

# PART 3: TRAINER'S GUIDE

The trainer's guide is part three of four parts contained in this module. It is NOT a training course. Rather it provides guidance on how to design a training course by giving tips and examples of tools that the trainer can adapt. The trainer's guide should only be used by experienced trainers to help develop a training course which meets the needs of a specific audience. The trainer's guide is linked to the technical information found in part 2 of the module.

Module 13 covers current protocols for the management of Severe Acute Malnutrition (SAM). It contains information about the implementation of the Community-based Management of Acute Malnutrition (CMAM) approach, with details of its different components (community mobilisation, inpatient care, outpatient care), and on the management of individuals with SAM. All the exercises have been prepared using standard protocols and tools. When preparing for training, be sure to adapt exercises and examples to the national protocols, or the protocol that is going to be used in the field (minor modifications may be necessary). It is also important to use the tools that the trainees will be using in the field (e.g. models of monthly reports, patients' cards, etc.).

Some of the exercises gathered in this module also refer to the information provided by:

- HTP Module 6: Measuring Malnutrition
- HTP Module 12: Management of Moderate Acute Malnutrition
- HTP Module 15: Health Interventions
- HTP Module 18: HIV-AIDS and Nutrition
- HTP Module 19: Working with communities in emergencies
- HTP Module 20: Monitoring and evaluation

### Navigating your way round these materials

The trainer's guide is divided into six sections:

1. **Tips for trainers** provide pointers on how to prepare for and organise a training course.
2. **Learning objectives** provide examples of learning objectives that can be adapted for a particular participant group.
3. **Testing knowledge** contains an example of a questionnaire that can be used to test participants' knowledge about management of SAM either at the start or at the end of a training course.
4. **Classroom exercises** provide examples of practical exercises that can be carried out in a classroom context either by participants individually or in groups to reinforce learning objectives.
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# 1. Tips for trainers

## Step 1: Do the reading!

- Read Parts 1 and 2 of this module.
- Familiarize yourself with the technical terms from the glossary.
- Read through the following key documents (see full references and how to access them in Part 4 of this module):
  - National Guidelines for the Management of SAM (if exists) or updated field protocols in use.
  - Valid International (2006) *Community-based Therapeutic Care (CTC). A field manual* Oxford: Valid International, First Edition.
  - WHO (2003) *Guidelines for the Inpatient Management of Severely Malnourished Children* Geneva: WHO
  - WHO (1999) *Management of severe malnutrition: a manual for physicians and other senior health workers*. Geneva: WHO

## Step 2: Know your audience!

- Find out about your participants in advance of the training:
  - How many participants will there be?
  - Have any of the participants already been involved on management of SAM activities in hospitals or dedicated centres?
  - Could participants with experience be involved in the sessions by preparing a case study or contribute through describing their practical experience?

## Step 3: Design the training!

- Decide how long the training will take and therefore what activities you can cover within the time available. In general the following guide can be used:
  - A **90-minute** classroom-based training can provide a basic overview of management of SAM activities and protocols in use.
  - A **half day** classroom-based training can provide a more in-depth overview of management of SAM activities and protocols including some practical exercises.
  - A **1 day** classroom-based training can provide a more in-depth understanding of management of SAM activities and include a number of practical exercises and/or one case study.
  - A **4-8 day** classroom plus field-based training can provide sufficient preparation for implementing the activities. This would include case studies and practical field exercises.
- Identify appropriate learning objectives. This will depend on your participants, their level of understanding and experience, and the aim and length of the training.
- Decide exactly which technical points to cover based on the learning objectives that you have identified. Divide the training into manageable 'chunks'. One session should generally not last longer than an hour.
- Ensure the training is a good mix of activities, i.e. mix PowerPoint presentations in plenary with more active participation through classroom-based exercises; mix individual work with group work.

**Step 4: Get prepared!**

- Prepare PowerPoint presentations with notes (if they are going to be used) in advance and do a trial run. Most NGOs and UN agencies working in nutrition have standard PowerPoint presentations that you can use for inspiration. Adapt them to your training!
- Prepare exercises and case studies. These can be based on the examples given in this trainers' guide but should be adapted to be suitable for the particular training context.
- Prepare a 'pack' of materials for each participant. These should be given out at the start of the training and should include:
  - Timetable showing break times (coffee and lunch) and individual sessions
  - Handouts including parts 1, 2 and 4 of this module plus exercises as required
  - Pens and paper

**REMEMBER**

People remember 20% of what they are told, 40% of what they are told and read, and 80% of what they find out for themselves.

People learn differently. They learn from what they read, what they hear, what they see, what they discuss with others and what they explain to others. A good training is therefore one that offers a variety of learning methods which suit the variety of individuals in any group. Such variety will also help reinforce messages and ideas so that they are more likely to be learned.

## 2. Learning objectives

Below are examples of learning objectives for different sessions on management of SAM. Trainers may wish to develop alternative learning objectives that are appropriate to the particular participant group. The number of learning objectives should be limited; up to five per day of training is appropriate. Each exercise should be related to at least one of the learning objectives.

### Examples of learning objectives

At the end of the training, participants will:

- Be aware of the principles and the components of the current approaches for the management of SAM.
- Understand the importance of the links between the different components of CMAM and the need for stressing the coordination between them
- Appreciate the importance of the external linkages between the different CMAM components and other health/ nutrition programmes in emergency and non-emergency situations.
- Understand the key elements of a community mobilisation strategy for the management of SAM and which actors should be involved in its implementation.
- Be aware of the different elements that support the diagnosis of acute malnutrition and how they are applied in the field
- Be aware of criteria for admission to treatment and discharge for each type of service (outpatient or inpatient care), including age
- Understand current protocols for the management of SAM cases as outpatients or inpatients, including who they target and where they are implemented
- Be aware of the specificities of the management of SAM in contexts with high HIV prevalence
- Understand basic concepts related to the monitoring and reporting of CMAM activities and be familiar with practical tools for it
- Be aware of the current baseline scenarios for emergency response and the different elements to be taken into account for setup, scale up or handover of activities for the management of SAM.
- (For hospital-based clinicians) Be aware of the specificities of the treatment of medical complications in SAM.

## 3. Testing knowledge

This section contains one exercise which is an example of a questionnaire that can be used to test participants' knowledge either at the start or at the end of a training session. Some agencies use the same questionnaire at the start AND at the end of the training session as means for evaluation of the immediate changes in knowledge in the participants. The questionnaire can be adapted by the trainer to include questions relevant to the specific participant group.

### Exercise 1: What do you know about management of SAM activities? Questionnaire

#### What is the learning objective?

- To test participants' knowledge about management of SAM.

#### When should this exercise be done?

- *Either* at the start of a training session to establish knowledge level.
- *Or* at the end of a training session to check how much participants' have learnt.
- *Or both:* At the start and at the end to evaluate differences

#### How long should the exercise take?

- 20 minutes

#### What materials are needed?

- **Handout 1a:** What do you know about management of SAM? Questionnaire
- **Handout 1b:** What do you know about management of SAM? Answers to questionnaire

#### What does the trainer need to prepare?

- Familiarise yourself with the questionnaire questions and answers.
- Add your own questions and answers based on your knowledge of the participants and their knowledge base.

#### Instructions

**Step 1:** Give each participant a copy of handout 1a

**Step 2:** Give participants 15 minutes to complete the questionnaire working alone

**Step 3:** Give each participant a copy of handout 1b

**Step 4:** Give participants 5 minutes to mark their own questionnaires and clarify the answers where necessary.

**Handout 1a: What do you know about management of SAM? Questionnaire***Time for completion: 15 minutes**Answer all the questions (Note that for some questions there is only ONE correct answer while for other questions there are SEVERAL correct answers)*

1. Cite three facilities or services that you know where a child with SAM can be treated

a)

b)

c)

2. List the main elements for the identification of SAM in a child 6-59 months old?

a)

b)

c)

3. With the information available, decide whether the following children with SAM should be treated at outpatient or inpatient care:

	Case	Orientation for treatment
a)	2 years old, MUAC 112 mm, no oedema, WFH between -2 and -3 Z Score, good appetite and no medical complications	
b)	4 months old, very thin and too weak for suckling	
c)	3 years old, MUAC 123 mm, no oedema, WFH <-3 Z Score, good appetite but cough, fever 39.5°C and RR >45 resp/min	
d)	2 years old, MUAC 123 mm, oedema (++), WFH between -2 and -3 Z Score, good appetite and no other complication	
e)	12 years old, BMI-for-Age <-3 Z Score, no oedema, no sick	

4. True or False (*briefly explain your choice*):

The role of the community in the management of SAM is negligible

5. Which ones of the following medicines are given to ALL patients on admission at outpatient care (*Circle the correct answer*)

a) Antibiotics

b) Vitamin A

c) ACT

d) Measles vaccination

e) Folic Acid

6. True or False (*briefly explain your choice*):  
Children at outpatient care come to the service every day to receive their treatment
7. True or False (*briefly explain your choice*):  
The appetite test should be done at each visit at outpatient care
8. Which of the following sentences referring to the dietary management at inpatient care are true (*Circle the ones you consider True*)
- A child in stabilisation phase can eat RUTF
  - F75 is the standard dietary treatment for stabilisation phase
  - RUTF should never be given at inpatient care
  - When given to infants (below 6 months) F100 is prepared with a special dilution (diluted F100)
  - At discharge from inpatient care, F100 can be distributed for home consumption
9. Which of the following sentences referring to the monitoring and reporting of the activities are True (*Circle the ones you consider True*)
- Children referred from outpatient care to an inpatient service are considered as çNon respondenté
  - Monthly reports should contain a lot of variables to be able to better monitor the impact of the activities
  - Routine monitoring should include qualitative and quantitative information
  - Coverage surveys are run every month
  - Routine monitoring is done by the health workers at each facility and compiled at district level
10. Which of the following sentences referring to management of medical complication in a hospital setting are True (*Circle the ones you consider True*)
- The main reason why anaemia is associated with high mortality during treatment of SAM is the inappropriate use of transfusions.
  - ReSoMal is given to all children with diarrhoea.
  - The typical signs of dehydration are not reliable in a marasmic child.
  - The treatment of hypothermia in the malnourished child includes, among other things, giving sugared water and broad-spectrum antibiotics.
  - The treatment of heart failure in the severely malnourished child includes stopping all fluid intakes until the main signs are resolved.



