COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION

MODULE ONE

Overview of Community-Based Management of Acute Malnutrition (CMAM)

Module Overview

This module is a general orientation to or overview of Community-Based Management of Acute Malnutrition (CMAM). It describes the extent of the problem of acute malnutrition. It discusses how CMAM differs from traditional approaches to managing severe acute malnutrition (SAM), which until recently were exclusively centre-based until full recovery for SAM with or without medical complications. The module outlines the key concepts, principles and components of CMAM. It notes the recent innovations making CMAM possible, such as ready to-use therapeutic food (RUTF) and the use of mid-upper arm circumference
(MUAC) as a rapid screening and admission tool for potential beneficiaries. The module briefly looks at the evidence to date from the experience of CMAM services in emergency settings. It notes how CMAM might be applicable in different contexts and incorporated into routine health services and national policies and guidelines. In addition, recent global commitments to CMAM are mentioned.

CMAM evolved from Community-Based Therapeutic Care (CTC), which is a community-based approach for the management of acute malnutrition in emergency settings and comprises community outreach, supplementary feeding programs (SFPs), outpatient therapeutic programs (OTPs) and stabilization centers (SCs). Other variants of CMAM include ambulatory care or home-based care for SAM. The term CTC is in use in certain countries or for emergency interventions. Most implementation experience and evidence to date is from CTC.

Overview of Community-Based management of acute malnutrition (CMAM): Classroom

LEARNING OBJECTIVES	HANDOUTS AND EXERCISES
Introduce Participants, Training Course, Modules, and Course objectives	Handout 1.1 Abbreviations and Acronyms Handout 1.2 Terminology for CMAM Handout 1.3 References and Further Reading PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM) OPTIONAL: Handout 1.15 PowerPoint Presentation Slide Images
1. Discuss Acute Malnutrition and the Need for a Response	Handout 1.4 Key Information on Undernutrition PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM)
2. Identify the Principles of CMAM	Handout 1.5 CMAM Principles PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM)
3. Describe Recent Innovations and Evidence Making CMAM Possible	Handout 1.6 Classification of Acute Malnutrition for CMAM Handout 1.7 Screening and Admission Using MUAC PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM) RUTF packets Colored MUAC tapes (designed for use in community-based programs)
4. Identify the Components of CMAM and How They Work Together	Handout 1.8 CMAM Components and How They Work Together PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM)
5. Explore How CMAM Can Be Implemented in Different Contexts	Handout 1.9 Case Studies Handout 1.10 Implementing CMAM in Different Contexts Handout 1.11 Factors to Consider in Seeking to Provide Services for the Management of SAM Handout 1.12 Integrating CMAM into Routine Health Services at the District Level PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM)
6. Identify Key National and Global Developments and Commitments Relating to CMAM	WHO, WFP, the UN/SCN and UNICEF. 2007. Community-based management of severe acute malnutrition: A joint statement. Video 1. Concern Worldwide Ethiopia Video PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM)
Wrap-up and Module Evaluation	Handout 1.13 Essentials of CMAM
Field Visit to Outpatient Care Site	Handout 1.14 Field Visit Checklist

MATERIALS

- Computer and projector for PowerPoint: Overview of Community-Based Management of Acute Malnutrition (CMAM)
- Post-it notes or colored cards
- Flip chart and markers
- Masking tape
- RUTF packets
- Colored MUAC tapes
- *Community-based Therapeutic Care (CTC): A Field Manual*, 2006
- World Health Organization (WHO), World Food Programme (WFP), the United Nations System Standing Committee on Nutrition (UN/SCN), and the United Nations Children's Fund (UNICEF). 2007. Community-based management of severe acute malnutrition: A joint statement.
- Video 1. Concern Worldwide Ethiopia video

Advance preparation

- Room setup, materials noted above
- Review and, if necessary, adapt "Overview of CMAM" PowerPoint presentation (this may include removing, adding or reorganizing slides). Review all participant handouts. If no adaptation is needed, trainers may decide to distribute **Handout 1.15 PowerPoint Presentation Slide Images** that provides a thumbnail image of all of the slides currently in the "Overview of CMAM" PowerPoint presentation.
- **Optional:** Arrange for a guest speaker(s) to discuss the design and planning of a CMAM intervention. The speaker should preferably be someone from the Ministry of Health (MOH) (regional or district level) who has experience in planning and setting up CMAM services. The speaker can also be someone from a nongovernmental organization (NGO) who has worked closely with the MOH. (Give guidance on the case study to be presented if a guest speaker is invited.)

