Training Course on The Management of ACUTE MALNUTRITION

FACILITATOR GUIDE

3rd edition, 2019
Addis Ababa, Ethiopia

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HEALTHIER CITIZENS FOR PROSPEROUS NATION

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The first National Protocol on the Management of Severe Acute Malnutrition (SAM) for Ethiopia was developed in 2004 and the 2nd and updated version was made available as of March 2007. The training course material was developed on 2011 titled "*Training Course on the Management of SAM"* using the WHO *"Training Course on the Management of SAM, 2002"* as template but taking most of the contents from the "National Protocol for the Management of SAM, 2007". The Third National Protocol for the management of acute malnutrition incorporated updates from the 2013 World Health Organization (WHO) global recommendations on the management of severe acute malnutrition in infants and children and revised. The revised guideline was launched in June 2019 by the FMOH titled "National Guideline for Management of Acute Malnutrition, Ethiopia". Subsequently, the training package has been revised in line with the national guideline. The training package incorporates both the in-patient and outpatient management of acute malnutrition.

This third edition of the training materials was developed through the technical and financial support from World Health Organization (WHO), Ethiopia and the valuable input of from the national experts from regional referral hospitals and teaching institutions, United Nations Children's Fund (UNICEF), World Food Programme (WFP), and experts from implementing Non-Governmental Organizations. It is our strong belief that this training package will contribute significantly to the efforts being made to improve the quality of care provided for malnourished children and pregnant & lactating women.

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Federal Ministry of Health

H.E Dr. Lia Tadesse (MD, MHA)

Minister of Health

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MANAGEMENT OFSEVERE ACUTE MALNUTRITION: FACILITATOR GUIDE

Introduction to this Facilitator Guide

What methods of instruction are used in this course?

This course uses a variety of methods of instruction, including reading, written exercises, discussions, role plays, video, and demonstrations and practice in a real Stabilization Center (SC) or severe malnutrition ward. Practice, whether in written exercises or on the ward, is considered a critical element of instruction.

How is the course conducted?

- Small groups of participants are led and assisted by "facilitators" as they work through the sessions of a module (sessions that contain units of instruction). The facilitators are not lecturers, as in a traditional classroom. Their role is to answer questions, provide individual feedback on exercises, lead discussions, structure role plays, etc.
- The module provides the basic information to be learned. Information is also provided through demonstrations, photographs and videotapes.
- The module is designed to help each participant develop specific skills necessary for case management of severely malnourished children. Participants develop these skills as they read the module, observe live and videotaped demonstrations, and practice skills in written exercises, group discussions, oral drills, or role plays.
- After practicing skills in the module, participants practice the skills in a real hospital setting, with supervision to ensure correct patient care. A clinical instructor supervises the clinical practice sessions in the TFU or severe malnutrition ward and OTP sites of the hospital or health center.
- To a great extent, participants work at their own pace through the module, although in some activities, such as role plays and discussions, the small group will work together.
- Each participant discusses any problems or questions with a facilitator and receives prompt feedback from the facilitator on completed exercises. (Feedback includes telling the participant how well he has done the exercise and what improvements could be made).
- In this facilitator guide page references are made to both the participant manual (abbreviated as PM) and to the facilitator guide (abbreviated as FG).

For whom is this course intended?

This course is intended for doctors, health officers, nutritionists, and nurses who manage severely malnourished children in health centers and hospitals. Doctors, health officers, nutritionists, and nurses must work closely together as a team, so they should have consistent training in the use of the same case management practices. Because of their different job responsibilities and backgrounds, however, they may find different parts of this course more interesting and applicable to their work. Nurses, in particular, may find that some parts of this course are more detailed than they need, or that they would like more explanation or time to understand the concepts.

Nurses, doctors, health officers and, nutritionists from the same health facility may meet together to work on planning exercises for their facility.

What is a FACILITATOR?

A facilitator is a person who helps the participants learn the skills presented in the course. The facilitator spends much of his time in discussions with participants, either individually or in small groups. For facilitators to give enough attention to each participant, a ratio of one facilitator to 7-8 participants is desired. In your assignment to teach this course, YOU are a facilitator.

