and wishes to take a break, they should feel free to do so.*
- ***Encourage participants to:***
  - *Commit to ensuring confidentiality, as some could share sensitive or personal information with the group, and we want to create a space where all participants will feel safe and comfortable. Any personal information shared during this training should not be shared with anyone outside of this training.*
  - *Share their thoughts on this issue of confidentiality.*

Present training objectives, plan, and activities. Make sure all the necessary materials are present.

Objectives:

At the end of this session, participants should be able to:

- Define and explain acute malnutrition.
- Identify and classify signs of malnutrition.
- Explain the causes and consequences of malnutrition.
- Categorize food by food groups.
- Identify target groups for the prevention, diagnosis, and treatment of malnutrition.
- Define the assessment of nutritional status.
- Assess and classify the nutritional status of children under five years of age based on mid-upper arm circumference.
- Refer cases of SAM with or without complications to the community health center for adequate management according to current protocol.
- Ensure the management of cases of MAM and SAM without complications at home according to current protocol.
- Monitor the nutritional status of children.

Plan:

1. Epidemiology and definition of malnutrition.
2. Description of acute malnutrition and overview of the different forms of SAM.
3. Causes of acute malnutrition.
4. Consequences of acute malnutrition.
5. Food group and concept of a balanced diet.
6. Target groups and nutritional needs.
7. Definition of nutritional status assessment.
8. Assessment of nutritional status in children under five (5) years of age.
9. Exit criteria.

Activities: brainstorming; practice exercises; simulation/role-plays; case studies

Materials:

- Common to all activities: video projector; laptop; large sheet of paper; multicolored markers; multimedia tools (images, forms, videos, etc.), suggestion box.
- Additional: scale, timer, MUAC bracelet, malaria RDT, Plumpy Sup, Plumpy Nut, enriched flour, Amoxicillin, Albendazole, Vitamin A, iron, cooking materials (gas, cereal, saucepan, etc.).

Pre-test:

"We will proceed with the pretest before diving into the subject in order to assess participants' level of understanding before and after the session is completed."

Provide a copy of the pretest to all participants. Remind them that the pretest is not a judgment and that it is a private exercise that helps us have a better idea of their basic level of understanding of the topic that will be discussed. Read and explain the questions one at a time pausing (30 seconds/question) to encourage participation. At the end of the pretest, thank the participants, collect the forms, and move forward with the training.

First and Last Name: _____

Some of the following statements are false and some are true. In the first column, circle (T) for those that are **"true"** and (F) for those that are **"false."** The correct answer is listed in the second column.

1	Malnutrition is always caused by a lack of nutrition.	T F	F
2	A child with bilateral lower limb edema may be treated at home in certain settings.	T F	T
3	A child who is fed only eggs in the morning, meat in the evening, and fish at night can never be considered to be malnourished.	T F	F
4	A food that is rich for an adult may not necessarily be rich for a child.	T F	T
5	A child should be breastfed at most five times during the day.	T F	F
6	A mother can prepare meals at home in the morning, at midday, and in the evening, and still have malnourished children.	T F	T
7	Obesity is a form of malnutrition.	T F	T
8	One may not give water to a child up to six months old without consequences.	T F	T
9	Measuring the mid-upper arm circumference helps determine a child's nutritional status.	T F	T
10	The MUAC bracelet determines the nutritional status of a child from birth to five years of age.	T F	F
11	To find out whether or not a child is malnourished, a scale must be used.	T F	F
12	If the CHW detects signs of malnutrition in a child, he/she should take the child immediately to the health center for his/her nutritional status to be determined.	T F	F
13	A MUAC bracelet has three colors: green, yellow, and red.	T F	T
14	Measuring mid-upper arm circumference with a MUAC bracelet is the only method for assessing nutritional status.	T F	F
15	A child with a yellow mid-upper arm circumference may be treated by a CHW at home.	T F	T
16	A malnourished child is more likely to develop severe and complicated forms of diseases.	T F	T
17	Disease is not a cause of malnutrition.	T F	F

PART 1: INTRODUCTION TO MALNUTRITION

Section 1: Epidemiology and Definition of Malnutrition.

"We will now discuss some theoretical concepts about malnutrition."

1. **Definitions of a Few Key Words about Malnutrition:**

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. Define undernutrition.
2. Define micronutrients.
3. Define being underweight.
4. Define obesity and being overweight.
5. Define malnutrition.

Answers:

1. **Undernutrition**: Results in involuntary weight loss, which includes emaciation or being extremely thin (low weight-for-height), stunting (low height-for-age), and being underweight (low weight-for-age).
2. **Micronutrients**: Micronutrients are elements the body needs but cannot produce itself. It must therefore obtain them from food. These micronutrients are: Vitamins (Vitamins A, C, E), minerals (iron, copper, magnesium), and trace elements (copper, selenium, fluoride, etc.).
3. **Underweight**: Low ratio between weight and age.
4. **Obesity** and **Overweight**: Obesity and overweight are defined as abnormal or excessive accumulation of body fat that can be a health hazard.
5. **Malnutrition**: this is defined as deficiencies, excess, or imbalances in a person's energy and/or nutritional intake. It is a nutritional status that results from poorly balanced nutrition in quantity and/or quality.

2. Epidemiology:

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What do you think is the level of malnutrition in your country and the world?
2. What are the risk factors for malnutrition?

Answers:

1. Epidemiology: Malnutrition is a global problem that particularly affects children under five years of age, with 195 million presenting with stunting. Malnutrition contributes to nearly half of the deaths of children under five years of age, and more than 900 million people worldwide are undernourished. **[16]**
   - In Africa, malnutrition is a major public health problem, with about 45% of deaths in children under five years of age being related to undernutrition.
   - For example, in Mali, 9% of children under five years of age suffer from acute malnutrition or weight loss. **[16]**
   - For example, in Côte d'Ivoire, 19% of children under five years of age are underweight. According to the World Bank and UNICEF, the rate of malnutrition in children under five years of age in Côte d'Ivoire is 6.1%. **[16]**
2. Risk factors for malnutrition:
   - Insufficient diet and unbalanced diet;
   - Low availability of nutritious food and drinking water;
   - Poverty and unfavorable socio-economic conditions;
   - Recurrent infections and chronic diseases;

- Limited access to health and nutrition services;
- Inappropriate feeding practices, including early weaning, lack of exclusive breastfeeding, etc.;
- Lack of nutrition education and awareness.

Section 2: Description of Acute Malnutrition and Different Forms of SAM

"We will now discuss acute malnutrition and the different forms of SAM."

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. Define acute malnutrition (reminder).
2. What are the forms of acute malnutrition?