Module duration: one hour in classroom followed by a one-day site visit

Note: Depending on the needs of their audience(s), trainers may choose to skip or spend more or less time on certain learning objectives and activities. The module duration is an estimate of the time it takes to complete all learning objectives and activities.

Introduce participants, training Course, modules, and Course objectives

Become familiar with **Handout 1.1 Abbreviations and Acronyms**, **Handout 1.2 Terminology for CMAM**, and **Handout 1.3 References and Further Reading**.

ICEBREAKER: PRESENTATION OF NEIGHBOUR. Ask participants to introduce themselves and say a little about why they are attending the training, what their interest is in attending the course and how they plan to use the skills they will acquire.

Alternative icebreaker: Ask participants to pair up and interview each other about their experience with programs managing acute malnutrition. Have them ask each other whether they are involved in services or programs to address SAM or moderate acute malnutrition (MAM), and whether community-based or facility-based, etc. Then, have participants introduce their partners and share this information. Discuss similarities and varieties of experiences.

POWERPOINT: PRESENTATION OF COURSE PURPOSE AND OBJECTIVES (Show slides 1-2.) Ask participants to write three things they expect to gain from the training on cards or Post-it notes, one expectation per card. Collect the expectations and group similar ones together. Post the expectations in the training room and discuss them.

Present course purpose and objectives (PowerPoint slides 1-2). Compare the learning objectives to participants' expectations, and explain which expectations are likely and unlikely to be met during the training. Leave the expectations posted during training and review them at the end of each day.

Tell participants that a flip chart will be kept free to post ideas, questions and suggestions that arise throughout the course (often referred to as a "parking place"). Check the parking place periodically throughout the course and respond.

Refer participants to **Handout 1.1 Abbreviations and Acronyms**, **Handout 1.2 Terminology for CMAM**, and **Handout 1.3 References and Further Reading**. Ask them to use them as reference tools and invite questions now or at any point in the training.

Learning objective 1:

Discuss acute malnutrition and the need for a response

LO.1

Become familiar with **Handout 1.4 key Information on undernutrition**.

BRAINSTORM: UNDERNUTRITION AS A PUBLIC HEALTH CONCERN. Ask participants to contemplate the statement "Undernutrition is a public health concern" and to brainstorm reasons whether and why this statement is true.

PARTICIPATORY LECTURE: INTRODUCTION TO ACUTE MALNUTRITION. Ask participants "What is acute malnutrition?" and "Why is a focus on acute malnutrition important?" Discussion should touch on the difference between MAM and SAM, and text from **Handout 1.4 key Information on undernutrition.**

	bilateral Pitting Edema	**MUAC***	**WFH z-score** (WHO standards or NCHS references)	**WFH as a percentage of the median** (NCHS references)
SAM:	Present	< 115 mm*	< -3	< 70%
MAM:	Not present	> 115 mm* and < 125 mm*	≥ -3 and < -2	≥ 70% and < 80%

POWERPOINT: UNDERNUTRITION AND ACUTE MALNUTRITION. (Show slides 3-6)

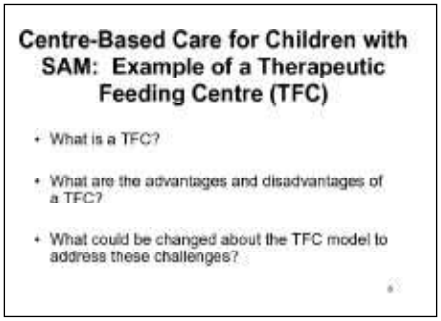
Slide 4: Ask participants what they see and to describe the nutritional status of all three children. Tell participants all three children are the same age. Discuss how this change their impressions of the children's nutritional status. Note: The child on the left is stunted, the middle child is normal and the child on the right is wasted and probably stunted as well.

