

MODULE FIVE

Inpatient Care for the Management of SAM with Medical Complications in the Context of CMAM

MODULE OVERVIEW

This module provides an orientation of inpatient care for the management of severe acute malnutrition (SAM) with medical complications and notes the issues that should be considered. The module briefly outlines who should be admitted to inpatient care and why. It also covers admission and discharge processes and criteria as well as the basic principles of medical treatment and nutrition rehabilitation. Emphasis is placed on ensuring a smooth referral process between outpatient care and inpatient care, in both directions.

This module is NOT a guide to setting up or managing inpatient care. For this type of guidance, a separate seven-day World Health Organization (WHO) training course has been designed for health care managers and health care providers who will be managing children with SAM with medical complications in inpatient care. However, participants in the training of this module will partake in a half-day site visit to an inpatient care site to give them a better understanding of CMAM, the comprehensive treatment of SAM, and the referral process between the inpatient and outpatient components.

This module is intended to be used alongside the WHO guidelines for the management of severe malnutrition (1999, new WHO guidelines for community-based management of SAM in development).

In the community-based management of acute malnutrition (CMAM) approach, inpatient care is provided in a hospital or health facility with 24-hour care for children with SAM without appetite or with medical complications until their medical condition is stabilised and the complication is resolving. Treatment then continues in outpatient care until the child recovers sufficient weight per national guidelines. This is in contrast to centre-based care, in which children with SAM are managed as inpatients through both stabilisation of the medical condition and nutrition rehabilitation until they have achieved weight recovery. For certain cases, inpatient care sites can provide for the management of SAM until the child is fully recovered.

Inpatient care for the management of SAM with medical complications is equivalent to the stabilisation phase of the WHO treatment protocol, which includes the transition to ready-to-use therapeutic food (RUTF). The term Stabilisation Centre (SC) is used in *Community-based Therapeutic Care (CTC): a Field Manual*.

INPATIENT CARE FOR THE MANAGEMENT OF SAM WITH MEDICAL COMPLICATIONS IN THE CONTEXT OF CMAM: CLASSROOM

LEARNING OBJECTIVES	HANDOUTS AND EXERCISES
1. Outline the Management of SAM with Medical Complications in Inpatient Care	Handout 5.1 Essentials of the Management of SAM With Medical Complications in Inpatient Care
2. Describe Admission and Discharge for the Management of SAM With Medical Complications in Inpatient Care	Handout 5.2 Admission Procedures in Inpatient Care Handout 5.3 Admission Criteria and Entry Categories for CMAM Handout 5.4 Discharge Procedures in Inpatient Care Handout 5.5 Discharge Criteria and Exit Categories for CMAM
3. Review Medical Treatment and Nutrition Rehabilitation in Inpatient Care	Handout 5.6 Medical Treatment and Nutrition Rehabilitation of SAM With Medical Complications Handout 1.3 References and Further Reading
4. Practice Referral Process Between Inpatient Care and Outpatient Care	Handout 5.5 CMAM Discharge Criteria and Exit Categories Handout 5.7 Practical Implications in Discharges From Inpatient Care Exercise 5.1 Referral from Inpatient to Outpatient Care
Wrap-Up and Module Evaluation	



MATERIALS

- Referral slips (for referral from inpatient care to outpatient care and vice versa, or for referral for further medical investigation)
- Copies of a local inpatient care treatment card or from the WHO manual (1999)
- National guidelines for management of SAM
- Handouts and exercises

ADVANCE PREPARATION

- Room setup, materials, flip charts, markers, masking tape
- Check national protocols for the management of SAM
- Obtain and make copies of a local inpatient care treatment card
- Download and make some copies of WHO's *Management of Severe Malnutrition: A Manual for Physicians* (1999) and WHO's *Guidelines for the inpatient treatment of severely malnourished children* (2003) from www.who.int/nut/publications
- Prepare sets of cards with an admission and discharge criterion written on each
- Collect or prepare referral slips



MODULE DURATION: TWO HOURS OF CLASSROOM TIME FOLLOWED BY A HALF-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 the learning objectives and activities.