Answers:

1. "Acute malnutrition is when the body starts to consume its own tissues to find the energy and nutritional components needed for its survival, thus melting the muscles and fat stores. The terms "severe" and "moderate" are used to describe the degree of severity of acute malnutrition, with both stages being a medical emergency and requiring prompt and effective management." **[3]**
2. **Forms of Acute Malnutrition:** SAM is divided into forms with edema (kwashiorkor), forms without edema (marasmus), and mixed forms. We will briefly discuss the clinical presentation of the forms without edema, then that with edema.

   Marasmus: common before one year of age; marasmus is the result of a lack of overall [nutritional] intake and is characterized by:

- "A very thin child with visible bony prominences;
- A face that appears old;
- A child who has a strong appetite;
- The child's skin looks larger than his/her body;
- The skin on the buttocks is wrinkled and saggy;
- The child is lively and alert despite his/her condition;
- Stunting." **[3]**

Figure 1: **Marasmus**

Kwashiorkor: usually occurs during the weaning period, between 18 months and two years of age. It presents as:

- "Fine, brittle, reddish-brown hair;
- Bilateral, painless edema;
- Weight loss that may be masked by edema;
- Lack of appetite;
- The child cries all the time and is nervous;
- Diarrhea." **[3]**

Figure 2: Kwashiorkor [4]

Section 3: Causes of Acute Malnutrition

"We will now discuss the causes of acute malnutrition."

CASE STUDY - Share the story with participants. Be sure to answer all the comprehension questions. Then ask questions one at a time to the participants. Specify whether the work should be done together, as a team, or individually. Advise participants as to whether they should share their answers. Provide a timeframe in which to do this work. Summarize the concept illustrated by this story at the end of the study.

Story:

Kadidia: Is a woman who has been married for about eight years and has six children, three of whom are under five years of age.

Her husband, Hamed, gives her 500 CFA francs per day to buy food. Sometimes, he doesn't have money to give her. She tries to wash her neighbors' clothes to help her husband meet the family's needs, but she doesn't find customers every day. She is thinking about growing crops or market gardening, but she has no access to water or farming land. In addition, she wants to make sure that her family eats a balanced diet with the few means she has, but she does not have the skills to do so.

Hamed: He works as a laborer, but he isn't able to find work every day to cover the cost of food. He wants to support his wife and feed his family, but he's in a tough situation is.

During a mass screening of malnutrition organized by the CHW in charge of their area of residence, Kadidia and Hamed's three children under five years of age were assessed as malnourished despite their parent's efforts.

Questions:

Based on this scenario, list the potential causes of malnutrition in the couples' children and any other causes of malnutrition you know.

Answers:

The main causes of malnutrition in this scenario are:

- Insufficient family income;
- Lack of access to farming land;
- Lack and/or insufficiency of food in quantity and quality;
- The mother's lack of information;
- Short interpregnancy interval;
- Lack of exclusive breastfeeding up to six months of age;
- Diseases, such as diarrhea and parasitic infections;
- Hygiene measures, such as hand washing and use of drinking water, which are not observed;
- Insufficient access to care;
- Insufficient access to drinking water;
- Inadequate feeding practices (e.g., sudden and early cessation of breastfeeding, banned foods, unbalanced meals).

Section 4: Consequences of Acute Malnutrition

"We will now discuss the consequences of acute malnutrition."

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

What are the consequences of acute malnutrition?

Answers:

The consequences of acute malnutrition are the following:

- **Loss of Life (Death):** Every year, nearly half of the deaths of children under five years of age worldwide are due to malnutrition. Because the risk of death is particularly high in children with SAM, it may be more than 20 times higher than in healthy children;
- **Increased Cases of Disease:** "Malnutrition weakens the immune system, making the child vulnerable to infection (malaria, diarrhea, ARIs, etc.), increases the severity of diseases, and slows recovery. These diseases, in turn, lead to worsening of the malnutrition. Delay in the management of acute malnutrition leads to disabilities in future development." **[17]** Malnutrition and infections constitute a vicious cycle illustrated by the figure below;
- **Disorders due to Micronutrient Imbalances:** these disorders differ depending on the type of deficiency:
    - **Iodine Deficiency:** serious mental or physical disorders, goiter (enlarged thyroid gland), impaired speech, deafness [3] ;
    - **Iron Deficiencies:** fatal anemia, decreased productivity [3] ;
    - **Vitamin A Deficiencies:** decreased visual acuity/blindness; weakened immune system [3].

Malnutrition increases the mortality rate, increases and worsens infections, causes significant, often irreversible, problems, decreases school and work performance to the point of stopping schooling permanently, and increases the parents' poverty.

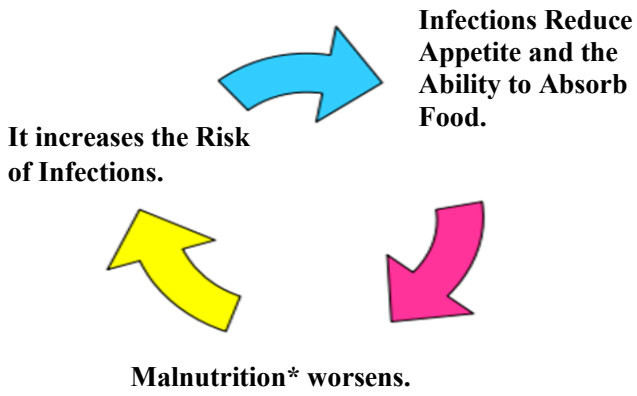

Figure 3: Vicious cycle of undernutrition and infection. **[3]**

Section 5: Food group and Concept of Balanced Diet

"We will now discuss balanced food groups."

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What are foods?
2. What are the food groups?
3. When is a meal considered balanced?

Answers:

1. **Foods:** Everything we eat that allows us to grow, fight diseases, work, stay healthy, and live. Foods are divided into three main groups: Energy-providing Foods, Body-building Foods, and Protective Foods. **[3]**
2. **Food Groups:**
   - **Energy-providing foods**: they are high in carbohydrates or fat. They provide the body with the energy needed to perform all its functions and activities. They include:
     - Cereals (millet, sorghum, corn, rice, wheat, etc.) ;
     - Tubercles (sweet potatoes, yams, manioc, potatoes, etc.) and plantains;
     - Fats, oils (peanut oil, cotton oil, palm oil, etc.), and butter;
     - Sugars.
   - **Body-building (or growth) Foods:** They are high in protein. They provide the body with the substances necessary for its growth, development, and maintenance. They include:
     - Animal-based products: meat, fish, eggs, milk, shellfish, etc.;
     - Vegetable-based products: legumes (peanuts, cowpeas, beans, peas, sesame seeds, soybeans, etc.).
   - **Protective Foods:** They are high in vitamins and minerals. They provide the body with specific nutrients that help keep it healthy and protect against infections. They include:
     - Fruits (mango, orange, lemon, papaya, guava, melon, pineapple, etc.) ;
     - Vegetables (tomato, okra, carrot, etc.) ;
     - Green leafy vegetables (salads, dark green leafy vegetables, etc.).
3. **A Balanced Meal: A** balanced meal contains at least one food from each of the three food groups. Examples:
   - Breast milk contains all the elements necessary for a child's needs from zero to six months of age;
   - Tô de mil [Millet porridge] + Sauce feuilles [Leafy stew] + Fish + Fruit.