Slide 6: Remind participants that SAM contributes to about one million deaths of children under 5 each year. The Lancet article (2006) highlighted the extent of the problem of acute malnutrition. Note to participants that:

- Acute malnutrition does not just occur in emergencies and is not limited to Africa.
- Wasting occurs in both emergencies and nonemergencies.
- India and Pakistan (non-emergency settings) have the highest number of children with severe wasting; 78 percent of the world's wasted children live in India, Pakistan and Bangladesh.
- Madagascar has the highest prevalence of severe wasting, above the emergency threshold for response to wasting
- Ranking is based on absolute numbers of severe wasting and will change when based on overall wasting.

lo.1

POWERPOINT: THE TRADITIONAL RESPONSE TO SAM. (Show slides 7-12.)



Slide 8: Ask participants what a therapeutic feeding centre (TFC) is. Explain that TFCs are also known as nutrition rehabilitation units (NRUs) and others. TFCs provide inpatient care for treating malnourished children; children with SAM receive F75 and F100 milk and medical care by trained clinical staff in a centralized facility with 24-hour care.

- Ask participants about the impact on coverage if treatment is provided only in centralized facilities by trained medical staff. What are the implications for patients and their mothers/caregivers?
- Ask what the implications are if ALL children with SAM are admitted as inpatients to a centre or health facility. What are the implications for inpatient capacity, availability of resources and quality of care? What about the possibility of cross-infection with so many children in overcrowded facilities?

Slide 9-12: Explain to participants, if not already addressed in discussion above, that because cent rebased care requires specially trained staff, facilities with beds and 24-hour medical care, there are few centers that cover large areas. These centers can become very overcrowded, especially in populations with a high incidence of SAM in both development and emergency contexts. As the centers become overcrowded, already vulnerable children become increasingly at risk for cross-infection and the facility can become overwhelmed (e.g., staff, equipment, supplies, beds).

Learning objective 2:
Identify the principles of CMAM

LO.2

Become familiar with **Handout 1.5 CMAM Principles**.

BUZZ GROUPS: WHAT IS CMAM. Have participants form groups of two or three to quickly name, if they can, a few key facts about CMAM. Write responses on a flip chart.

POWERPOINT: INTRODUCTION TO CMAM (Show slides 13-19.)
Highlight the four main components:

1. Community outreach
2. Outpatient care for SAM without medical complications
3. Inpatient care for SAM with medical complications
4. Services or programs for management of MAM can be provided depending on the context

DISCUSSION: COMMUNITY-BASED VS. CENTRE-BASED APPROACHES FOR THERAPEUTIC FEEDING.

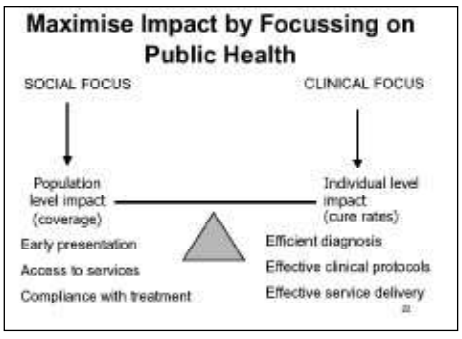
Ask participants to quickly highlight some advantages of CMAM in comparison to centre-based approaches, then discuss the disadvantages. Write responses on a flip chart and be prepared to return to this topic.

POWERPOINT: PRINCIPLES OF CMAM (Show slides 20-22.)