## Handout 1b: What do you know about management of SAM? Answers to the questionnaire

- Possible answers are: Health Centre, Hospital, Therapeutic Feeding Centre, Outpatient Care service, Inpatient Care service, Paediatric unit...
- Answers should be: MUAC measurement, presence of oedema and WFH index.
- With the information available, decide whether the following children with SAM should be treated at outpatient or inpatient care:

	Case	Orientation for treatment
a)	2 years old, MUAC 112 mm, no oedema, WFH between -2 and -3 Z Score, good appetite and no medical complications	Outpatient
b)	4 months old, very thin and too weak for suckling	Inpatient
c)	3 years old, MUAC 123 mm, no oedema, WFH <-3 Z Score, good appetite but cough, fever 39.5°C and RR >45 resp/min	Inpatient
d)	2 years old, MUAC 123 mm, oedema (++) , WFH between -2 and -3 Z Score, good appetite and no other complication	Outpatient
e)	12 years old, BMI-for-Age <-3 Z Score, no oedema, no sick	Inpatient

- True** or False

The role of the community in the management of SAM is negligible

The community plays an essential role in the management of SAM cases and, in general, in all the nutrition activities carried out by the health system. Community awareness is essential for participation in active case finding and follow up of cases.

- Which ones of the following medicines are given to ALL patients on admission at outpatient care?

**a) Antibiotics**

b) Vitamin A

c) ACT

**d) Measles vaccination**

e) Folic Acid

- True or **False**

Children at outpatient care come to the service every day to receive their treatment

Children attending an outpatient care service visit the centre once a week.

- True** or False

The appetite test should be done at each visit at outpatient care

At each visit, the health worker should evaluate the appetite of the child by giving him/her a ration of RUTF and checking how he/she eats it.

8. Which of the following sentences referring to the dietary management at inpatient care are true
- a) A child in stabilisation phase can eat RUTF
  - b) F75 is the standard dietary treatment for stabilisation phase**
  - c) RUTF should never be given at inpatient care
  - d) When given to infants (below 6 months) F100 is prepared with a special dilution**
  - e) At discharge from inpatient care, F100 can be distributed for home consumption.
9. Which of the following sentences referring to the monitoring and reporting of the activities are True  
(Circle the ones you consider True)
- a) Children referred from outpatient care to an inpatient service are considered as "Non respondent"
  - b) Monthly reports should contain a lot of variables to be able to better monitor the impact of the activities
  - c) Routine monitoring should include qualitative and quantitative information**
  - d) Coverage surveys are run every month
  - e) Routine monitoring is done by the health workers at each facility and compiled at district level**
10. Which of the following sentences referring to management of medical complication in a hospital setting are True  
(Circle the ones you consider True)
- a) The main reason why anaemia is associated with high mortality during treatment of SAM is the inappropriate use of transfusions.**
  - b) ReSoMal is given to all children with diarrhoea.
  - c) The typical signs of dehydration are not reliable in a marasmic child.**
  - d) The treatment of hypothermia in the malnourished child includes, among other things, giving sugared water and broad-spectrum antibiotics.**
  - e) The treatment of heart failure in the severely malnourished child includes stopping all fluid intakes until the main signs are resolved.**

## 4. Classroom exercises

This section provides examples of practical exercises that can be carried out in a classroom context either by participants individually or in groups.

Practical exercises are useful to break up plenary sessions where the trainer has done most of the talking as they provide an opportunity for participants to engage actively in the session. The choice of classroom exercises will depend upon the learning objectives and the time available.

Trainers should adapt the exercises presented in this section to make them appropriate to the particular participant group. Preferably, trainers should use case examples with which they are familiar.

### Exercise 2: Identifying barriers to access: Role play

Adapted from Training Guide for CMAM: Valid International, FANTA, UNICEF and Concern; 2008

#### What is the learning objective?

- Be able to identify barriers to access to CMAM services

#### When should this exercise be done?

- After the Community Mobilisation section has been presented

#### How long should the exercise take?

- 60 minutes

#### What materials are needed?

- **Handout 2a:** Identifying barriers to access.
- **Handout 2b:** Identifying barriers to access (Model answer)

Room setup, flip charts, markers, masking tape

#### What does the trainer need to prepare?

The evening before the training or earlier, select six players to take part in a role-play and distribute role-play cards to the selected participants **IN ADVANCE**

**Exercise 2: Identifying barriers to access: Role play** (continued)**Instructions**

**Step 1:** Confirm that the players have read the role-play cards (Handout 2a) distributed in advance.

**Step 2:** Explain that the role-play should unfold as a series of scenes between the mother and the other players.

**Step 3:** Spend 5 minutes with the players to answer questions they may have and suggest ways to make their performance more realistic. The audience (those not acting out the role-play) should not be present when you explain the roles to the players. They may, however, be asked to participate in the final scene, where they may collectively act as a crowd of curious onlookers and care-seekers at the outpatient care site.

**Step 4:** Allow 40 minutes for the role-playing

**Discussion points for feedback in plenary (See handout 2b: Model answers)**

After the players have carried out the play, all participants should list the obstacles and analyse the scenario (write responses on the flip chart and fill in gaps):

- ➔ Which of these barriers are likely to be an issue in their own community?
- ➔ What other factors hinder participation?
- ➔ What measures would help eliminate these barriers?
- ➔ Which factors could be 'facilitating' elements for services uptake?

## Handout 2a: Identifying barriers to access

### Community Mother:

You are a mother of five children, living in a community that is a two-hour walk from the nearest government health post. Your 2-year-old daughter has been sick since her younger sister's birth six months ago. You have tried many local remedies but nothing seems to make her better. She is now very thin and has almost no energy. You are very worried. You have heard that there are people going house to house to measure children's arms, but you are not sure why. You are sceptical of these volunteers because some of the same people were appointed as health messengers last year and have a reputation for harassing people about building latrines. There are even rumours that some families in a nearby community were fined for not building latrines and your husband (who is out) forbade you from allowing the messengers into the family compound. When a messenger arrives and asks to see your children, you have mixed feelings: You want to obey your husband, but you do not wish to anger the community chairman by refusing his emissaries. When the messenger assures you that s/he is not here to look at your latrine, you reluctantly agree to admit him/her. At first, you are not planning to show him/her your sick child.

### Nutrition Volunteer (Male or female):

You are trained to perform MUAC measurements on children by going house to house. Your work area covers four communities, including your own. You have limited formal schooling, but you are clever and are respected by people in your community who know you, even though you are young. While you are fairly confident of your ability to measure MUAC, you have not yet attended an outpatient care day because of the distance to the health post, so you are uncertain about what happens to the children you refer there. In this encounter, you are starting at a disadvantage: several months ago, you asked mothers/caregivers from your communities to gather their children in one spot for vaccination, but the vaccines did not arrive on time, leaving the mothers/caregivers waiting. You had to make a second appointment, and some mothers/caregivers are still resentful about having wasted their morning. This mother seems a little anxious, but you sense she might be persuaded to let you examine her children. After she finally allows you into her compound, you cannot answer all her questions. You therefore try to emphasise two important points to her and her husband (who has returned): 1) you are trying to save the lives of the sickest children, and 2) there is a new treatment for the most malnourished cases that can be given at home so that mothers/caregivers no longer have to spend weeks in the town hospital with their children.

### First Neighbour (In community):

You are spending the morning in the compound of your friend (community mother) when she is visited by the health messenger. You recognise him/her as the person who wasted your time on immunisation day and are openly antagonistic to him/her. Why should your friend waste her time with his/her new services? And aren't his colleagues causing people to be fined over latrines? When your friend finally shows her sick child to him/her, you recognise this as a problem created not by malnutrition but by "spoiled" breast milk. You counsel your friend to get roots from a community healer, boil them and bathe the child with the water. However, your friend eventually decides to accept referral to outpatient care, so you try to help by watching her other children for the day and cooking for her husband.