PRACTICE EXERCISE - Go over the exercise instructions. Specify whether the exercise should be done individually or in teams. Advise participants as to whether they should share their answers. Provide the answer during or at the end of the exercise.

Preparation:

1. Write the names of different foods on pieces of paper. The list may include: Peanut oil, beans, green leafy vegetables, fish, carrots, mangoes, millet, rice, red meat, Shea butter, chicken, tomatoes, eggs, etc.

   Note: This list must be adapted depending on the country.
2. Separate participants into groups of five people.
3. Hand out enough completed pieces of paper to each group.
4. Give each group a large sheet of paper divided into three columns, one for each food group.

Instructions:

1. Ask each group to stick each sheet of paper into the corresponding column.

2. Share and compare each group's answers.

PRACTICE EXERCISE - Go over the exercise instructions. Specify whether the exercise should be done individually or in teams. Advise participants as to whether they should share their answers. Provide the answer during or at the end of the exercise.

Preparation: Hand out one sheet of paper to each participant.

Instructions:

1. Ask each participant to write down a balanced meal they eat at home by specifying its ingredients and the time of day it is eaten.
2. Gather the sheets and make a financial estimate of each meal before sharing this list the next day; it will be useful for community discussions.

SIMULATION/ROLE-PLAY - Review what the participants should simulate or the role(s) they should play. Provide a timeframe for when participants should share their simulation or act out the situation.

Roles:

1. **Aminatou CISSE**: You are the mother of a five-year-old child and are looking for information on balanced meals.
2. **Fatima TRAORE**: You are the CHW visiting Aminatou.

- Share tips for building a balanced meal, including meal examples.

Section 6: Target Groups and Nutritional Needs

"We will now discuss target groups and nutritional needs."

1. Target Groups:

Populations vulnerable for malnutrition are children aged zero to 59 months and pregnant women.
Children are vulnerable because they are in a phase of rapid growth and development. They need a lot of food, both in quantity and in quality, during this period. They are therefore at risk of developing malnutrition. Vulnerability is even greater for children aged zero to 24 months [3].
Pregnant and lactating women are vulnerable because their needs increase due to pregnancy and breastfeeding.

2. Nutritional Needs of each Target Population:

Zero to six months: Exclusive breastfeeding without water, herbal tea, or infusions.

- "Breastfeeding as often as the child requires it. Observe signs indicating that the baby is hungry: he/she starts to get agitated, brings his/her hands to his/her mouth, or makes sucking movements with his/her lips or tongue;
- Breastfeed day and night every time the baby requires it, at least eight times per 24-hour period. Frequent breastfeeding increases milk production;
- If the baby is small (low birth weight): breastfeed at least every two to three hours, awaken the baby to breastfeed him/her after three hours if he/she has not woken up on his/her own;
- Exclusive breastfeeding is particularly important for newborns of HIV-positive mothers. Mixed breastfeeding increases the risk of HIV transmission from mother to child compared to exclusive breast-feeding." **[18]**

Figure 5: Infant's diet from zero to six months **[8]**

Six to nine months: In addition to breastfeeding, enriched porridge should be introduced.

- "Breastfeeding as often as the child requires it;
- Also give them porridge or pureed foods, including animal-based foods and fruits and vegetables rich in Vitamin A;
- Start by giving two to three teaspoons of food. Gradually increase to a 1⁄2 cup (1 cup = 250 mL);
- Give him/her two to three meals per day;
- Offer him/her one or two snacks per day between meals if the child seems hungry." **[18]**

Figure 6: Infant's diet from six to nine months. [8]

Nine to 12 months: In addition to breast milk and enriched porridge, give him/her finely chopped foods that the child can hold with his/her fingers.

- "Breastfeeding as often as the child requires it;
- Also give him/her a variety of foods from the family meal that are crushed or finely chopped, including animal-based foods and fruits and vegetables rich in Vitamin A;
- Give him/her a 1⁄2 cup at each meal (1 cup = 250 mL) ;
- Give him/her three to four meals per day;
- Offer him/her one or two snacks between meals. The child will eat if he/she is hungry;
- For snacks, give him/her small, easy-to-chew foods that the child can hold on his/her own. Let the child try to eat them on his/her own but help him/her if needed." **[18]**

Figure 7: Infant's diet from nine to 12 months **[8]**

12 to 24 months:

- "Breastfeeding as often as the child requires it;
- Also give him/her a variety of foods from the family meal that are crushed or finely chopped, including animal-based foods and fruits and vegetables rich in Vitamin A;
- Give him/her a 3⁄4 cup at each meal (one cup = 250 mL) ;
- Give him/her three to four meals per day;
- Offer him/her one or two snacks between meals;
- Continue feeding the child slowly and patiently. Encourage the child to eat, but do not force it." **[18]**

Figure 8: Infant's diet from 12 to 24 months. **[8]**

After 24 months of age: He/she should be given meals that are rich (especially protein-rich), balanced and diverse, at least five times (the three usual meals and two snacks) a day.

- "Give the child a variety of foods from the family meal, including animal-based foods and fruits and vegetables rich in Vitamin A;
- Give him/her at least one full cup (250 mL) at each meal;
- Give him/her three to four meals per day;
- Offer him/her one or two snacks between meals;
- If the child refuses a new food, offer for him/her to "taste" several times. Show that you like this food. Always be patient;
- Talk with the child during the meal and maintain eye contact." **[18]**

PART 2: ASSESSMENT OF ACUTE MALNUTRITION IN CHILDREN SIX MONTHS TO FIVE YEARS OF AGE

Section 1: Definition of Nutritional Status Assessment

"We will now discuss the nutritional status assessment of children."

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What is a nutritional status assessment?
2. How is nutritional status assessed?

Answers:

1. **Definition of Nutritional Status:** Nutritional status assessment is a process for determining a person's nutritional status.
2. **Nutritional Status Assessment** is based on measurements (e.g., mid-upper arm circumference measurement) as well as information about diet, clinical condition, and psychosocial and economic factors.

   Therefore, there are two parts to this assessment:

   - Nutritional status measurements (for CHWs, an MUAC bracelet will be used);
   - Assessment of the causes of malnutrition (economic factors, other diseases, social factors, etc.).