Refer participants to **Handout 1.5 CMAM Principles** and review briefly together. Explain that in bringing together the four main components of CMAM, services can be carried out according to the following key principles:

1. Maximum access and coverage
2. Timeliness
3. Appropriate medical and nutrition care
4. Care for as long as it is needed

Slide 22: Explain that CMAM is a public health approach (treating as many as possible in outpatient care), as compared to the traditional centre-based approach (treating individuals in a 24-hour clinical setting). As such, it illustrates a shift from the individual to the population.



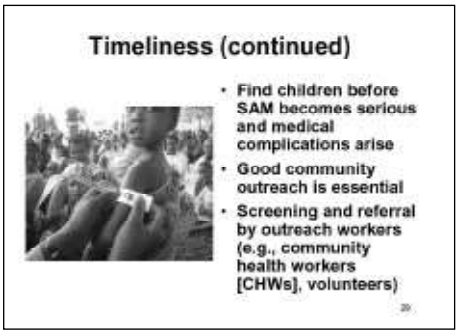
POWERPOINT: KEY PRINCIPLE 1. MAXIMUM ACCESS AND COVERAGE
(Show slides 23-26.)

Slides 24-25: The first scenario provides care at a national level only. The second scenario shows the provincial geographical coverage when many decentralized outpatient care sites were established.

LO.2

POWERPOINT: KEY PRINCIPLE 2. TIMELINESS (Show slides 27-30.)

Slide 29: Note to participants that this is a child with SAM who is still alert, likely has a good appetite, and can be treated as an outpatient. The colored strip measures MUAC in children ages 6-59 months. Outreach workers (e.g., lady health workers [LHWs], volunteers) can easily identify children with acute malnutrition using MUAC tape and can be trained to recognize bilateral pitting edema. This makes it easy to identify children with acute malnutrition in the community.



POWERPOINT: KEY PRINCIPLE 3. APPROPRIATE MEDICAL AND NUTRITION CARE (Show slides 31-32.)

Slide 32: An assessment of the medical condition following the integrated management of childhood and neonatal illness (IMNCI) approach as well as the appetite test will determine whether the child can be treated as an outpatient with regular visits to the health facility or must be referred to inpatient care.

POWERPOINT: KEY PRINCIPLE 4. CARE FOR AS LONG AS IS NEEDED (Show slides 31-32.)

discussion: Ask participants if they have further thoughts on the advantages or disadvantages of community-based versus centre-based therapeutic care. Then ask how each of the components contributes to achieving the principles.

Learning objective 3:

Describe recent innovations and evidence making CMAM possible

Become familiar with **Handout 1.6 Classification of Acute Malnutrition for CMAM** and **Handout 1.7 Screening and Admission using MUAC**.

ELICITATION: Ask participants if any can name innovations that have made CMAM possible. Direct conversation to the following three innovations:

1. Availability of RUTF
2. Classification of acute malnutrition for CMAM
3. Screening and admission using MUAC

POWERPOINT: AVAILABILITY OF RUTF (Show slides 35-39.)

Slide 36: Explain that RUTF is an oil-based paste with very low water activity. It does not grow bacteria even when accidentally contaminated. It is safe to use in most environments. It is energy-dense but the quantity of proteins, fat, vitamins and minerals per 100 kilocalories (kcal) is equivalent to that of F100, recommended by WHO for the inpatient treatment of SAM. RUTF can be eaten straight from the packet or pot and can be consumed easily by children from the age of 6 months. No water is added.

Slide 37: RUTF has distinct advantages over the traditional milk-based therapeutic diets: F100, which can be easily contaminated, should never be used for outpatient care, while RUTF can be kept in simple packaging for several months without refrigeration. RUTF can be kept for several days even when opened. Also, RUTF contains iron, while F100 does not.

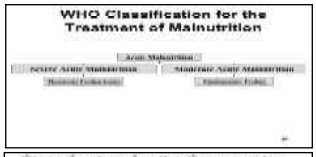
Slide 38: RUTF can be produced locally using simple equipment. However, thorough inspections and quality control are needed for large-scale local production to ensure that there is no risk of contamination of the ingredients and that the product has the right composition and quality. The cost for local production can vary based on availability of ingredients and the capacity of local manufacturers.