LEARNING OBJECTIVE I: OUTLINE THE MANAGEMENT OF CHILDREN WITH SAM WITH MEDICAL COMPLICATIONS IN INPATIENT CARE



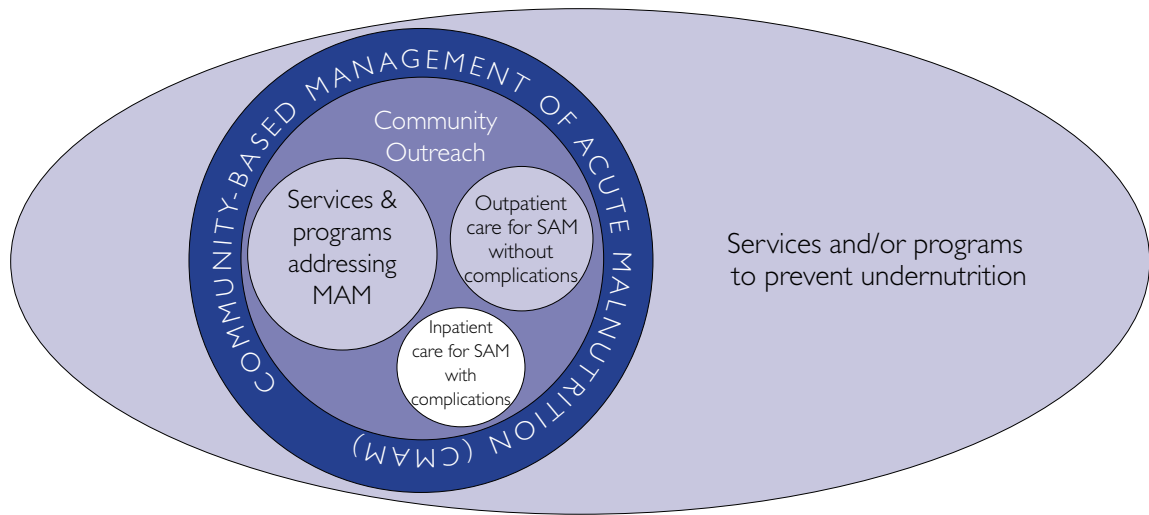
Become familiar with **Handout 5.1 Essentials for the Management of SAM with Medical Complications in Inpatient Care.**



BRAINSTORM: INPATIENT CARE FOR SAM. Draw the graphic below on the flip chart and ask participants:

- Why is the inpatient care component in CMAM services smaller than the other components?
- How does the inpatient component in CMAM differ from residential or centre-based care? (Answers: only the most at-risk children are admitted while others are treated in outpatient care; children are released when their medical condition is stabilised and their medical complication is resolving, rather than fully recovered; children can take RUTF in inpatient care if they have appetite)

FIGURE I. CORE COMPONENTS OF CMAM



GROUP DISCUSSION: ESSENTIALS OF INPATIENT CARE. Direct participants to **Handout 5.1 Essentials for the Management of SAM With Medical Complications in Inpatient Care.** Ask participants to review the handout and answer the following questions. Review responses in plenary and discuss.

- Why is inpatient care such an essential component of CMAM?
- Who receives treatment in inpatient care?
- How long is treatment provided?
- How is inpatient care best implemented? Within which structures?

LEARNING OBJECTIVE 2: DESCRIBE ADMISSION AND DISCHARGE FOR THE MANAGEMENT OF SAM WITH MEDICAL COMPLICATIONS IN INPATIENT CARE



Become familiar with **Handout 5.2 Admission Process in Inpatient Care, Handout 5.3 Admission Criteria and Entry Categories for CMAM, Handout 5.4 Discharge Process in Inpatient Care** and **Handout 5.5 Discharge Criteria and Exit Categories for CMAM.**



PARTICIPATORY LECTURE: PROCESS FOR ADMISSION TO INPATIENT CARE. Describe to participants the bullet points outlined in the first section of **Handout 5.2: Admission Process in Inpatient Care.**