Section 2: Nutritional Status Assessment in Children under Five Years of Age

"We will now discuss the nutritional status assessment of children under five years of age."

In general, a child's assessment goes through several stages which include: Interview, physical examination, anthropometric measurements and often additional examinations.

1. Interview

The interview is a crucial step in diagnosing and managing children, often leading to diagnostic hypotheses. It must be carried out diligently, paying attention to details and being as thorough as possible, with the cooperation of the children or parents (mother, father, or caregiver).

Topics to address include disease history, symptoms, lifestyle, and personal and family history. It is vital to conduct the interview via active listening, creating a climate of trust and giving the child or caregiver enough time to express himself/herself, and without judgment or interruption, first asking open-ended questions, then specific questions as they arise.

The different questions a provider might ask during a malnutrition assessment of a child are the following:

1.1. Open-ended Questions:

- How do you plan to feed/breastfeed your child?
- What challenges do you face in trying to make sure your child eats well?
- What would you like to learn or know about nutrition and breastfeeding that might be helpful to you?

1.2. More Specific Questions:

- Is the infant exclusively breastfed? If so, congratulate the mother and encourage her to continue in that direction. If not, does the infant usually receive other foods or drinks? Note: The infant should be exclusively breastfed.
- Do you give him/her any other foods in addition to breast milk?
- Do you have any other children? If yes, how many are under the age of five years?

2. Physical Examination

A physical examination is a common medical procedure performed by a provider to supplement the other steps for the assessment of children.

As a follow-up to discussions, we will focus on the physical examination for SAM.

SAM is primarily divided into three forms: forms without edema (marasmus), forms with edema (kwashiorkor), and mixed forms.

- Marasmus is related to a lack of intake of nutritious foods (Quantitative Intake). It usually occurs during a hunger season, during which there is a shortage of food. It is characterized by significant weight loss due to the child not having enough to eat. Thus, the child uses his/her fat stores, which he/she will consume gradually, and then his/her muscles. As a result, the child becomes frail, crying constantly to demand food, which he/she pounces on when he/she receives it.
- Kwashiorkor is severe PEM primarily due to a notable lack of protein in the child's diet. Therefore, this is a lack of qualitative intake, unlike marasmus which is due to a lack of quantitative food intake.

2.2 Looking for Visible And Severe Signs of Weight Loss that are Characteristic of Malnutrition:

To observe visible and severe weight loss in a child, the CHW should:

- Undress the child to look for visible weight loss;
- "Examine the muscles of the shoulders, arms, buttocks, and legs, and check whether the child's ribs are visible;
- Examine the child's hips. They may appear narrow compared to the chest and abdomen;
- Examine the child from the side to see if there is fat in the buttocks. When weight loss is extreme, the buttocks and thighs are wrinkled. The child appears to be wearing pants that are too large for him/her;
- Children who have noticeable, severe weight loss have a face that may look normal. The child's abdomen may be dilated or bloated." **[1]**

Figure 9: *Visible weight loss in two children* **[2]**

2.3 Looking for Edema of Both Feet:

Examine both of the child's feet for edema. This is a sign of severe malnutrition in children. Bilateral pitting edema is a clinical sign of severe malnutrition. It is caused by an abnormal accumulation of fluids in the body.

To detect edema in the feet, it is important to:

- "Apply thumb pressure to both feet for three whole seconds, then remove your thumb;
- Once the thumb is removed, if the pressure leaves an impression (a dimple) on **both** feet, the bilateral, pitting edema is of **a + (low) level**;
- Repeat the same test on the lower legs, hands, and lower arms;
- If the dimple remains on these parts of the body, check if the face is swollen, especially around the eyes;
- If the face is not swollen, the bilateral edema is of **a ++ (moderate) degree.** If the face is swollen, the bilateral edema is of **a +++ (severe) level.**" **[3]**

Figure 10: Technique to look for Bilateral Nutritional Edema. [5]

Note: Non-bilateral edema (not present on both feet or legs) is not of nutritional origin. Only bilateral, pitting (dimples) edema is nutritional edema.

PRACTICE EXERCISE - Go over the exercise instructions. Specify whether the exercise should be done individually or in teams. Advise participants as to whether they should share their answers. Provide the answer during or at the end of the exercise.
Preparation: Divide participants into two groups and give them each one of the two pictures below.
Directions: Ask each group to comment on the image they received and give the techniques to look for edema in the feet. How do they proceed? Or how do they look for edema?

Figure 11: *Edema and skin disorder characteristic of kwashiorkor* **[2]**

3. Methods for Measuring a Child's Nutritional Status.

The methods for measuring a child's nutritional status are as follows:

- Weight/Height ratio;
- Weight/Age ratio;
- Height/Age ratio;
- Body mass index for age;
- Measuring the mid-upper arm circumference with MUAC bracelet.

Note: The tool that we will use to assess malnutrition in children from six months to less than 59 months of age is called an MUAC bracelet.

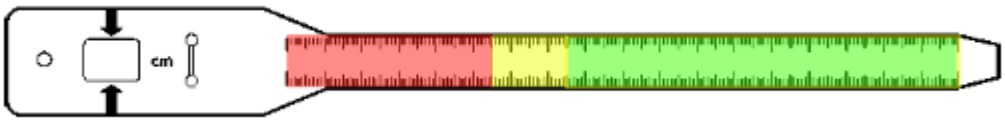

Figure 12: MUAC bracelet [4]

3.1 Measuring the Mid-Upper Arm Circumference:

The mid-upper arm circumference measurement is a measurement of the thickness of muscle tissue and subcutaneous fat, taken at the biceps level in children six months of age and older. It is commonly used at the community level for active screening for malnutrition **[4]**.

This method includes a number of benefits, including:

- Simple;
- Fast;
- Does not require any complicated materials;
- Ideal for the field;
- Does not require knowledge of the child's weight and height.