**Husband:**

You come home to find your wife talking with the health messenger and are initially annoyed that she has let him/her into the compound. However, when it becomes clear he/she is not trying to make you build a latrine, you relax. You have to choose between the traditional remedy suggested by your neighbour and the messenger's advice to let your wife go to the health post where your child will receive a new treatment that can be brought home. You would not mind your wife's going to the health post, but in the past, you have seen that children in this condition have been moved from the health post to the district hospital with their mothers/caregivers where they spent weeks under care. You love your daughter and want her to recover, but you are also afraid of how this would affect your family. How would your family eat? Furthermore, it is the weeding season, and the time your wife spends at the health post-away from home-will reduce your harvest. You want assurances that she will be able to return from the health post promptly.

**Second Neighbour (Returning on the road):**

You are on your way back from the outpatient care site and are very annoyed. Yesterday you were called to attend a screening in your community. You waited all morning in the sun while children were measured. Your child was selected to attend outpatient care. But today, after walking over an hour to the health post, the outpatient care staff re-measured your child and refused to admit him. You and several other mothers/caregivers waited to speak to the head health worker because you thought the measurers were cheating you. After all, you were referred from the community with a note! However, the programme seemed to be taking all day, the staff was overworked and short-tempered, and the crowding was stressful. Therefore, you left without presenting your grievance. Why, you wonder, are people forced to waste their time like this during the harvest? As you walk home, you meet a woman from a neighbouring community (community mother) who says she was referred to the same programme. You tell her your story and bitterly advise her not to waste her time.

**Outpatient Care Nurse:**

You have been busy all morning examining children as part of these new services. You are glad there is finally an effective treatment for very malnourished children, but things cannot go on as they are in the same disorganised fashion. People are everywhere in the clinic, asking for food and assistance. This is not a general store! You are a clinician, but increasingly you are being asked to manage a relief operation. The stress has been making you irritable, especially with mothers/caregivers who have been deliberately returning to the screening queue after being rejected just minutes earlier. Now here comes a mother (community mother) trying to get into the outpatient care line without even going to the screening queue first! The irritation is too much for you. You angrily tell her to go away. Now the crowd is getting involved. As you turn your attention back to the child in front of you, the last thing you see is the mother surrounded by people loudly offering contradictory advice.

## Handout 2b: Identifying barriers to access (Answers)

There is not a unique answer to this exercise. **Areas of investigation** might include:

- **Local disease classification** for severe forms of acute malnutrition; health problems might be treated as something other than a nutritional or food-related problem, requiring special communication
- **Attitudes toward formal health services**, which involves identifying what other services are offered through the existing government health services and how they are perceived by the population; a perception of poor service could affect uptake of CMAM
- **Other paths to treatment**, (e.g., pharmacies, traditional healers) might have a role equal to or greater than MOH health services
- **Community homogeneity/heterogeneity**: various identity designators (e.g. language, ethnicity, religion, politics) can divide communities, making it necessary to provide information and services in an even-handed manner or to make special efforts to reach excluded or marginalised groups

The list below shows some of the common obstacles faced in a community that might impede participation in CMAM or attending CMAM services:

- **Poor awareness** of the services within the community being served or **community mobilisation has been overly broad**, resulting in too many ineligible cases arriving and being rejected
- People might be aware that there is a new nutrition service, but **local medico-cultural traditions do not connect advanced wasting or swelling with malnutrition** and awareness of traditional medicines might be stronger
- Community mobilisation or site selection may have overlooked **important community gatekeepers or opinion-makers** or there might be stigma **in the community or the influence of peers or family members** might serve as disincentives
- **Referral and admission** criteria are not aligned (e.g. MUAC is used for community screenings but final admission at site is based on WFH), leading to rejection of referred individuals at the site and damage to the programme's reputation
- **Other services at the primary health care (PHC) facility are poorly regarded** by the community (e.g. because medicines are not available, because hours are irregular, because staff are overworked, because access to treatment requires long waits) which projects a negative view on CMAM simply by association when it is established at the PHC facility
- The **location of outpatient care sites** might require an unreasonable amount of travel time for target communities or make the sites inaccessible due to barriers like seasonal flooding
- Participation may be **interrupted by seasonal labour patterns** beyond the control of the service, such as temporary relocation of families from homes to more remote farms during the weeding or harvesting seasons

**Exercise 3: Using the Outpatient care Individual follow up card****What is the learning objective?**

- To familiarise participants with the contents of the outpatient care Individual follow up card
- To be able to use the outpatient care follow up card as a tool for supervision and training

**When should this exercise be done?**

- After the content (Criteria, protocols and procedures) of the outpatient care section have been introduced

**How long should the exercise take?**

- 60 minutes

**What materials are needed?**

- **Handout 3a:** Using the Outpatient care Individual follow up card.
- **Handout 3b:** Using the Outpatient care Individual follow up card. (Model answer)
- WFH WHO reference tables for boys
- Part 2 of the Module or National Guidelines if existing

**What does the trainer need to prepare?**

- Prepare a case study using outpatient cards of your programme based on the example in handout 3a.

**Instructions**

**Step 1:** Give each participant a copy of handout 3a and the rest of the necessary materials

**Step 2:** Give participants (in pairs) 40 minutes to read the card and write down the answers

**Step 3:** Allow 20 minutes for discussion in plenary.

**Discussion points for feedback in plenary (See handout 3b: Model answers)**

- ➔ How to use cards for patient management
- ➔ How to use cards during supervisions and on-the-job training

Alternatives to this exercise:

- Modify the card to highlight problems frequently seen in your programme (usual mistakes, typical presentation of cases, etc.).
- Use real cards with actual mistakes. Select them carefully before the start of the exercise. Make sure that this does not appear to be an exercise in blaming the team in the centre!
- Give blank cards to participants and asking them to fill in the information themselves as it is being dictated, or ask them to reproduce a typical card of a child showing poor progress (with re-feeding oedema, failure to respond to treatment, etc.) if the participants are already familiar with outpatient care.
- A similar exercise, focussing more on clinical management of patients, can be developed with inpatient care cards.



## Handout 3a: Using the Outpatient care Individual follow up card (Questions)

*Time for completion: 40 minutes*

**Read the outpatient card on the following page carefully,** start with the **Admission** part and go through the different sections:

- Identification
- Anthropometry (Including criteria of admission)
- Medical history and clinical examination, including appetite test
- Routine medicines and other treatments

**Follow up** part: each column represents a weekly visit and has to be filled by the health worker during the consultation

- Identification
  - Anthropometry during follow up
  - Medical history for the week between the two appointments
  - Clinical examination, including appetite test
  - Actions required
  - Identification of the examiner
  - Result of the visit
1. Identify and write down (At least) 10 mistakes (Missing information, errors...).
  2. Complete the card with the missing information and correct the identified mistakes.
  3. Describe in a paragraph the evolution (Anthropometrical, clinical) of the child during the treatment and explain the decisions taken by the health worker.
  4. Answer the following questions:
    - a. What was the criterion used for admission?
    - b. Is MUAC for week 4 (21st September) correct?
    - c. What would be the target weight for that child if criterion of discharge is "15% weight gain (From admission weight)"?

ADMISSION AT OUTPATIENT CARE FOR SEVERE ACUTE MALNUTRITION

Name	Xxxxxx Yyyyyy			Reg. No.	XXX/098/OTP		
Caretaker	XXXXXXXXXXXXXXXXXXXXXXXXXXXX			Health Centre	XXXXX XX		
Physical address	Locality xxxxxxxxxxxxxxxxxxxxxxxxxxxx			Commune Yyyyyyyyyyyyyyyyyyyyyy			
Age (months)	19	Sex	M	F	Date of admission	03/09/2010	
Information about admission	Referred by CHW	Self-reference		Relapse	Readmission after defaulting	Referral from Inpatient care	
<b>Admission Anthropometry</b>							
Weight (kg)	8.4	Height (cm)	83.0	WFH (or BMI)	<-3ZS	MUAC (mm)	108
Oedema (0), (+) or (++)	NO	Criteria of admission		Oedema	WFH <-3ZS (BMI <16)	MUAC <115cm	
<b>Physical Examination at admission</b>							
Cough	Yes	No	Respiration Rate	6-12m	<50 >50	12-59m	<40 >40
				Chest indrawing		Yes	No
Diarrhoea (>3 liquid stools)	Yes	No	Dehydration		Yes		No
Vomiting	Yes	No			Mid/Moderate		Severe
Passing Urine	Yes	No					
Thirsty	Yes	No					
Extremities	Normal	Cold					
State of conscienceness	Normal	Agitated	Irritated	Passive			
Ears	Normal	Dry	Pain	Discharge			
Mouth	Normal	Sores	Candida				
Skin changes	None	Scabies	Ulcers	Abscess	Peeling		
Lymph nodes	None	Axilla	Neck	Groin			
<b>Other problems (specify):</b> Mother explains that the child has been caughing for several (unknown) weeks							
Malaria rapid test at admission (-) or (+)	positive		HIV test result (if known)				
<b>Routine medicines (Note date and dose)</b>							
Sugared water	at admission		Mebendazole	second visit			
Amoxycillin	at admission		Measles vac.				
Anti-malaria			Vitamin A	at discharge			
<b>Other treatments</b>							
Drug	Date	Dose		Drug	Date	Dose	

Circle the right answer

## Handout 3b: Using the Outpatient care Individual follow up card (Answers)

### Answers and comments

1. Identify and write down (At least) 10 mistakes (Missing information, errors...).
2. Complete the card with the missing information and correct the identified mistakes.
3. Describe in a paragraph the evolution (Anthropometrical, clinical) of the child during the treatment and explain the decisions taken by the health worker.
4. Answer the following questions:
  - a. What was the criterion used for admission?