ELICITATION AND GROUP DISCUSSION: ADMISSION CRITERIA FOR INPATIENT CARE. Ask participants to name criteria for admission to inpatient care. Many of the criteria will be those encountered in **Module 4** requiring referral to inpatient care. Write responses on a flip chart. Refer participants to **Handout 5.2 Admission Process in Inpatient Care** and **Handout 5.3 Admission Criteria and Entry Categories for CMAM.** Review the text and the table, making note of any discrepancies with the answers on the flip chart. Emphasize the differing admission criteria for infants under 6 months and briefly present admission criteria for adolescents, adults and HIV-positive adults. Discuss and fill in gaps.



PARTICIPATORY LECTURE: PROCEDURE AND CRITERIA FOR DISCHARGE IN INPATIENT CARE. Describe to participants the bullet points outlined on **Handout 5.4 Discharge Process in Inpatient Care, Section A** and **Handout 5.5 Discharge Criteria and Exit Categories for CMAM.** Answer any questions then briefly review the discharge criteria in both the text and the table on the same handout.



PRACTICE AND GROUP DISCUSSION: DETERMINE APPROPRIATENESS OF INPATIENT CARE. Refer participants to the tables in both **Handout 5.3** and **Handout 5.5.** Tell them you will give examples of children either presenting at or already in inpatient care and ask them to determine if the child should be admitted, remain in inpatient care or be discharged to outpatient care. Ask them to explain why.



Examples:

1. Child is under 6 months and is brought to inpatient care with bilateral pitting oedema grade +.
(Answer: admit to inpatient care because of bilateral pitting oedema.)
2. Child was admitted to inpatient care with a mid-upper arm circumference (MUAC) < 110mm and no appetite but no other medical complications. Child now passes the appetite test and is clinically well and alert.
(Answer: discharge to outpatient care because appetite has returned and all other criteria met).
3. Child is brought to inpatient care with bilateral pitting oedema grade ++ and MUAC < 110mm.
(Answer: admit to inpatient care with for treatment of marasmic kwashiorkor.)
4. Child was brought to inpatient care with marasmic kwashiorkor. Bilateral pitting oedema has been reduced from grade +++ to grade +.
(Answer: keep child in inpatient care until bilateral pitting oedema resolved.)

LEARNING OBJECTIVE 3: REVIEW MEDICAL TREATMENT AND NUTRITION REHABILITATION IN INPATIENT CARE



Become familiar with **Handout 5.6 Medical Treatment and Nutrition Rehabilitation of SAM With Medical Complications.**

LO.3



REVIEW: MEDICAL COMPLICATIONS REQUIRING INPATIENT CARE. Ask participants to name the medical complications that, coupled with SAM, would require inpatient care:

- Anorexia, no appetite
- Intractable vomiting
- Convulsions
- Lethargy, not alert
- Unconsciousness
- Lower respiratory tract infection
- High fever
- Severe dehydration
- Severe anaemia
- Hypoglycaemia
- Hypothermia



READING AND GROUP DISCUSSION: Medical Treatment and Nutrition Rehabilitation in Inpatient Care. Explain to participants that the medical treatment and nutrition rehabilitation of SAM in inpatient care follows the WHO treatment protocol for the treatment of SAM until the medical condition is stabilised, the medical complication is resolving and the child is referred to outpatient care.

Refer participants to **Handout 5.6 Medical Treatment and Nutrition Rehabilitation of SAM With Medical Complications.** In plenary, discuss the figure showing stabilisation and rehabilitation phases. Note that after four to seven days of treatment, the medical condition should be stabilised and the medical complication resolving. Review the handout together and answer any questions regarding nutrition rehabilitation for children 6-59 months and for children under 6 months.

Refer participants to the *WHO Guidelines for the Inpatient Treatment of Severely Malnourished Children* (2003) and other guidance listed in **Handout 1.3 References and Further Reading** (received in **Module One**).