As a facilitator, you need to be very familiar with the material being taught. It is your job to give explanations, do demonstrations, answer questions, talk with participants about their answers to exercises, conduct role plays, lead group discussions, assist the clinical instructor with clinical practice in the hospital, and generally give participants any help they need to successfully complete the course. You are not expected to teach the content of the course through formal lectures. (Nor is this a good idea, even if this is the teaching method to which you are most accustomed.)

What, then, DOES a FACILITATOR do?

As a facilitator, you do 3 basic things:

1. You INSTRUCT:

- Make sure that each participant understands how to work through the materials and what he is expected to do in each sessions of the module and each exercise.
- Answer the participant's questions as they occur.
- Explain any information that the participant finds confusing and help him understand the main purpose of each exercise.
- Lead group activities, such as group discussions, oral drills, video exercises, and role plays, to ensure that learning objectives are met.
- Promptly review each participant's work and give correct answers.
- Discuss with the participant how he obtained his answers in order to identify any weaknesses in the participant's skills or understanding.
- Provide additional explanations or practice to improve skills and understanding.
- Help the participant to understand how to use skills taught in the course in his own hospital.
- Assist the clinical instructor as needed during clinical practice sessions.

2. You MOTIVATE:

- Compliment the participant on his correct answers, improvements or progress.
- Make sure that there are no major obstacles to learning (such as too much noise or not enough light).

3. You MANAGE:

- Plan ahead and obtain all supplies needed each day, so that they are in the classroom or taken to the hospital ward when needed.
- Monitor the progress of each participant.

How do you do these things?

- Show enthusiasm for the topics covered in the course and for the work that the participants are doing.
- Be attentive to each participant's questions and needs. Encourage the participants to come to you at any time with questions or comments. Be available during scheduled times.
- Watch the participants as they work and offer individual help if you see a participant looking troubled, staring into space, not writing answers, or not turning pages. These are clues that the participant may need help.
- Promote a friendly, cooperative relationship. Respond positively to questions (by saying, for example, "Yes, I see what you mean," or "That is a good question."). Listen to the questions and try to address the participant's concerns, rather than rapidly giving the "correct" answer.
- Always take enough time with each participant to answer his questions completely (that is, so that both you and the participant are satisfied).

What NOT to do .....

- During times scheduled for course activities, do not work on other projects or discuss matters not related to the course.
- In discussions with participants, avoid using facial expressions or making comments that could cause participants to feel embarrassed.
- Do not call on participants one by one as in a traditional classroom, with an awkward silence when a participant does not know the answer. Instead, ask questions during individual feedback.
- Do not lecture about the information that participants are about to read. Give only the introductory explanations that are suggested in the Facilitator Guide. If you give too much information too early, it may confuse participants. Let them read it for themselves in the module.
- Do not review text paragraph by paragraph. (This is boring and suggests that participants cannot read for themselves.) As necessary, review the highlights of the text during individual feedback or group discussions.
- Avoid being too much of a showman. Enthusiasm (and keeping the participants awake) is great, but learning is most important. Keep watching to ensure that participants are understanding the materials. Difficult points may require you to slow down and work carefully with individuals.
- Do not be condescending. In other words, do not treat participants as if they are children. They are adults.
- Do not talk too much. Encourage the participants to talk.
- Do not interrupt or distract the clinical instructor when he is conducting a clinical session. He has certain objectives to cover in a limited time.
- Do not be shy, nervous, or worried about what to say. This Facilitator Guide will help you remember what to say. Just use it!

How can this FACILITATOR GUIDE help you?

This Facilitator Guide will help you teach the course module, including the video segments.

For each session of the module, this Facilitator Guide includes the following:

- A list of the procedures to complete the session, highlighting the type of feedback to be given after each exercise;
- A list of any special supplies or preparations needed for activities in the session;
- Guidelines describing:
  - How to do demonstrations, role plays, and group discussions
  - How to conduct the video exercises
  - How to conduct oral drills
  - Points to make in group discussions or individual feedback.

- A place to write down points to make in addition to those listed in the guidelines.

At the back of this Facilitator Guide is a section titled "Guidelines for All sessions of the Module". This section describes training techniques to use when working with participants during the course. It provides suggestions on how to work with a co facilitator. It also includes important techniques to use when:

- Participants are working individually
- You are providing individual feedback
- You are leading a group discussion
- You are coordinating a role play.

Answer sheets are provided at the end of this facilitator guide.