Only one criterion for admission should be reported here. Individual follow up cards are used to assess typology of admissions and monthly reports. If more than one criterion has been circled the health worker collecting data for reports can report the case twice.

When more than one of the admission criteria is present, priority for reporting is given as follows: (1) oedema, (2) WFH and (3) MUAC. All of them are independent criteria. Cases presenting low MUAC or WFH and bilateral pitting oedema should be referred to inpatient care
  - b. Is MUAC for week 4 (21st September) correct?

MUAC at week 4 is 123mm which is much bigger than in the previous and following weeks (112 and 116 respectively). This difference can be measurement error or transcription error but should have been detected and the measure repeated and corrected.
  - c. What would be the target weight for that child if criterion of discharge is "15% weight gain (From admission weight)"?

The target weight if a criterion for discharge is 15% of weight gain is 9.8kg

**Exercise 4: Data collection and analysis: Consolidating monthly reports****What is the learning objective?**

- To understand basic concepts related to the monitoring and reporting of CMAM activities and be familiar with practical tools for it

**When should this exercise be done?**

- After the main concepts on inpatient and outpatient care have been introduced and the tools for monitoring of programmes have been explained.

**How long should the exercise take?**

- 60 minutes

**What materials are needed?**

- **Handout 4a:** Data collection and analysis
- **Handout 4b:** Data collection and analysis (Model answer)
- Calculators
- Paper for preparing graphs
- Filled forms for site monthly report
- Empty forms for consolidated monthly report
- District consolidated monthly reports (Two months)
- Part 2 of the Module or National Guidelines if existing

**What does the trainer need to prepare?**

- Prepare a case study using statistics from several centres based on the template seen in handout 4a.

**Instructions**

**Step 1:** Give each participant a copy of handout 4a with the question and a copy of the five site monthly reports

**Step 2:** Give participants 40 minutes to read the information, complete the calculations required in each site monthly report, produce the consolidated monthly report and answer the questions in handout 4a (This can be done individually or in groups of 3 or 4 participants).

**Step 3:** Allow 20 minutes for discussion in plenary.

**Discussion points for feedback in plenary (See handout 4b: Model answers)**

- ➔ What is the importance of consolidating reports from different sites?
- ➔ Why is it important to have separate reports from each site?
- ➔ How to use monthly reports during supervisions

Note to trainers: as with previous exercises, a large number of questions have been suggested for this exercise. You can select those that are most relevant to the participants, or introduce others based on this template.

**Handout 4a: Data collection and analysis: Consolidating monthly reports (Questions)**

**Time for completion:** 40 minutes

You are the acting supervisor for nutrition in the district of Malanemie. You have just received monthly data<sup>1</sup> from the 5 outpatient care sites and the inpatient care service (in the district hospital). This data is summarised in the table on the following page. You are asked by your District Health Officer to produce the consolidated monthly report for CMAM and to analyse the information provided by each centre and trends for the District for the last three months. Prepare a short report for the district supervisors' team visiting the different sites for supervision.

1. Calculate the (Consolidated) total number of patients at the beginning of the month and the total at the end.
  - a. Compare both figures and describe changes in the total patient load
  - b. Do the same for each individual site and explain findings
2. Calculate the (Consolidated) total number of new admissions and calculate the percentage of cases that were admitted through the outpatient care services and the percentage that started treatment in the inpatient care centre.
3. Calculate the (Consolidated) total number of discharges and the percentage for each category, do the same calculations for each individual site
  - a. Describe your findings for the district against international standards (Sphere)
  - b. Which site has the best recovery rate?
  - c. Which site has the greatest mortality rate? Justify your findings
  - d. Which site has the greatest defaulting rate?
4. Look at the number and percentage of non-recovered per site and for the district and at the number of cases transferred from each outpatient care site to the inpatient unit
  - a. Which site has the greatest non-recovering rate?
  - b. What are the main reasons for non-recovering?
  - c. Which outpatient site has the lowest number of cases transferred to inpatient?
  - d. What can you conclude about site (A) taking into account the rates abovementioned (In this question and in previous)? Which questions arise from the comparison between discharge rates, non-recovery rates and the number of cases transferred from outpatient care to inpatients?
5. Look at the consolidated reports from the two previous months and prepare hand-made graphs for: admissions (New cases), discharges and number of cases in charge at the end of the month. Describe your findings and analyse trends for exit indicators. Briefly explain what would be your next action if you were the manager of that programme.

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<sup>1</sup> To make the exercise simpler, only data for children 6-59 months are presented here. In reality, when all age groups (infants, adolescents, adults etc.) are present in the programme most of the calculations still have to be done ONLY for the age group 6-59 months.

Outpatient care site data for use in exercise 4

Site	Total beginning of the month (A)	New cases (B)		Old cases (C)	Total admission (D) (B+C=D)	Discharges (E)				Transfer (F)		Total end of the month (H) (A+D-G=H)
		6-59m (B1)	Other (B2)			Cured (E1)	Death (E2)	Defaulter (E3)	Non-recovered (E4)	To inpatient or outpatient care (F)	Total discharge (G) (E+F=G)	
Makumba (A)	50	48	0	5	53	32	6	9	9	0	56	47
Kapio (B)	78	54	0	9	63	32	2	15	7	6	62	79
Anamio (C)	43	59	0	7	66	40	0	4	6	4	54	55
Bontemi (D)	32	12	0	2	14	14	1	11	2	5	33	28
Herreros (E)	87	23	0	6	29	40	0	4	6	4	54	62
Ilonge (F)	12	19	0	9	28	3	6	2	1	17	29	11
DISTRICT	302	215	0		215	161	15	45	31		252	265
						64.0%	6.0%	18.0%	12.0%			

**Handout 4b: Data collection and analysis: Consolidating monthly reports (Answers)**

- Calculate the (consolidated) total number of patients at the beginning of the month and the total at the end.
  - Compare both figures and describe changes in the total patient load  
The total number of cases in charge for the whole district has slightly decreased: From 302 cases at the beginning of the month to 265 at the end.
  - Do the same for each individual site and explain findings  
Sites (A) (D) and (E) have a smaller number of patients in charge at the end of the month than at the beginning  
Sites (B) (C) and (F, inpatient) have increased their numbers
- Calculate the (consolidated) total number of new admissions and calculate the percentage of cases that were admitted through the outpatient care services and the percentage that started treatment in the inpatient care centre.
  - Total number of admissions for the district and for the month: 215
  - Number of new admissions at outpatient care: 196 (91% of the total)
  - Number of new admissions (directly) at inpatient care: 19 (9% of the total)
- Calculate the (consolidated) total number of discharges and the percentage for each category. Do the same calculations for each individual site

	CURED	DEATH	DEFAULTER	NON-RECOVERED
Makumba (A)	32	6	9	9
	57%	11%	16%	16%
Kapiro (B)	32	2	15	7
	57%	3.5%	27%	12.5%
Anamio (C)	40	0	4	6
	80%	0.0%	8%	12%
Bontemi (D)	14	1	11	2
	50%	3.5%	39.5%	7%
Herreros (E)	40	0	4	6
	80%	0.0%	8.0%	12%
Ilonge (F) (inpatient care)	3	6	2	1
	25%	50%	16.7%	8.3%
DISTRICT	161	15	45	31
	64%	6%	18%	12%

- Describe your findings for the district against international standards (Sphere<sup>2</sup>)  
Recovery rate for the district is low due to a high defaulting rate and an important percentage of non-recovered cases.
- Which site has the best recovery rate?  
Both (C) and (D) are at 80% of cured, which is above standards. The rest are much lower, with only half of the exits being cured in (D).

<sup>2</sup> Sphere standards are: recovery rate >75%, death rate <10%, defaulting rate <15%

- c. Which site has the greatest mortality rate? Justify your findings

The site with the highest mortality rate is (A) with 11% of exits being deaths. The rest of outpatient care sites show lower rates, except the inpatient unit (F) where mortality reaches 50%.

- d. Which site has the greatest defaulting rate?

All sites show high defaulting rates but the one with the greatest percentage is (D) with almost 40% of cases abandoning treatment before complete recovery.

**Note:**

When analysed individually, outcomes from inpatient care services have to be carefully interpreted.

- If access to outpatient care is adequate, most of the cases going to inpatient care go back to an outpatient service when their clinical condition has been stabilised to complete recovery there. Thus, recovery rates in the inpatient services should be low
- Only children with SAM and critical clinical condition go to inpatient care, thus they are the most at risk of mortality. Causes and other related aspects (time of the death...) should be assessed regularly in order to prevent excess mortality in the unit.

4. Look at the number and percentage of non-recovered per site and for the district and at the number of cases transferred from each outpatient care site to the inpatient unit

- a. Which site has the greatest non-recovering rate?