Give each participant a copy of a local inpatient treatment card and explain the information that can be found on it:

- Personal information: names and locations of mothers/caregivers to allow for follow-up home visits after discharge
- Results of daily bilateral pitting oedema checks

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- Anthropometry: MUAC, weight, and height recorded on admission; weight is also measured daily
- Clinical data/findings: results of daily medical assessments (because deterioration can occur quickly, it is essential to record medical findings and other information to make a correct diagnosis and provide timely treatment)
- Medicines: the medicines given and when they were given are recorded (Note: medical staff should directly observe the medicine being taken, the child's response to the medicine and the outcome)
- Feeding information: type and proportion of the therapeutic food the child consumes and any instances of vomiting

LO.3

LEARNING OBJECTIVE 4: PRACTICE REFERRAL PROCESS BETWEEN INPATIENT CARE AND OUTPATIENT CARE



Become familiar with **Handout 5.5 Discharge Criteria and Exit Categories for CMAM**, **Handout 5.7 Practical Implications in Discharges from Inpatient Care** and **Exercise 5.1 Referral from Inpatient to Outpatient Care**.



REVIEW: REFERRALS FROM INPATIENT CARE. In plenary, ask participants to name discharge criteria that would indicate a discharge from inpatient care to outpatient care. If participants have difficulty responding, remind them to refer to **Handout 5.5 Discharge Criteria and Exit Categories in CMAM**.



PARTICIPATORY LECTURE: REFERRALS BETWEEN INPATIENT AND OUTPATIENT CARE. Explain to participants that the main focus of these modules is on outpatient care, which includes referrals from inpatient to outpatient care. However, there are several cases where patients will be discharged to other settings. Outline to participants the key points regarding discharges from inpatient care to tertiary care and discharges that exit CMAM services as found in **Handout 5.7 Practical Implications in Discharges From Inpatient Care**.

Remind participants that an effective referral system between inpatient care and outpatient care is essential for the smooth functioning of CMAM services. Note that it is helpful for inpatient care staff to visit outpatient care sites and vice versa. Outline the key points in **Handout 5.7**. Ask participants if they have any other key points to add.



BRAINSTORM: REFERRALS FROM INPATIENT TO OUTPATIENT CARE. Ask participants to think of key actions that should accompany the discharge of patients from inpatient care to outpatient care. Write responses on a flip chart. Fill in the gap in responses with the key points outlined in **Handout 5.7, Section D**.



PRACTICE: REFERRALS FROM INPATIENT TO OUTPATIENT CARE. Ask participants to form pairs. Refer them to **Exercise 5.1 Referral from Inpatient to Outpatient Care**. Write the following details of a child on flip chart and ask pairs to fill out the referral card from inpatient to outpatient care. (Note: use a locally appropriate name for the child and the name of a local community.) Move within and among the pairs and answer questions. Discuss what changes occurred in the child's health to permit referral to outpatient care and fill in gaps.

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- Admission data:
 - Date of admission: 09/Feb/08
 - Inpatient site: XXX
 - Registration number: 113/OC/ZAL
 - Age: 26 months
 - Sex: Female
 - Height: 78.5 cm
 - Weight: 7.2 kg
 - Bilateral pitting oedema: +++
 - MUAC: 112 mm
 - WFH: < -3 z-score
- Discharge data:
 - Date of discharge: 15/Feb/08
 - Weight: 7.0 kg
 - Bilateral pitting oedema: none
 - MUAC: 115 mm
 - WFH: < -3 z-score
- Treatment: F75, some RUTF
 - Amoxicillin: 125 mg (5 ml) 3x/day for 7 days
 - Artesunate: Days 1-3, 1 tablet per day



EXERCISE 5.1 REFERRAL FROM INPATIENT TO OUTPATIENT CARE (WITH ANSWERS IN BOLD)

LO.4

Name of child: (local name)		Community: (local name)	
Age: 26 months		Sex: F	
Date of Admission: 09/Feb/08		Site: XXX	
ADMISSION DATA	Weight: 7.2 kg	MUAC: 112 mm	Referral to: Outpatient Care
	Height: 78.5 cm	WFH: < -3 z-score	
Bilateral pitting oedema (circle) None + ++ +++			Registration No: 113/OC/ZAL
Date of Referral: 15/Feb/08			
Criteria for Referral:			
Weight: 7.0 kg		MUAC: 115 mm	
WFH: < -3 z-score		Bilateral Pitting Oedema: None	
Treatment given: F75, Some RUTF Amoxicillin: 125 mg (5 ml) 3x/day for 7 days Artesunate: Days 1-3, 1 tablet per day		Comments:	

WRAP-UP AND MODULE EVALUATION



SUGGESTED METHOD: REVIEW LEARNING OBJECTIVES AND COMPLETE EVALUATION FORM.