DEMONSTRATION: FAMILIARIZATION WITH RUTF AND ITS PACKAGING.
After the PowerPoint slides, distribute RUTF packets so that participants can familiarize themselves with the product.

LO.3

POWERPOINT: ACUTE MALNUTRITION CLASSIFICATION FOR CMAM

(Show slides 40-41.)



Slide 40: Note to participants that in the past, acute malnutrition was divided into two categories which determined the mode of treatment.

Slide 41: An updated classification has been proposed for use in CMAM: dividing the category for children with SAM into SAM with medical complications and SAM without.

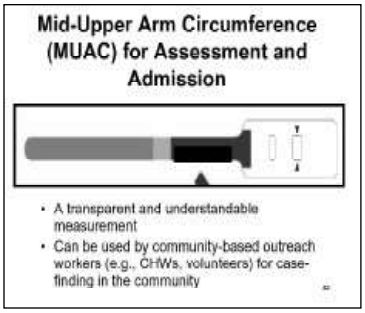
ELICITATION: COMPARING THE TWO CLASSIFICATIONS. Ask participants what has changed between the two classifications and what implications this has for treating children with SAM. Fill in the gaps:

- The new classification recommends that children with SAM and medical complications be treated in inpatient care until their condition is stabilized. This ensures that children with increased mortality risk are treated appropriately.
- It also recommends that those with SAM with appetite and without medical complications be treated in outpatient care.

Ask participants about critical factors in identifying children with medical complications. Note that the most critical indicator of whether a child with SAM requires inpatient or outpatient care is APPETITE.

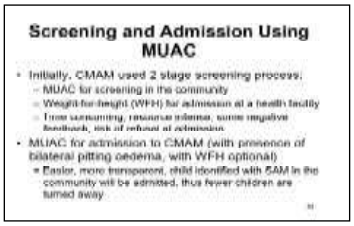
POWERPOINT: SCREENING AND ADMISSION USING MUAC (Show slides 42-44.)

Slide 42: Note that:



- MUAC makes it easy to understand how children are classified and whether they will qualify for treatment. This increases transparency and community support for the program.
- MUAC is simple to use. A MUAC tape can be used by one person and is easily transportable. It can fit into a pocket. It also does not require literacy, numeracy or additional equipment. This makes it easy to use at the community level, increasing the likelihood of early identification and presentation. However, simple training is needed to ensure correct use of the MUAC tape.

Slide 43: Note that:



- MUAC is used for identification of SAM during screening at the community level and admission for treatment at the health facility. Using MUAC alone for admission means that all children who are referred by CHWs and who come to outpatient care would be admitted and therefore would not be rejected if they do not meet the weight-for-height (WFH) criteria for admission.
- Using MUAC alone as independent criteria for SAM was endorsed by WHO.

DEMONSTRATION: FAMILIARISATION WITH MUAC TAPES. Distribute colored MUAC tapes and briefly show how they are used. Allow participants to familiarize themselves with them. Refer participants to **Handout 1.7 Screening and Admission using MUAC** and review the categorization by color and what they mean. Answer any questions.

Learning objective 4:

Identify the components of CMAM and how they Work together

Become familiar with **Handout 1.8 CMAM Components and How They work Together**.

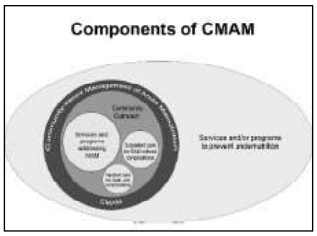
POWERPOINT: CMAM COMPONENTS (Show slides 45-55)

Review the four components of CMAM (below) and refer participants to **Handout 1.8 CMAM Components and How They work Together** for future reference**.**

1. Community outreach
2. Outpatient care for SAM without medical complications
3. Inpatient care for SAM with medical complications
4. SFPs for MAM, depending on the context.