Site (A) has the biggest proportion of non-recovered cases.

- b. What are the main reasons for non-recovery?

Reason for non-recovery could vary from place to place. The following are possible reasons for non-recovery:

- Sharing of RUTF with other siblings
- Not attending the programme consistently, and hence not getting appropriate treatment and RUTF supply
- Underlying chronic medical conditions such as HIV/AIDS, TB
- Repeated acute infections such as diarrhoea, pneumonia
- Poor quality of care provided: health worker not closely monitoring child response to treatment and taking appropriate and timely action.

- c. Which outpatient site has the lowest number of cases transferred to inpatient?

The site with the lowest number of children transferred to inpatient care is (A) with no cases referred.

**Note:**

Although there are no standard objectives for that indicator, it is assumed not to be high. Non-recovered cases can be the result of the interaction between individual (chronic illnesses, food insecurity, social – environmental...) and programmatic (insufficient quality/weak performance of the activities) factors that in most cases should be avoided.

- d. What can you conclude about site (A) taking into account the rates abovementioned (in this question and in previous)? Which questions arise from the comparison between discharge rates, non-recovery rates and the number of cases transferred from outpatient care to inpatients?

Site (A) presents the highest mortality and non-recovered rates and has no transfers to the inpatient care service.

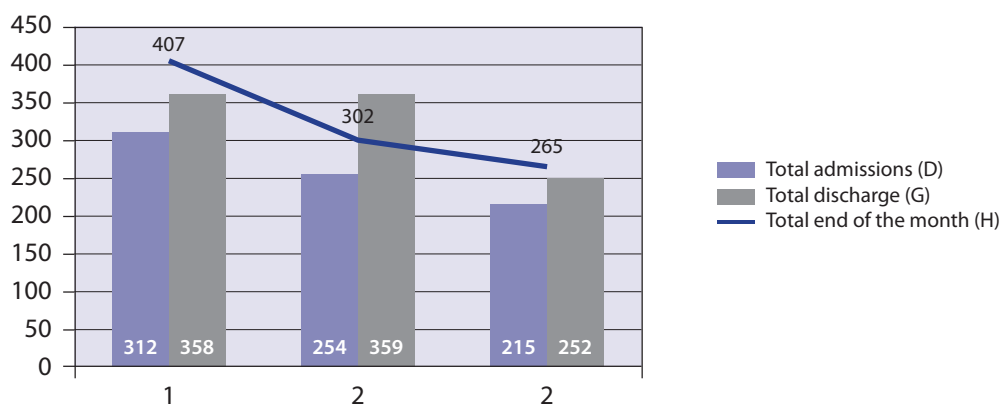
Reasons that can explain that are:

- Access to the inpatient facility, in terms of distance or cost or the perception of the families that inpatient care at the hospital would not benefit the child's condition
- Outpatient care service performance: staff not sufficiently trained on the detection of cases that need inpatient care

5. Look at the consolidated reports from the two previous months and prepare handmade graphs for: admissions (new cases), discharges and number of cases in charge at the end of the month. Describe your findings and analyse trends for exit indicators. Briefly explain what would be your next action if you were the manager of that programme



Month	Total cases at the beginning of the month	Total admissions	Discharges				Total discharges	Total cases at the end of the month
			Cured	Death	Defaulter	Non-recovered		
June	453	312	222	54	45	37	358	407
			62%	15%	13%	10%		
July	407	254	238	35	54	32	359	302
			66%	10%	15%	9%		
August	302	215	161	15	45	31	252	265
			64%	6%	18%	12%		



- The number of monthly new admissions has been slightly decreasing for three consecutive months (June, July, and August), as the caseload at the end of each month: from 407 at the end of June to 265 at the end of August.
- Regarding exit indicators:
  - The proportion of cured remains stable but always below standards
  - Mortality rates were high (above standards) at the beginning of the period but have been decreasing and in August are almost within objectives.
  - The defaulting rates were correct in June but have been slightly increasing, being in August above standards

## 5. Case studies

Two case studies are presented in this section: Case studies are useful for getting participants to think through real-life scenarios. They also provide an opportunity for participants to work in a group and develop their analytical and decision-making skills. Trainers should develop their own case studies which are contextually appropriate to the particular participant group. Preferably trainers should use scenarios with which they are familiar.

### Exercise 5: Case Study on setting up an emergency therapeutic care programme

#### What is the learning objective?

- To be aware of the current baseline scenarios for emergency response and the different elements to be taken into account for setup, scale up or handover of activities for the management of SAM.

#### When should this exercise be done?

- As part of a longer in-depth training

#### How long should the exercise take?

- 2 to 3 hours

#### What materials are needed?

- **Handout 5a:** Case Study on setting up an emergency therapeutic care programme.
- **Handout 5b:** Case Study on setting up an emergency therapeutic care programme. Model answers.

#### What does the trainer need to prepare?

- Prepare a case study from a context familiar to the participants based on the template handouts 5a and b.

#### Instructions

**Step 1:** Give each participant a copy of handout 5a.

**Step 2:** Divide the participants into groups of (maximum) 5 people.

**Step 3:** The case study is divided into 6 sets of questions. Give the participants 20 minutes for the sets of questions that need calculations and 15 minutes for those that don't.

**Step 4:** Give each group 5 minutes for feedback in plenary. Then allow for 10 minutes for discussion of results and for reading the suggested answer.

**Step 5:** At the end a 30 minute debate should allow the participants to consolidate and summarise the main conclusions and lessons learnt from the exercise.

Note: Information presented in this case-study is adapted from reports from SC-UK, World Vision, Valid International, FANTA, Action Contre la Faim and MSF. Although data from several sources has been used to prepare this case-study, the results are not based on the actual results of any specific programme.

## Handout 5a: Case Study on setting up an emergency therapeutic care programme

X is a country of more than 12 million people of whom more than 2.4 million are children under five years of age. It is among the poorest countries in the world with great scarcity of resources and infrastructure. Eighty percent of its inhabitants live in rural areas and 63 percent are classified as living below the poverty line. Levels of child mortality and malnutrition are high, even in normal (i.e., non-emergency) years. According to recent surveys, life expectancy is 42 years (female) and 41 years (male), infant mortality 100 per 1000 live births, under-five mortality 198 per 1000, and fertility rates 7.1 children born per woman. The rate of HIV infection amongst 15 to 49 year olds is 0.7 per cent. It is estimated that only half of the population in the country have access to health care and no more than 60 per cent to safe drinking water. Fourteen percent of children below 6 months are exclusively breastfed and vaccination coverage of DPT3 in children between one and two years is only 29 per cent.

In 2000, the rate of Global Acute Malnutrition (GAM) was estimated to be 14.1 per cent and the rate of severe acute malnutrition (SAM) 3.2 per cent. Stunting was estimated to be 39.8 per cent but there was consensus that this had increased since the 2000 survey.

The health system in X follows a pyramidal primary health care structure with rural health centres in every district, some of which are supported by health posts, and hospitals at district, regional and national level. The system is undermined by lack of funding, effective human resources and mismanagement in most districts.

X is subject to recurrent droughts, frequent food insecurity, high incidence of communicable diseases, and high population pressure, particularly in the south. The country has suffered major food crises in the past (on average once every decade). The consequences included excess malnutrition and death, destitution and large-scale migration to neighbouring countries.

### Current situation

A humanitarian emergency was declared in 2005. The causes for the emergency was multi-factorial and included food production failure and market disruption in rural areas overlaying endemic inadequate care and feeding practices, high prevalence of communicable diseases, and poor health access. Nutrition surveys from several provinces started showing alarming results including an earlier than expected seasonal increase in malnutrition cases detected at health facilities. By August, some NGOs published statistics showing GAM rates of 22.3 per cent and SAM rates of 4.1 per cent in the province of Alpha, inhabited by approximately 230 000 people.

Food distributions to the general population started in August 2005, and international NGOs established programs addressing acute malnutrition and food insecurity. There were no reported outbreaks of infectious diseases.

### Questions:

1. Using the information provided estimate the number of severely malnourished children in the province.
2. Do you think a therapeutic care programme would be necessary in this setting?
3. If yes, list other information that you would need to design a therapeutic care programme.

### Programme planning: Location of centres<sup>3</sup>

With the information from above you are asked by your agency to submit an intervention plan to provide therapeutic care in the region. You collect further information on the demography of the province and its characteristics. The province is divided in 6 districts, as follows:

	Hospitals	Health centres and Health posts	Population	Distance from Head of district to capital
Province capital	1 (Provincial)	4 (Urban)	32 000	0
District A	1 (District)	3 (Rural)	28 700	50 km S
District B	1 (District)	4 (Rural)	34 600	10 km SW
District C	1 (District)	3 (Rural)	26 700	75 km SE
District D	1 (District)	4 (Rural)	34 200	125 km NW
District E	1 (District)	4 (Rural)	33 500	145 km NE
District F	1 (District)	5 (Rural)	40 300	115 km N

You know from the data that population size varies considerably between districts. The districts in the south (Districts A to C including the capital which is in District A) are much smaller in size and therefore have a much higher population density. In contrast, Districts D to F which are further north are larger and have a very dispersed population.