3.2 MUAC Bracelet Colors and Interpretation:

The MUAC bracelet has three colors, and each color represents a very accurate nutritional status:

Band Color	Nutritional Status
Green (MUAC ≥ 12.5 cm)	Good nutritional status
Yellow (11.5 cm ≤ MUAC < 12.5 cm)	Moderate malnutrition (to be treated at home)
Red (MUAC < 11.5 cm)	Severe malnutrition (requiring referral)

Note: *Always keep in mind that this interpretation must take into account several factors, including the child's clinical condition.*

3.3 Technique for Measurement of Mid-Upper Arm Circumference using the MUAC bracelet:

- "Gently stretch the child's left arm out so that it is straight;
- On the child's arm, find the middle point between the shoulder and elbow;
- Affix the widest end of the bracelet to this center point;
- Wrap the other end of the band around the child's arm;
- Insert the green end of the band through the second small slot of the band underneath it;
- Pull both ends until the band snaps into place, taking care not to overtighten it on the arm;
- Press the opening on the widest side of the band and note the number and color between the markers." **[18]**

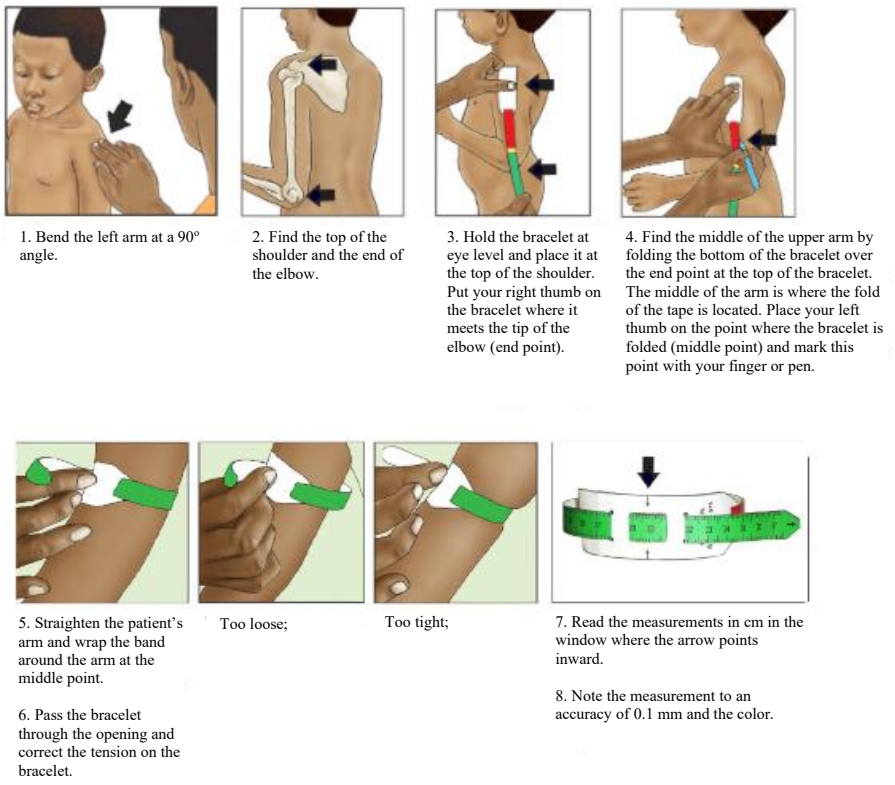

Figure 13: Mid-Upper Arm Circumference Measurement Technique. [4]

3.4 Classification of Acute Malnutrition According to MUAC Bracelet Criteria:

- MAM:
  - MUAC bracelet in the yellow (11.5 cm ≤ MUAC < 12.5 cm) AND
  - No edema.
- SAM:
  - SAM without complications:
    - MUAC bracelet in the red (MUAC < 11.5 cm) AND/OR bilateral edema (+/++) AND
    - Positive appetite test (good or average) AND
    - No wounds on the skin.
  - SAM with complications:
    - MUAC bracelet in the red (MUAC < 11.5 cm) AND/OR bilateral edema (+/++) AND
    - Negative appetite test (poor) AND
    - Presence of wounds on the skin.

Note: The CHW should refer all cases of complicated SAM to the community health center.

In some countries, even cases of severe malnutrition without complications should be referred to the community health center. It is important to present only information relevant to the country-specific protocol.

4. Appetite Test.

The appetite test is an important criterion for classifying acute malnutrition and managing children. The procedures to be followed and explained to the mother for the appetite test are:

- The test should be done at a location away from noise and crowds;
- It is important to wash your hands and sit comfortably with the child on your lap;
- Offer the child a RUTF in a pouch and use a finger to give the child some of the RUTF;

- You should give the child water in a cup at the same time;
- Do not force the child, and try for up to an hour, if necessary;
- When the child is finished, measure how much he/she consumed (graduated cup);
- If the child has consumed at least half or more than half of the RUTF, you can conclude that his/her appetite is adequate or average. However, if the child has not reached this threshold, the child's appetite is considered poor.

Figure 14: Appetite Test Technique. (4)

PRACTICE EXERCISE - Go over the exercise instructions. Specify whether the exercise should be done individually or in teams. Advise participants as to whether they should share their answers. Provide the answer during or at the end of the exercise.

Preparation:

1. Separate participants into two groups;
2. In each group, hand out dolls of different sizes or encourage children with informed consent from their mothers;
3. Hand out MUAC bracelets to participants.

Instructions:

1. Ask each group to indicate the nutritional status of the dolls or children using the mid-upper arm circumference measurement;
2. Share the results of the different groups with the rest of the participants.

PRACTICE EXERCISE - Go over the exercise instructions. Specify whether the exercise should be done individually or in teams. Advise participants as to whether they should share their answers. Provide the answer during or at the end of the exercise.

Preparation:

1. Identify nursery schools where this exercise can be done;
2. Separate participants into groups of eight;
3. Hand out MUAC bracelets to each group.

Instructions:

1. Ask each group to screen for malnutrition in children six months to five years of age in a nursery school over one hour;
2. Each group should then present these results to the other participants, explaining the techniques used to identify each child's nutritional status and identify malnutrition cases.

Section 3: Management of Different Types of Malnutrition in Children

"We will now discuss the management of different types of malnutrition in children."

Management of a malnourished child consists of dietary supplementation and treatment with medication. The type of food and the drugs given depend on the type of malnutrition and the availability of the products.

- Dietary supplementation can be done with several products. In our situation, we will be using commercial or locally prepared enriched flour and the Plumpy supplement.
- Treatment with medication consists of deworming the child and giving the child supplements, such as Vitamin A and iron combined with Folic Acid. The time to give these medications (during detection or during treatment) may depend on the type of product used for dietary supplementation.

In order not to overload the CHWs with information, it is important to only discuss the management that will be provided by CHWs in the community, in accordance with the country-specific protocol and the available medications/supplies. Please check with the program managers about this.

1. Protocol for the Management Of Cases of MAM with Enriched flour:

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What is enriched flour?
2. What are the criteria for the CHW to manage MAM?
3. How is the management of MAM with enriched flour carried out?
4. When should follow-up be done, and what should be done at follow-up after the management of MAM with enriched flour?
5. What should be done at the end of a follow-up for the management of cases of MAM?

Answers:

1. Enriched flour is a mixture of several products to obtain a composition enriched with the micronutrients needed for the growth of children. These products may include millet, soy, peanut, monkey bread, sugar, and salt. The composition depends on the availability of the products in the country. It can be made locally or bought at a local market. Examples of commercial enriched flour include Misola and Vitablé.