POWERPOINT: HOW THE COMPONENTS OF CMAM WORK TOGETHER (Show slides 56-58.)

Slide 56: Point out each of the components and ask participants why the circles are of different sizes. Point out that:



- If community outreach is effective and intervention is timely, children with acute malnutrition will be identified early and most will have MAM without medical complications. They can then be referred to programs to treat MAM.
- More than 80 percent of those with SAM will have no medical complications and will qualify for outpatient care.
- The few children with SAM who have medical complications or no appetite will require referral to inpatient care.

GROUP DISCUSSION: HOW THE COMPONENTS WORK TOGETHER. Have participants break into groups of four to five people, show slide 56 (Components of CMAM) and ask the groups to discuss:

- The component where children most at risk are treated
- The component where children at medium risk are treated
- The component where children at lower risk are treated

Ask groups to diagram the movement of the following child among CMAM components.

Ask each question individually after each group has answered the previous question:

- Identified by community screener with red MUAC
  - Where does the child go next? (outpatient care)
- In outpatient care, the child is found to have red MUAC and medical complications
  - Where does child go next? (inpatient care)
- Child's medical complications clear, but still has red MUAC
  - Where does child go next? (outpatient care)
- Child has been in treatment for the minimum amount of time and MUAC shows s/he is now moderately malnourished
  - Where does child go next? (supplementary feeding, if available)

Ask participants to discuss their own experiences with implementing the different components.

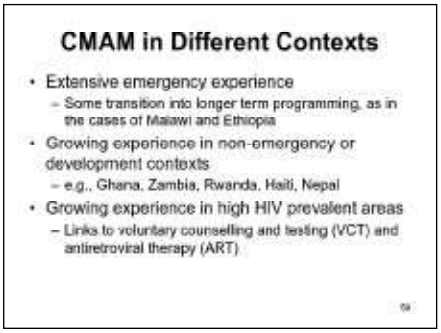
Learning objective 5:
Explore how CMAM Can Be implemented in different Contexts

Become familiar with **Handout 1.9 Case Studies**, **Handout 1.10: Implementing CMAM in different Contexts**, **Handout 1.11: Factors to Consider in Providing Services for the Management of SAM** and **Handout 1.12: Integrating CMAM into Routine Health Services at the district level**.

WORKING GROUPS: Ask participants to form groups of five or six. Give each group **Handout 1.9 Case Studies**. Ask the groups: "Which case study best represents your working context, and why"? Ask the groups to present back then discuss. If not raised in discussion, ask whether the context was an emergency setting or not, whether CMAM services were integrated into routine health services, and whether there was a high HIV prevalence rate.

POWERPOINT: CMAM IN DIFFERENT CONTEXTS (Show slides 59-61.)

Slide 59: Highlight to participants the following characteristics of CMAM in different contexts:



emergency and post-emergency settings: CMAM works well in an emergency context because large numbers of children with acute malnutrition can be reached, due to the availability of external financial and technical resources to introduce or strengthen services.

non-emergency context: CMAM of SAM can take place in the context of ongoing health programming. Inpatient care takes place at existing health facilities with 24-hour care (e.g., hospitals, health centers with hospitalization), while outpatient care operates at the first-level health facility (e.g., health centers, clinics, health posts).

In high HIV prevalence areas: A large proportion of children with SAM in inpatient and outpatient care will be HIV-positive. The majority of HIV-positive children with SAM will benefit from community-based treatment with RUTF. Strong linkages between CMAM, voluntary counselling and testing (VCT) and treatment services (i.e. offering antiretroviral [ARV] and cotrimoxazole prophylaxis) are essential.

WORKING GROUPS: INTEGRATING CMAM WITH EXISTING HEALTH SERVICES. Still in the same working groups, refer participants to **Handout 1.12 Integrating CMAM into Routine Health Services at the district level.** Ask participants to read it quietly and then discuss what programs in their district could be integrated with CMAM and how. Ask them to take into account the factors to consider outlined in **Handout 1.11 Factors to Consider in Providing Services for the Management of SAM.**

lo.6

Learning objective 6:

Identify key national and global developments and Commitments relating to CMAM

Become familiar with the **WHO, WFP, UN/SCN and UNICEF 2007 joint Statement on Community-based Management of Severe Acute Malnutrition**.