Following the primary health structure of the health system in country X your initial plan is to establish outpatient services close to each health centre or health post (22 in total) and one inpatient facility (stabilisation centre) at each of the 7 hospitals. However, after checking with your manager you realise that this may not be feasible in the short-term. You are told that with the available resources you may only plan for 1 or 2 inpatient facilities and a maximum of 15 outpatient facilities. Furthermore, these will have to be opened progressively (a first wave immediately and a second wave in the following 2 or 3 weeks).

#### Questions:

- Discuss what criteria you could use to decide where to set up the facilities.
- Discuss with your working group any implications of the decision taken and what can be done to limit any adverse consequences or limitations of this approach.

### Programme planning: Forecasting needs for staff and food

After discussion with your donors and agency it has been decided that your agency will concentrate programming in districts A, B and C. One inpatient facility will be set up in the capital to take advantage of the extra services provided by the provincial hospital. The need for a second inpatient facility will be re-evaluated later. A first wave of 6 outpatient facilities will be opened immediately and the others will follow in two weeks.

#### Questions

- What is the number of children in need in the selected 3 districts (plus the provincial capital)?
- Assuming coverage of 80 per cent, what is the number of children expected in the centres during the next three months? How many would you expect to see in each type of facility?
- What are the staffing needs for the stabilisation centre and the 6 outpatient facilities?
- Calculate the required amount of food items for a period of three months (F75, F100, and RUTF).
- What other activities need to be planned at this stage?

<sup>3</sup> This part of the exercise could be done with a map of the area of intervention where participants are expected to work.

## Community mobilisation

In conjunction with establishing the mobile teams for outpatient care you send out teams for screening patients in the communities around each site (case-finding). This team works intensively during the first two weeks. You also appoint 2 volunteers for each outpatient site.

The main components of your programme therefore comprise:

- 1 inpatient care facility at provincial hospital
- 6 mobile outpatient care facilities served by one team (1 in the capital, 2 districts with 2 sites and 1 district with 1 site)
- One screening team
- One or two volunteers per outpatient care site.

### Questions

11. Do you think that these programme components are sufficient to meet your objectives? Comment.
12. Describe the main features of community mobilisation.

## Two months later

You have just received information from the second monthly report. Among other things you observe that;

- The total number of children admitted to the programme so far is 984.
- 45 per cent of these children were admitted to inpatient care.

### Questions

13. Comment on these two statistics. Estimate programme coverage.

With this information at hand you decide to check the centre register and discover that:

1. 20 per cent of the children come from neighbouring districts, and
2. There are no children from the villages further away from the centres.

### Question

14. Comment on these findings and whether they would lead you to take any actions

## Conclusion

*List the main conclusions you draw from this exercise.*

## Handout 5b: Case Study on setting up an emergency therapeutic care programme. Model answers.

*There are no definitive answers for the questions posed in this case study. The answers and calculations below are only suggestions and a range of answers and calculations could be explored as part of this exercise.*

*Do not distribute all the answers at once. The trainer can present the answers after each question has been completed by participants. The full handout with all the answers can be given out at the end of the exercise while wrapping up and drawing conclusions in plenary.*

1. Estimation of numbers of malnourished children in the province can be made using the nutrition survey data (prevalence). However, note that this information does not take account of the new cases that will develop malnutrition in the coming months. These cases need to be taken into account in the planning process as well!  
  
Assuming that 20 per cent of the population in the region are children below 5 years old then there are 46 000 children in the region. If 4.1 per cent are severely malnourished, the total number of severely malnourished children in the province at the time of the survey is around 1886.  
  
Note that the need for therapeutic care was already justified on the basis of the survey data from 2000!
2. Yes, a Therapeutic programme is certainly necessary. GAM is above 15 per cent while the trend shows an increase compared to previous years. Furthermore, the food security situation provides corroborating evidence that severe malnutrition is to be expected.
3. Other information needed at this stage might include:
  - a. Mortality rates (probably available from the nutrition surveys),
  - b. Specific causes of malnutrition identified in the region (if a specific survey of this type has been undertaken),
  - c. Available resources in country (nutrition capacities, more information on the health system, etc.),
  - d. Presence of other public health priorities,
  - e. Characteristics of the general food distribution already in place (composition of the ration distributed, type of targeting, who are the beneficiaries, etc.)
  - f. Existing plans for implementing SFPs or therapeutic care,
  - g. Presence of other agencies in the area or in the country that could participate in nutrition programming,
- 4) and 5) There is no single answer to these questions and each situation is different. However, the following considerations should be taken into account:
  - The distribution of malnutrition in the region. This information is often unavailable as nutrition surveys provide a single prevalence figure for all the area. Other surveys, or rapid assessments, can be undertaken but this would be time consuming and delay an intervention which needs to be started urgently.
  - The coverage of the programmes. Is your agency aiming to cover the whole region with the risk of only achieving limited coverage in each of the districts, or achieving a higher coverage in some of the districts than in others<sup>3</sup>?
 Possible approaches to resolve this dilemma include:
  1. Lobbying for extra resources,
  2. Concentrating on part of the region and lobbying for another agency to take responsibility for therapeutic care in the remaining areas of the region.

<sup>3</sup> An alternative way of approaching this question is to divide the groups into two and ask each group to defend one of the two options in the question. A negotiated process could lead to a consensus. Any decision taken needs to be justified.

6. The numbers in need for the three districts and the capital are:

	Total Population	Pop Under 5 (20%)	SAM population (4.1%)
Region capital	32 000	6 400	262
District A	28 700	5 740	235
District B	34 600	6 920	284
District C	26 700	5 340	219
Total			1,000

Note that the figure of 1,000 children does not include children below 6 months of age. Such estimation may be good enough, but further information could be needed if there was a suspicion that this age group is particularly at risk.

7. There is no standard method to forecast the number of patients that may present with severe malnutrition in the following three months. This will depend on the dynamics of the emergency e.g. whether severity of conditions is expected to increase or not and on the relative distribution between oedematous malnutrition (which develops rapidly – in one or two weeks) and marasmus (which develops over 4 to 6 weeks). For the purpose of this exercise, let's assume that we expect twice the number of children observed in the survey will need therapeutic care, i.e. 2000 children. Given an anticipated coverage of 80 per cent we need to plan for 1600 cases.

In normal circumstances, 20 to 30 per cent of these cases will need inpatient treatment, at least for the first phase of treatment, while the others will go straight into outpatient care. This translates into a rounded up figure of 400 children in inpatient care and 1200 in outpatient care.

8. The decision to open 6 outpatient care facilities was partly taken on the basis that this would allow for a mobile team to serve 6 locations – one each day of the week. This would help establish the programme rapidly. Staffing needs would be fairly minimal, e.g. one nurse, one or two assistants for measuring the children and distributing the foods and one driver would be adequate. If the decision was taken to establish fixed outpatient sites, the number of staff in each centre would comprise two persons (one nurse and one assistant) with each centre dividing its workload into several days per week.

9. Using the figures from Annex 7 and 8 and Section 11 of Part 2 of this module:

Facility/Product	Cumulative number expected	Need per patient	Total need for 3 months
<b>Inpatient care</b>			
F75	400	2 kg	800 kg
F100	20*	12 kg	240 kg
<b>Outpatient care</b>			
RUTF	1 200	12 to 15 kg	14 400 to 18 000 kg

\* (5% of total inpatients). See Part 2 of the module for assumptions underpinning these calculations.

10. Other things that need to be planned:

- a. Contacts with the local authorities and community representatives,
- b. Coordination with other agencies working in the area,
- c. Recruitment and training of staff. A two day initial training for the outpatient care staff is sufficient if accompanied by on the job training during the first weeks,
- d. Transport of patients (for referrals) – consideration whether this will be necessary
- e. Set up of the inpatient facility: Does this require new buildings or are there potential locations within the existing hospital? Recruitment and training of staff in the centre.
- f. Community mobilisation (see next).

11. The number of outpatient and inpatient care sites may be insufficient. This should be re-evaluated after several weeks of activity. The community mobilisation component is incomplete while the number of volunteers may prove insufficient.

12. Main community mobilisation activities should include:

1. Mobilisation and sensitisation on programme activities and principles.
2. Active case finding (screening) within communities
3. Follow up of outpatient cases and absentees (defaulters)
4. Health education.

13. At the time of the survey just before the programme began there were 1000 malnourished children. In order to estimate the number of patients expected in the first three months (to account for new cases of children who were not malnourished at the time of the survey), this figure was doubled. Most admissions should have taken place in the first month, with the remaining 1000 distributed between months 2 and 3. If the coverage reached the target of 80 per cent by the end of the second month the programme should have admitted 1200 children. Coverage is therefore certainly below the target. However, it is not possible to be precise about achieved coverage with the information provided.

The fact that 45 per cent of children were admitted to inpatient care while only 55 per cent went directly into outpatient care may mean two things:

1. That the protocols are not correctly applied (e.g. staff overestimating the severity of malnutrition in patients). This, in turn, could be due to lack of training, or lack of confidence in outpatient care to rehabilitate children who are very thin (perhaps partly as a result of pressure from mothers who lack confidence in outpatient care).
2. That most children present with complicated severe malnutrition.