- Review the learning objectives of the module. In this module you have:
 1. Outlined the inpatient care component of CMAM
 2. Identified admission and discharge criteria for inpatient care
 3. Recalled medical treatment and nutrition rehabilitation used in inpatient care
 4. Practiced the referral process from inpatient care to outpatient care

- Ask for any questions and feedback on the module.

- Ask the following review questions:
 - What are the main reasons for referring a child with SAM to inpatient care?
 - About what percentage of the total caseload of children with SAM will require inpatient care?
 - How long (on average) is a child with SAM with medical complications expected to stay in inpatient care before continuing on to treatment in outpatient care?
 - What are the discharge criteria from inpatient care to outpatient care (i.e. how do you know when a child with SAM with complication is ready to go to outpatient care)?

- Let participants know that they will have an opportunity to observe procedures and discuss them with staff during the inpatient care field visit.

- Ask participants to fill out the module evaluation form.

**Module 5: Inpatient Care for the Management of SAM
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COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION

INPATIENT CARE FIELD VISIT

OVERVIEW

- Ideally, a maximum of five participants should be at each inpatient care site on a given day to allow participants enough time to observe and interact directly. Coordinate with as many inpatient care sites as necessary to keep the number of participants at five or fewer.
- Pair participants with someone who speaks both the participants language and the local language.
- Introduce participants to the head of the ward or other person in charge.

LEARNING OBJECTIVES	HANDOUTS TO TAKE TO INPATIENT CARE FIELD VISIT
1. Review Admission, Treatment and Discharge Procedures for Inpatient Care	Handout 5.1 Essentials for the Management of SAM With Medical Complications in Inpatient Care Handout 5.8 Inpatient Care Field Visit Checklist Local Inpatient Care Treatment Card
2. Observe and Discuss Admission, Treatment and Discharge Procedures for Inpatient Care	



FIELD VISIT LEARNING OBJECTIVE 1: REVIEW ADMISSION, TREATMENT AND DISCHARGE PROCEDURES FOR INPATIENT CARE

READING THE EVENING BEFORE: Admission and Discharge Procedures for Inpatient Care

In preparation for the inpatient care field visit, ask participants to review **Handout 5.1 Essentials for the Management of SAM With Medical Complications in Inpatient Care**.



FIELD VISIT LEARNING OBJECTIVE 2: OBSERVE AND DISCUSS ADMISSION, TREATMENT AND DISCHARGE PROCEDURES IN INPATIENT CARE



Become familiar with **Handout 5.8 Inpatient Care Field Visit Checklist** and direct participants to bring this with them to the field visit.

During the field visit, observe the following:

- The patient registration process
- Admission and discharge criteria
- Daily nutrition assessment and monitoring
- Daily medical assessment, monitoring and medical treatment
- Food preparation and storage
- Feeding and feeding routines
- Recording on the individual child's inpatient care treatment card (e.g., the information collected, the child's progress)
- The flow of activities
- The referral process

During the field visit, ask the staff:

- How effective inpatient care is now that outpatient care is also available
- How the numbers of children and types of ailments they saw in inpatient care before outpatient care was available compares to the numbers and types they see now
- What the challenges to managing their workload are



FEEDBACK/DISCUSSION: INPATIENT CARE FIELD VISIT SESSIONS

After the inpatient care field visit, conduct a feedback session in which participants will:

- Provide feedback on strengths they observed at the health facility with inpatient care
- Raise issues for clarification by trainers
- Identify key gaps that require more observation time at the health facilities with inpatient care