2. The management criteria of MAM by the CHW are the following:
   - MUAC bracelet in the yellow (11.5 cm ≤ MUAC < 12.5 cm).
   - No edema.

3. The management of MAM by the CHW with enriched flour consists of:
   - **Dietary Supplementation:** Management is done with one to four bags of flour per week in addition to dietary supplementation.
   - **Systematic Treatment** is carried out with Albendazole, Vitamin A, iron + Folic Acid combined, at the following dosage:

Medications	Age of Child	Amounts	Observations
Vitamin A	6 months to less than 12 months	One capsule of 100,000 IU (one blue capsule)	Single dose at start of treatment
	12 months to less than	One capsule of 200,000 IU (one red	

	59 months	capsule)	
Albendazole	12 months to less than 24 months	One tablet of 200 mg	Single dose at start of treatment
	24 months to less than 59 months	One tablet of 400 mg	
Iron + Folic Acid	Less than 10 kg	1⁄2 tablet	Once a week for two months after the 14th day of treatment
	10 kg and over	One tablet	

4. Follow-up after the management of MAM is done for three months according to the following plan:
   - 1st month: every week (every seven days);
   - 2nd and 3rd month: every two weeks (every 15 days).

   During follow-up, the CHW should:
   - Measure the mid-upper arm circumference;
   - Look for warning signs;
   - Make sure the child is eating the therapeutic foods;
   - Educate parents to encourage them to properly follow-up on the treatments given to the child;
   - Inform the parents of the date for the next follow-up;
   - Inform parents that if warning signs appear, the CHW should be contacted urgently.

   Note: Follow-up days should coincide with the days when enriched flour is provided.

5. At the end of a follow-up, there are five possible courses of action based on the results of the assessment performed at the follow-up visits:

Continuation of Follow-Up;	**Referral to Community Health Center without stopping Follow-up;**	**Referral to Community Health Center with end of Follow-up;**	**Dropout;**	**Recovery.**
When the child's condition improves with a positively evolving result on the MUAC bracelet with no warning signs and no edema, and as long as the time in the program is not reached.	• Onset of warning signs; • Diarrhea; • Pneumonia; • Impression of weight loss or lack of weight gain according to the mother.	• Onset of edema during treatment; • Three "yellow" results in a row from the first follow-up (for MAM cases); • "Red" result at any time; • Onset of skin wounds.	After three absences in a row with certainty that the patient is no longer in the area or without giving clarification OR a categorical refusal by the family to keep the child in the program even if he/she is not cured.	• MUAC ≥ 12.5 cm: Two measurements in a row; • Clinically well (without warning signs); • Minimum three weeks of treatment; • No edema for two weeks.

Some Important Points:

- **In Case of Referral without Stopping Follow-up:** the CHW should carry out a follow-up after the child's referral for three days and then continue with the MAM follow-up as per protocol.
- **In Case of Referral with end of Follow-up:** the CHW should carry out a follow-up after the child's referral for three days, if the child is not hospitalized; otherwise, he/she should regularly ask the family about the child. This child may continue his/her treatment at the community health center until recovery or be referred back to the CHW for further management by the CHW as a new patient following an assessment indicating the type of malnutrition.

SIMULATION/ROLE-PLAY - Review what the participants should simulate or the role(s) they should play. Provide a timeframe for when participants should share their simulation or act out the situation.
Preparation: Prepare a saucepan or pot, gas, and different kinds of cereal (rice, millet, beans, corn, etc.), oil and sugar, and a commercial enriched flour.
Simulation: demonstrate:

1. How to prepare porridge from the commercially enriched flour.
2. How to make and prepare porridge from the locally enriched flour.

Answers:

1. Preparation of the porridge from commercially enriched flour:

- In a bowl, mix one part enriched flour and one part water using the same instrument;
- Boil another part of water in a saucepan;
- Pour the diluted flour into the boiling water;
- Continue to heat by stirring over low heat for a few minutes;
- Remove from the heat and be sure not to dilute the porridge;
- After cooling, add fruit juice if available.

2. Making and preparing porridge from locally enriched flour:

- Three level ladles of cereal flour (millet, corn, etc.) ;
- One level ladle of bean flour;
- Sugar or salt;
- Tamarind, lemon, or monkey bread powder depending on preference and availability;
- Oil or Shea butter depending on preference and availability.

Preparation:

- Roast (grill in a pot) both types of flour separately;
- Boil water (1 liter) ;
- Mix both types of flour together in cold water;
- Pour into the boiling water;
- Cook over low heat for 10 minutes;
- Stir and add the tamarind, lemon or monkey bread powder, salt or sugar, as well as oil, shea butter, or fat at the end of cooking.

Note: Bean flour can be replaced by soy flour, cotton seed flour, dry, smoked fish flour, peanut powder, peanut paste, or egg.

PRACTICE EXERCISE - Go over the exercise instructions. Specify whether the exercise should be done individually or in teams. Advise participants as to whether they should share their answers. Provide the answer during or at the end of the exercise.
Preparation: Ask participants to take a sheet.
Instructions:
For each of the children below, determine the amount of Vitamin A and Dewormer to be given to them.

First and Last Name	Age	Amount of Vitamin A	Amount of Dewormer
Issa COULIBALY	9 months		
Moussa N'DIAYE	14 months		
Nana TOURE	22 months		

Oumou SOGOBA	59 months		

2. Protocol for the Management of Cases of Malnutrition with the Plumpy Supplement:

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What is the Plumpy supplement?

Answers:

1. Plumpy supplement is a RUTF used for the management of moderate or SAM.
   Plumpy is available in two forms: Plumpy Sup for the management of cases of MAM and Plumpy Nut for the management of cases of SAM.
   Plumpy is ideal for the management of cases of malnutrition, as it does not require a preparation effort on the part of the community.

2.1 MAM Case Management Protocol with Plumpy Sup:

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What are the criteria for the CHW to manage MAM?
2. How is the management of MAM with Plumpy Sup carried out?
3. When should follow-up be done, and what should be done at follow-up after the management of MAM with Plumpy Sup?
4. What are the possible courses of action during a follow-up?