In both cases it may be necessary to reinforce training and boost community mobilisation in order to detect cases earlier and sensitise / educate the community on the potential benefits of outpatient care (see below).

14. As coverage is below expected levels several actions will need to be implemented. The following are some examples:

1. Contact agencies in neighbouring districts and determine whether they are implementing a therapeutic care programme component. If not, lobby these agencies to implement therapeutic care programmes.
2. Increase the number of outpatient care facilities to make the programme more accessible (at least 90 per cent of patients should be able to travel back and forth to the centre within one day).
3. Boost community mobilisation including; sensitisation on programme activities and principles and case finding. This will need many more volunteers. A rule of thumb can be applied, i.e. that a volunteer should not be in charge of more than one or two villages (this depends on the size of the villages and how far apart they are). With only 2 to 4 volunteers per district in this example, it was highly unlikely that good mobilisation and coverage would be achieved. In order to plan and design a more detailed community mobilisation programme, you will need a list of; villages, community structures and leaders and also have identified potential opportunities for screening and sensitisation (e.g. market days),
4. Undertake a coverage survey to estimate the coverage in each of the areas of the target districts and reconsider the set up of community mobilisation based on the results.



**Exercise 6: Survival exercise: management of a patient with complications in inpatient care****What is the learning objective?**

- To be aware of the specificities of the treatment of medical complications for SAM

**When should this exercise be done?**

- As part of a longer in-depth training

**How long should the exercise take?**

- 30 minutes

**What materials are needed?**

- **Handout 6a:** Survival exercise: Management of a patient with complications in inpatient care (Trainer instructions)
- **Handout 6b:** Survival exercise: Management of a patient with complications in inpatient care (Model answers)

**What does the trainer need to prepare?**

- See text to prepare coloured cards.

**Instructions**

**Step 1:** Give each participant a copy of handout 6a.

**Step 2:** Divide the participants into groups of (Maximum) 5 people

**Step 3:** Give the groups 30 minutes to answer the questions and prepare a presentation of their answers

**Step 4:** Give each group 5 minutes for feedback in plenary

**Discussion points for feedback in plenary**

- ➔ See handouts

## Handout 6a: Survival exercise: Management of a patient with complications in Inpatient care.

### Instructions for the trainer

A number of problems are written out on coloured cards with the options for treatment.

The coloured cards are numbered.

The consequences (answers) are on equivalent coloured cards kept by the facilitator.

Divide the class into groups of 2-3 participants.

Ask one participant to read out the scenario above. Explain that the groups have to work together to ensure Wangani's survival.

The first group is asked to take card number 1 and read out the problem and options. The group has one minute to choose an option.

If the option is correct, a point is scored, if it is wrong, no point is scored.

The second group then chooses a problem card, etc.

Scoring: The total score is added at the end

Score = 0-3 Wangani probably dies.

Score = 3-6 Wangani remains longer in therapeutic care than she needs to.

Score = 6 Wangani survives and receives the recommended treatment.

### Text for participants:

You are working in an inpatient care centre which has been set up by an NGO. Facilities are basic but the centre is up and running with enough staff to meet Sphere minimum standards. A little girl called 'Wangani' is brought in by her grandmother. Her height is 68cm but she weighs only 5.8 kg. She is clearly very sick and has no appetite. You are put in charge of her treatment. The decisions that you take with respect to her treatment will either ensure her survival or may hasten her death.

## Handout 6b: Survival exercise: Management of a patient with complications in Inpatient care (Model answers)

Problem 1: Wangani is clearly suffering from anaemia. What should you do?

<b>Option 1:</b> Give iron immediately.	<b>Consequence 1:</b> INCORRECT Iron has toxic effects in the initial phase of treatment and reduces resistance to infection
<b>Option 2:</b> Withhold iron until the second phase.	<b>Consequence 2:</b> CORRECT Iron should never be given during Phase I and should only be given orally after 14 days during rehabilitation.

**Discussion points: What are the signs of anaemia? What should you do when a child needs a blood transfusion because of severe anaemia?**

**Answers:** The clinical signs of anaemia are: pale conjunctivae (inner eyelid), nails, gums, tongue, lips and skin; breathlessness; headaches; tiredness (but difficult to recognise). Blood test: severe anaemia Hb<4g/l.

Never give transfusions between day 2 of treatment in the stabilisation phase and day 14 in rehabilitation. Outside this range, only give a blood transfusion where facilities are available, including testing for HIV and hepatitis, and under strict supervision (follow up of vital signs and weight change). Special forms for following up rehydration (or transfusion) are used.

Problem 2: Wangani has watery diarrhoea and is showing signs of dehydration (thirst, sunken eyes, weak pulse, cold hands and feet, and no urine flow – developed in the last hours). What should you do?

<b>Option 1:</b> Give ordinary ORS.	<b>Consequence 1:</b> INCORRECT ORS has too much sodium and too little potassium for severely malnourished children.
<b>Option 2:</b> Give ReSoMal.	<b>Consequence 2:</b> CORRECT This is the correct ORS solution for severely malnourished children to be used in Phase I only.
<b>Option 3:</b> Don't give anything.	<b>Consequence 3:</b> INCORRECT A dehydrated child requires urgent treatment.

**Discussion points: How can you make the differential diagnosis of dehydration in the malnourished child? What should you do when a child requires oral or IV rehydration?**

**Answers:** All classical signs of dehydration are unreliable in the malnourished child. The diagnosis needs to be made on the basis of: i) a definite history of recent fluid loss (watery diarrhoea, not just loose stools – appearing suddenly in the last hours or day); ii) a recent change in child's appearance; and iii) the child has no oedema.

Rehydration with ReSoMal or IV fluids should only be administered to children with a definite diagnosis of dehydration. IV fluids are only given when the child presents dehydration shock (fast weak pulse, loss of consciousness, coldness of extremities). In all cases, ensure strict supervision (vital signs and weight change). Special forms for following up rehydration are used for this.

**Problem 3: Wangani's grandmother reports that she has been feeding Wangani on diluted porridge. The grandmother would like to continue with the porridge. What do you do?**

<b>Option 1:</b> Explain to the grandmother that Wangani needs a special milk. Immediately start Wangani on F-75 milk and encourage her to feed every 2 hours.	<b>Consequence 2:</b> CORRECT Wangani needs a specially balanced milk introduced in a controlled manner.
<b>Option 2:</b> Explain to the grandmother that Wangani needs a special milk. Immediately start Wangani on F-100 and encourage her to feed every 2 hours.	<b>Consequence 2:</b> INCORRECT F-100 is for Phase II as the protein and energy content are too high. Wangani risks heart failure.
<b>Option 3:</b> Allow the grandmother to continue feeding Wangani on the porridge.	<b>Consequence 3:</b> INCORRECT The porridge will not have the finely balanced nutrient mix which is necessary for severely malnourished children.

**Discussion point: What would an effective method be for explaining to the grandmother that it is important to use milk?**

**Answer:** A good way to get over information is to ask another woman in the centre (whose child has recovered well with treatment) to explain the treatment methods and be encouraging.

**Problem 4: Wangani's grandmother says that Wangani has had difficulty seeing in the dark and, after clinical examination, you suspect vitamin A deficiency. What do you do?**

<b>Option 1:</b> Delay treating with vitamin A until Wangani enters Phase II.	<b>Consequence 1:</b> INCORRECT Wangani should receive vitamin A immediately.
<b>Option 2:</b> Start giving vitamin A supplements immediately.	<b>Consequence 2:</b> CORRECT

**Discussion point: Are there any potential problems with giving children therapeutic doses of vitamin A?**

**Answer:** Yes. Vitamin A is toxic in large doses. Current guidelines advise that it should only be given to children with clinical signs of vitamin A deficiency, if there is a high prevalence of vitamin A deficiency in the area or if measles and vitamin A supplementation coverage in the area are low. It is important to check the child's health card (if (s)he has one) or speak with the carer to establish whether previous doses have been given.

**Problem 5: Wangani's grandmother has been feeding Wangani using a bottle and teat as Wangani has no appetite and isn't feeding well. The grandmother would like to continue with the bottle. What do you do?**

<b>Option 1:</b> Teach the grandmother how to feed Wangani using a cup. If Wangani is unable to retain her milk (vomiting) set up a naso-gastric tube.	<b>Consequence 1:</b> CORRECT Bottles and teats should never be used in Therapeutic care programmes.
<b>Option 2:</b> Ensure that the bottle and teat are well sterilised and ask the grandmother to continue bottle-feeding Wangani as this is what she is used to.	<b>Consequence 2:</b> INCORRECT The risk of infection is high using bottles and teats and in her vulnerable state Wangani is very open to infection.

**Discussion point: In what circumstances should a nasogastric tube be used?**

**Answer:** Nasogastric tubes should be used as a last resort and should be inserted by a qualified health person. These are used only in circumstances where young children are unable to keep food down or if the child is unconscious. Nasogastric tubes are invasive and may frighten the carer.

**Problem 6:** After 3 days in the inpatient centre, Wangani's grandmother reports an enormous improvement in Wangani. She appears to be more alert. The grandmother is keen to get back home as she has other members of the family to care for. She asks if she can leave Wangani's 6-year-old sister in charge. What do you do?