POWERPOINT: GLOBAL COMMITMENT FOR CMAM (Show slides 62-63.)

DISCUSSION: Distribute the **WHO, WFP, UN/SCN and UNICEF 2007 joint Statement on Community-based Management of Severe Acute Malnutrition** and briefly review the contents together. Make particular note of the joint statement's support to:

Adopt national policies and programs to:

- Ensure that national protocols for management of SAM have a strong community component
- Achieve high coverage through reaching children who need treatment through effective community outreach and active case-finding
- Provide training and support for CHWs to identify children with SAM and to recognize those with medical complications that need urgent referrals
- Provide training for improved management of SAM at all levels so there is an effective integrated approach (i.e. combined inpatient and outpatient care)

Provide the resources needed for effective management of SAM including:

- Making RUTF available in community-based services and programs as well as other essential items (e.g. F100, F75, ReSoMal, scales, MUAC tapes)
- Encouraging national production of RUTF
- Ensuring funding to provide free treatment for SAM

Link CMAM with other health activities, including IMCI and prevention services

DISCUSSION: Ask a few participants to give examples of national commitments and policy with regard to CMAM.

VIDEO: View a video of a CMAM programme run by the Ethiopia MOH with Concern Worldwide/Wollo Ethiopia. Discuss.

GUEST SPEAKER: Listen to a guest speaker share his/her experiences in planning, implementing and integrating a CMAM programme.

Wrap-up and module evaluation

SUGGESTED METHOD: REVIEW OF LEARNING OBJECTIVES AND COMPLETION OF EVALUATION FORM

- Review the learning objectives of the module. In this module you have:

1. Discussed acute malnutrition and the need for a response
2. Described the principles of CMAM
3. Described recent innovations and evidence
4. Discussed how the components of CMAM work together
5. Developed an appreciation for the issues related to implementing CMAM
6. Explored how CMAM can be implemented in different contexts
7. Identified global commitments related to CMAM ▪

Ask for any questions and feedback on the module.

- Direct participants to **Handout 1.13 essentials of CMAM** for future reference.
- Tell participants that they will have an opportunity to observe procedures and talk with staff during the field visit.
- Ask participants to complete the module evaluation form. *

*The evaluation form can also be distributed at the end of each day or periodically, depending on trainers' preferences.

FIELD VISIT TO OUTPATIENT CARE

Become familiar with **Handout 1.14 Field visit Checklist**.

- A maximum of five participants should be at each outpatient care site on a given day. Coordinate with as many sites as necessary to keep the number of participants at five or fewer.
- Pair participants with someone who speaks both the local language and the participants' language.
- Introduce participants to the person in charge.

Learning objectives

1. Observe the following activities:
   - How children with SAM are admitted and discharged, if possible
   - How children with SAM are treated and evaluated in outpatient care follow-on sessions (e.g., anthropometric measurement, medical assessment, supply of RUTF)
2. Discuss with staff the following:
   - What do they like and dislike about the CMAM service?
   - How does this service affect their overall workload?
   - What shortcomings or problems do they see with the service?
   - How do they work with outreach workers (e.g., CHWs, volunteers)?
   - How do they link with other health services (e.g., expanded programme of immunization [EPI], VCT)?
   - What type of support is provided to the child's family after the child is discharged (e.g., micro-credit support, agricultural support, infant and young child feeding [IYCF] counselling)
3. Talk with mothers/caregivers:
   - How did they find out about the service?
   - What do they like and dislike about the service?

DISCUSSION: FEEDBACK ON FIELD VISIT SESSION. After the field visit, conduct a feedback session in which participants will:

- Provide feedback on strengths observed at each outpatient care site visited
- Raise issues for clarification by facilitators
- Identify key gaps that need more observation time