Answers:

1. The management criteria of MAM by the CHW are the following:
   - MUAC bracelet in the yellow (11.5 cm ≤ MUAC < 12.5 cm).
   - No edema.
2. Management of MAM with Plumpy Sup by the CHW consists of:
   - **Dietary Supplementation:** Management is done with Plumpy Sup at a rate of one sachet per day, regardless of age, weight, value of MUAC measurement, and for the entire duration of treatment in addition to dietary supplementation.
   - **Systematic Treatment** is carried out with albendazole, vitamin A, iron + folic acid combined, at the following dosage:

Medications	Age of Child	Amounts	Observations
Vitamin A	6 months to less than 12 months	One capsule of 100,000 IU (one blue capsule);	Single administration on the 21st day (third follow-up);
	12 months to less than 59 months	One capsule of 200,000 IU (one red capsule);	
Albendazole	12 months to 24 months;	One tablet of 200 mg	Single administration on the 7th day (first follow-up);
	24 months to less than 59 months	One tablet of 400 mg	
Iron + Folic Acid	Less than 10 kg	1⁄2 tablet	Once a week for two months after

	More than 10 kg.	One tablet	the 14th day of treatment

3. Follow-up after the management of MAM is done for three months according to the following plan:
   - 1st month: every week (every seven days).
   - 2nd and 3rd month: every two weeks (every 15 days).

   During follow-up, the CHW should:
   - Measure the mid-upper arm circumference.
   - Look for warning signs.
   - Make sure the child is eating the therapeutic foods.
   - Educate parents to encourage them to properly follow-up on the treatments given to the child.
   - Inform the parents of the date of the next follow-up.
   - Inform parents that if warning signs appear, they should contact the CHW urgently.

   Note: Follow-up days should coincide with the days when Plumpy Sup is distributed.

6. At the end of a follow-up, there are five possible courses of action based on the results of the assessment performed at the follow-up visits.

Continuation of Follow-Up;	**Referral to Community Health Center without stopping Follow-up;**	**Referral to Community Health Center with end of Follow-up;**	**Dropout;**	**Recovery.**
When the child's condition improves with a positively evolving result on the MUAC bracelet with no warning signs and no edema, and as long as the time in the program is not reached.	• Onset of warning signs; • Diarrhea; • Pneumonia; • Impression of weight loss or lack of weight gain according to the mother.	• Red from first follow-up; • Onset of edema during treatment; • Three "yellow" results in a row from first follow-up (for MAM cases); • Onset of skin wounds.	After three absences in a row with certainty that the patient is no longer in the area or without giving clarification OR a categorical refusal by the family to keep the child in the program even if he/she is not cured.	• MUAC ≥ 12.5 cm (green) for three measurements in a row after admission, • No bilateral edema, • No warning signs, • No diarrhea, • No cough, • No impression of weight loss or lack of weight gain according to the mother, • Minimum three weeks of treatment.

Some Important Points:

- **In Case of Referral without Stopping Follow-up:** the CHW should carry out a follow-up after the child's referral for three days and then continue with the MAM follow-up as per protocol;
- **In Case of Referral with end of Follow-up:** the CHW should carry out a follow-up after the child's referral for three days, if the child is not hospitalized; otherwise, he/she should regularly ask the family about the child. This child may continue his/her treatment at the community health center until recovery or be referred back to the CHW for further management by the CHW as a new patient following an assessment indicating the type of malnutrition.

CASE STUDY - Share the story with participants. Be sure to answer all the comprehension questions. Then ask questions one at a time to the participants. Specify whether the work should be done together, as a team, or individually. Advise participants as to whether they should share their answers. Provide a timeframe in which to do this work. Summarize the concept illustrated by this story at the end of the study.
Story:

Ousmane TOURE, nine months, son of Oumou TRAORE and Oumar TOURE, motorcycle repairman in Sèche, Tori health area (select a preferred health area). Ousmane has an MUAC bracelet in the yellow measured at 12 cm and no edema.

Questions:

1. What is the COA for Ousmane's management, both for dietary supplementation with Plumpy Sup and for systematic treatment with medications?
2. What will be Ousmane's follow-up?

Answers:

1. Dietary management: Ousmane has MAM that must be managed with Plumpy Sup at a rate of one sachet per day for three months. Inform the mother that, in addition to Plumpy Sup, she will need to give her child a dietary supplement.
   Systematic treatment with medications: Vitamin A at the third follow-up and Iron + Folic Acid from the second follow-up until the end of treatment.
   Note: Albendazole was not given because Ousmane is not yet one year old.
2. Follow-up will take place using this schedule: 1st month: every week (every seven days); 2nd and 3rd month: every two weeks (every 15 days).

CASE STUDY - Share the story with participants. Be sure to answer all the comprehension questions. Then ask questions one at a time to the participants. Specify whether the work should be done together, as a team, or individually. Advise participants as to whether they should share their answers. Provide a timeframe in which to do this work. Summarize the concept illustrated by this story at the end of the study.

Story:

Souleymane, a two-year-old child, receives follow-up by his CHW for MAM. At the third follow-up visit, the CHW found that Souleymane had a cough for less than 14 days and a high breathing rate of 45 breaths per minute. The MUAC bracelet measurement indicates a green color.

Questions:

1. What should you do right away?
2. What will be Souleymane's follow-up for MAM?

Answers:

- Onset of pneumonia;
- Referral to health center without stopping follow-up;
- Follow-up on the child's referral for three days;
- Continue with his follow-up for MAM upon his return.

a. Management of Uncomplicated SAM with Plumpy Nut:

BRAINSTORMING – Ask each question to participants. Write their answers on a large sheet of paper. Then present the corresponding answer.

Questions:

1. What are the criteria for the CHW to manage uncomplicated SAM?
2. How is uncomplicated SAM managed with Plumpy Nut?
3. When should follow-up be done, and what should be done at follow-up after the management of uncomplicated SAM with Plumpy Nut?
4. What are the possible courses of action during a follow-up?

Answers:

1. The criteria for management of uncomplicated SAM by the CHW are the following:

- MUAC bracelet in the red (MUAC < 11.5 cm) AND/OR bilateral edema (+/++) AND
- Positive appetite test (good or average) AND
- No wounds on the skin.

2. Management of uncomplicated SAM by the CHW consists of:

- Plumpy Nut, which is given based on the child's weight:

WEIGHT CLASS (KG)	SACHETS/DAY	SACHETS/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

Weight is measured with the scale according to the following steps:

a. Make sure that the scale is properly calibrated and ready to use.
b. Place the undressed child on the scale, making sure he/she is calm and still. If necessary, ask the mother or another adult to hold the child to ensure his/her stability.
c. Read and record the weight displayed on the scale. It is recommended to record the weight to an accuracy of at least 100 grams.
d. To measure the mother's weight, ask her to climb on the scale alone, then record the weight that is displayed.
e. To calculate the child's weight only, subtract the mother's weight (if measured) from the total weight displayed on the scale.
f. Record the weight measurements in the child's medical record or using another appropriate recording system.

- Systematic treatment with Albendazole, Amoxicillin, ACT if the malaria RDT is positive.
- Check the vaccination record to see if the child has received the measles vaccine (AMV).