<p><b>Option 1:</b> Allow the grandmother to go home leaving the sister in charge of Wangani.</p>	<p><b>Consequence 1:</b> INCORRECT Wangani needs very careful supervision and a 6 year old should not be left with that responsibility.</p>
<p><b>Option 2:</b> Persuade the grandmother to stay a little longer – at least until Wangani moves to Phase II.</p>	<p><b>Consequence 2:</b> CORRECT Wangani requires time to stabilise and careful supervision of feeding from an adult.</p>

**Discussion point: What do you do if a carer can't stay with the child?**

**Answer:** In some circumstances, the carer may not be able to stay and his/her wishes must be respected. It is then important to find a substitute carer. Remind the carer that after some extra days (total of 10 days on average) they will be able to move to outpatient care and continue treatment from home.

## 6. Field based exercises

This section outlines ideas for exercises that can be carried out as part of a field visit. Field visits require a lot of preparation. An organisation that is actively involved in programming has to be identified to 'host' the visit. This could be a government agency, an international NGO or a UN agency. The agency needs to identify an area that can be easily and safely visited by participants. Permission has to be sought from all the relevant authorities and care taken not to disrupt or take time away from programme activities. Despite these caveats, field-based learning is probably the best way of getting over information that will be remembered by participants.

### Exercise 7: Field activities in an outpatient care facility

#### What is the learning objective?

- To appreciate what goes on in the real life implementation of CMAM service. Assess strength and challenges of the service based on the skills and knowledge you have acquired in the training.

#### When should this exercise be done?

- At the end of an in-depth course on therapeutic care.

#### How long should the exercise take?

- A morning at the outpatient facility. The days before and after for preparation and discussion (Plenary).

#### What materials are needed?

- **Handout 7a:** Field activities in an outpatient care facility

#### What does the trainer need to prepare?

- On day 1, the trainer needs to work with the participants to develop their action plans. The field visit takes place on day 2. The trainer will need to identify a suitable organisation and area for the field visit and organise all logistics (transport, fuel, meals etc.) for the visit. It is essential that the trainer visits the field site in advance of the visit in order to coordinate with the team at the outpatient facility, and identify potential problems. Discussion of the exercise should take place back in the classroom on day 3 (or the afternoon of day 2).

#### Instructions

**Step 1:** Decide which activities to implement from the list in handout 7a.

**Step 2:** Divide participants into groups and give each one or two activities.

**Step 3:** On day 1, groups prepare an action plan for the following day, with background materials and examples of questions.

**Step 4:** On day 2, groups implement their action plans

**Step 5:** On day 3, groups return to the classroom for discussion

#### Discussion points for feedback in plenary

- ➔ See handouts

## Handout 7a: Field activities in an outpatient care facility (Examples)

You may divide the participants into several groups. Smaller groups may cause less disruption at the centres. Rotate the groups so that each can complete different activities during the same visit. This handout gives some examples of learning activities that can be undertaken during a field visit. Organisation and timing will depend on the number of participants and the activities in the centre. In each case, decide which activity or activities are going to be undertaken by each group before hand.

On the day before the visit, each group should prepare a list of questions to ask about a particular activity. On the day of the visit collect and summarize all the information. On the day after (or the afternoon of the visit), each group reports to the plenary group their findings and observations. Use this to start a debate or discussion, and to link the observations to the material taught during the course.

### **Three activity areas are described:**

#### **Working with the registration book, statistics and patient's cards:**

This should be undertaken before patients arrive, or at the end of the day when they have left the centre. Get familiar with the registration book of the centre, if one is being used. Take 10 minutes looking at the entries for the last months. What impressions do you get? Can you roughly estimate from the book how the centre has performed in terms of recovery, defaulters, etc? Compare the data in the book with the monthly reports! Summarize observations and report to the plenary group.

Ask for the cards of 10 patients that have been discharged during the previous month. Identify the card of those patients in the Registration book and check that all information is correctly copied. Do you find any discrepancy? Summarize and report to the group.

Identify cards of 5 patients that were referred back to inpatient care after having started treatment in outpatient care. Carefully read the card and identify:

1. The criteria for sending the patient back to inpatient
2. When were they referred back
3. When did the patient arrive in inpatient care?
4. What was done there?
5. How long did it take for the patient to be referred again to outpatient care?
6. Was the problem solved?
7. Is the patient progressing better now (or if the patient has already been discharged, did he/she recover)?

Summarize the information and report to the group.

Identify cards of 10 patients that have been discharged as non-responders or died. Look for the details of weight gain, presence of complications (clinical evolution), appetite, treatment given and result observed, etc. Summarize the information and report to the group.

Ask for the monthly statistical reports of the centre (and daily tally sheets if they are used) for the last four months. Describe evolution of the centre (data trends over time) and the main constraint faced during this period. Summarize the information and report to the group.

Look at the registration book or patient's card. Note the origin of the patients (and number of patients from each origin) admitted during the last month. Plot the number of patients coming from each surrounding village on a map. Present the map and your comments to the group. (If this activity can be done with several outpatient centres, make a map of the whole programme. Compare the number of beneficiaries during the last month with the results of the last nutrition survey (and coverage survey, if there is one).

## Observation

To be carried out before and during consultation with the patients.

- Visit the facilities of the centre. Observe and report on the means for storing drugs and food. What methods are being used to control these stocks?
- Identify the main source of water in the centre, and how sugar-water is prepared for patients waiting for admission. Report to the group.

Draw a plan of the centre with its waiting area, consultation facilities, etc. Consider the flow of patients and estimate the time each patient stays in each station. Present the map and your comments to the group.

Once the patients arrive observe the activities in the centre. In particular, describe where and how:

- Patients wait to be seen
- Patients are weighed and measured
- Registration books and cards are filled in
- Health and nutrition education is conducted
- The medical consultation takes place
- The appetite is assessed
- Drugs and food are distributed.

Prepare a brief presentation of the activities for someone who has never visited an outpatient centre (to be done on day 3 and presented to the rest of the group).

## Interviews

Conduct discussions with those responsible for the centre and their team. Ask them to explain the position of their centre in the larger therapeutic care programme. What is their relationship with other outpatient centres, with the inpatient facilities, with hospital or health centre? How do these relationships function and what, if any, issues arise?

Summarize comments and report to the group.

If there are some outreach workers participating in the outpatient session, ask them to stay some minutes after the patients have gone. Make it clear that you are there to learn from them, and not to assess the quality of their work, or to introduce any changes or respond to any demand. Let them explain their activities and the main constraints they face in their work. Ask questions about distance walked to visit their community, number of families they can visit per day, etc. Ask about particular situations like: patients that refused treatment, patients that could not be found, follow up of defaulters. Ask about their relationship with local authorities and community leaders. Let them describe individual stories where they believe their work made a difference to save a child. Summarize comments and report to the group.

Conduct a small focus group discussion with the mothers and carers of patients waiting to be seen. Ask about the following:

- What is the problem with the child?
- How did they know about the programme?
- How were they recruited into the programme (through an outreach worker, or did they come spontaneously)?
- How long does it take them to come to the centre?
- How do they get organised to come to the centre?
- Do they leave other activities in order to come here?
- Do they have anyone to take care of other children or cover for other responsibilities/activities on the day of their visit to the centre?
- What have they learnt about the child's feeding since they have been in the programme?



What other questions can you suggest? Summarize the results and report to the group.

There are no standard answers to any of the questions above.

The most delicate part of these field exercises is to implement them without giving the impression to the staff in the centre that they are being inspected or supervised. It is key, therefore, that they play a major role during the visit. It is best therefore that the facilitator takes a back seat and allows those running the centre to explain "how things are". On day three there will be time for comments, criticism, etc. Never criticise those working in the centre in front of participants, beneficiaries or other staff!

## Handout 8a: Field activities in an inpatient care facility (Examples)

This field-based exercise is similar to exercise 7. Most of the activities in exercise 7 can be adapted for an inpatient centre.

When conducting field visits to inpatient care centres, remember that only small groups should be allowed into the facility. Remember that the most severely malnourished patients should be disrupted as little as possible. Minimize contact with these patients.

In addition to the activities described in exercise 7, you may add:

- Use the Registration book, patient's cards and monthly reports to identify the main causes of transfer to hospital or death. Ideally, identify examples of cases with dehydration, severe anaemia, shock, heart failure or respiratory infection. Analyse a number of patient cards where these conditions arose and complete a full description for each case (nutritional status of the child, clinical condition, when the problem presented, treatment given, actions taken and the results observed). Report to the group.
- Ask the medical person in charge of the facility to present 2 or 3 patients where complications were observed (use the same list as above if possible). Summarise the case history using additional information from the patient's card and report to the group.
- Identify the cards of patients below 6 months of age who are being treated with special protocols. If there is an infant less than 6 months in the centre observe how the supplementary suckling technique is implemented. Summarize the case and report to the group, explaining this technique.
- If a patient is known to be HIV-infected, analyse his / her card and identify the adaptations to the protocol that have been made. Summarize and present to the group explaining the reasons for the adaptations.

These activities in exercises 7 and 8 are only suitable for medical personnel following training. It is important that the training and the exercise are led by a medical person (physician or nurse) with experience in the management of patients with complicated severe acute malnutrition.