Medications	Age of Child	Amounts	Observations
Amoxicillin 250 mg	6 months to less than 12 months	5 mL in the morning and 5 mL in the evening.	For seven days from diagnosis (admission).
	12 months to less than 59 months	10 mL in the morning and 10 mL in the evening.	
ACT 20/120	Six months to less than 36 months,	One tablet in the morning and one tablet in the evening.	For three days from diagnosis (admission).
	36 months to less than 59	Two tablets in the morning	

	months,	and two tablets in the evening.	
Albendazole	12 months to less than 24 months	One tablet of 200 mg or 1⁄2 tablet of 400 mg.	Seventh day (1st follow-up) as a single dose from 12 months.
	24 months to less than 59 months	Omne tablet of 400 mg.	
Measles Vaccination.	Nine months to less than 59 months,	Check your child's vaccination record.	Fourth follow-up.

Note: For any uncomplicated cases of SAM, the CHW should systematically perform the malaria RDT.

3. Follow-up of uncomplicated SAM is done weekly until the criteria for recovery, dropout, or referral to the community health center are met with termination of follow-up.

During follow-up, the CHW should:

- Measure the mid-upper arm circumference.
- Look for warning signs.
- Make sure the child is eating the therapeutic foods.
- Communicate with parents to encourage them to properly follow-up on the treatments given to the child.
- Inform the parents of the date of the next follow-up.
- Inform parents that if warning signs appear, they should contact the CHW urgently.

Note: Follow-up days should coincide with the days when Plumpy Nut is distributed.

4. At the end of a follow-up, there are five possible courses of action based on the results of the assessment performed at the follow-up visits.

Continuation of Follow-Up;	**Referral to Community Health Center without stopping Follow-up;**	**Referral to Community Health Center with end of Follow-up;**	**Dropout;**	**Recovery.**
When the child's condition improves with a positively evolving result on the MUAC bracelet with no warning signs and as long as the time in the program is not reached.	• Onset of warning signs; • Diarrhea; • Pneumonia; • Impression of weight loss or lack of weight gain according to the mother;	• Onset of edema during treatment. • Edema still present at the second follow-up for children admitted with edema, • Failure of the appetite test at any time, • Three "red" results in a row from first follow-up (for SAM cases),	After three absences in a row with certainty that the patient is no longer in the area or without giving clarification OR a categorical refusal by the family to keep the child in the program even if he/she is not cured.	• MUAC ≥ 12.5 cm: two measurements in a row, • No warning signs, • Minimum three weeks of treatment. • No edema lasting two weeks.

Some Important Points:

- **In Case of Referral Without Stopping Follow-up:** The CHW should carry out a follow-up after the child's referral for three days and then continue with the SAM follow-up as per protocol.
- **In Case of Referral With End of Follow-up:** The CHW should carry out a follow-up after the child's referral for three days, if the child is not hospitalized; otherwise, he/she should regularly ask the family about the child. This child may continue his/her treatment at the community health center until recovery or be

referred back to the CHW for further management by the CHW as a new patient following an assessment indicating the type of malnutrition.

CASE STUDY - Share the story with participants. Be sure to answer all the comprehension questions. Then ask questions one at a time to the participants. Specify whether the work should be done together, as a team, or individually. Advise participants as to whether they should share their answers. Provide a timeframe in which to do this work. Summarize the concept illustrated by this story at the end of the study.

Story:

Fanta is 3 years old, her parents did not go to school, and they are hard to convince. During your routine visits, you met Fanta, whose has an MUAC bracelet in the red with edema. She has a good appetite and has no warning signs or skin wounds.

Questions:

1. How will you convince Fanta's parents to accept her management?
2. How should Fanta be managed with therapeutic foods?
3. How will you manage her systematically with medications?
4. What will be Fanta's follow-up?

Answers:

1. Social and behavior change communication: to convince Fanta's parents to accept her management, it is important to adopt an empathetic and educational approach. Here are some possible steps:
   - Build trust: Take time to talk with her parents, listen to their concerns and show that you care about their child's well-being.
   - Explain the severity of the situation: Tell the parents that the MUAC bracelet in the red with edema that Fanta has is a sign of severe malnutrition and that early intervention is needed to ensure optimal health and growth.
   - Educate them on the benefits of management: Inform the parents about the benefits of Fanta's management, such as improved health, growth, and cognitive development. Explain that this can prevent long-term complications.
   - Simplify information: Given that her parents are illiterate, use simple words and concrete examples to explain the need for therapeutic nutrition and medications.
2. Dietary management: Fanta presents SAM without complications, the management of which must be done with Plumpy Nut due to her weight. Note: No other food outside of breast milk should be consumed by the child until the end of treatment.
3. Systematic treatment with medications:
   - Amoxicillin: On diagnosis,
   - Albendazole: One week after diagnosis (1st follow-up),
   - If the malaria RDT is positive: Administer ACT for three days,
   - Check the vaccine record for the measles vaccine: from the fourth follow-up.
4. Follow-up is done weekly until the criteria for recovery, dropout, or referral to the community health center are met with termination of follow-up or until death.

CASE STUDY - Share the story with participants. Be sure to answer all the comprehension questions. Then ask questions one at a time to the participants. Specify whether the work should be done together, as a team, or individually. Advise participants as to whether they should share their answers. Provide a timeframe in which to do this work. Summarize the concept illustrated by this story at the end of the study.

Story:

Aminata, a three-year-old child, received follow-up by her CHW for SAM without complications. At the second follow-up visit, the CHW finds that the child has a warning sign (vomits everything she eats). The MUAC bracelet measurement indicates a yellow color.

Questions:

1. What should you do right away?
2. What will be Aminata's follow-up for SAM?

Answers:

- Onset of a warning sign,
- Referral to the health center without discontinuing follow-up,
- Follow-up on the child's referral for three days,
- Continue with her follow-up for SAM upon her return,

Section 4: Assessment and Post-Test

1. **Assessment:**

"We are going to do an assessment of this training module."

1. **ASK** participants what their thoughts are on this training module.
2. Then **ASK** the following questions:
    a. What aspects did you find most useful, and which should be maintained or even reinforced for the remainder of this training or for future training?
    b. What aspects were not beneficial to you and did not help you understand the concepts?
    c. What aspects can we improve?
3. **REMIND** participants that there is a suggestion box, and they should not hesitate to use it.
4. **REVIEW** the module objectives and ask participants if they achieved these objectives. If this is not the case, ask them why and summarize these objectives to achieve a better understanding.

2. **Post-test:**

- *Advise participants that we are moving on to the post-test.*
- *Hand out a copy of the post-test to all participants.*
- *Read and go over the questions one at a time pausing (30 seconds per question) to encourage participation.*
- *At the end, thank all participants and collect the forms.*

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