To prepare yourself for each session, you should:

- Read each session and work the exercises;
- Check your answers by referring to the answer sheets;
- Read in this facilitator guide all the information provided about the session;
- Plan with your co-facilitator how work on the session will be done and what major points to make;
- Collect any necessary supplies for exercises in the session, and prepare for any demonstrations or role plays;
- Think about sections that participants might find difficult and questions they may ask;
- Plan ways to help with difficult sections and answer possible questions;
- Ask participants questions that will encourage them to think about using the skills in their own hospitals.

CHECKLIST OF INSTRUCTIONAL MATERIALS NEEDED IN EACH SMALL GROUP

ITEM NEEDED	NUMBER NEEDED
Facilitator Guide	1 for each facilitator
1 module, Chart booklet, and Photographs booklet	1 for each facilitator and 1 for each participant
Set of 5 laminated reference cards	1 set for each facilitator and 1 set for each participant
Guideline for the management of acute malnutrition FMOH, 2019 **(optional)**	1 for each facilitator and if possible one for each participant
Therapeutic treatment multi-chart	1 for each facilitator and 1 for each participant
OTP card	1 for each facilitator and 2 for each participant
Extra copies of Multi-chart loose (for use in exercises)	10 for each participant
Extra copies of Monitoring Record (for use in exercises)	3 for each participant
TFP Registration book	1 for each facilitator to demonstrate
Extra copies of two pages of TFP Registration book	2 copies
Monthly statistics TFP Report form	One copy for facilitator and 2 copies for participants
Monitoring Checklists (3 pages)	1 set for each facilitator and 1 set for each participant
Set of multi-chart and other forms and PPT of conceptual framework of malnutrition (if LCD projector is available). Alternative: Enlarged wall chart photocopies of Therapeutic treatment multi-chart and SAM assess and classification charts	1 set per group
Videotape	1 per group
Schedule for the course	1 for each facilitator and participant
Schedule for clinical sessions	1 for each facilitator and participant

CHECKLIST OF SUPPLIES NEEDED FOR WORK ON SESSIONS

Supplies needed for each person include:

- Name tag and holder
- 2 Pens
- 2 Pencils with erasers
- Paper
- Highlighter
- Folder or large envelope to collect answer sheets
- Calculator.

Supplies needed for each group include:

- Paper clips
- Pencil sharpener
- Stapler and staples
- 1 Roll masking tape
- Extra pencils and erasers
- Flipchart pad and markers or blackboard and chalk
- Lcd projector (if possible), and erasable markers for writing on overhead transparencies.

Access is needed to a video player. Your Course Director will tell you where this is. In addition, certain exercises require special supplies such as ingredients for feeding formulas or ReSoMal, mixing containers and spoons, a blender, or a hot plate for cooking. These supplies are listed at the beginning of the guidelines for each session. Be sure to collect the supplies needed from your Course Director before these exercises.

Guidelines for INTRODUCTION SESSION

	Procedures*	Feedback
1.	Introduce yourself and ask participants to introduce themselves.	
2	Do any necessary administrative tasks.	
3.	Distribute the module and introduce session 1: Introduction to participants. Present the conceptual framework for malnutrition. Participants read all of session 1: Introduction.	
4.	Answer any questions about the Introduction.	
5.	Explain your role as facilitator.	
6.	Participants tell where they work and describe briefly their responsibility for care of severely malnourished children.	
7.	Continue immediately to the second session, Principles of Care.	

* Notes for each of these numbered procedures are given on the following pages.

1. Introduction of yourself and participants

Introduce yourself as a facilitator of this course and write your name on the blackboard or flipchart. As the participants introduce themselves, ask them to write their names on the blackboard or flipchart. (If possible, also have them write their names on large name cards at their places.) Leave the list of names where everyone can see it. This will help you and the participants learn each other's names.

2. Administrative tasks

There may be some administrative tasks or announcements that you should address. For example, you may need to explain the arrangements that have been made for lunches, transportation of participants, or payment of per diem.

This is a good time to distribute the course schedule and point out when your group will be visiting the hospital's severe malnutrition ward for clinical practice.

3. Introduction of session 1: Introduction

Explain that the short Introduction session briefly describes the problem of acute malnutrition, the conceptual framework for malnutrition (using PPT), and the need for improved case management. It also describes the course methods and learning objectives.

Explain that the module is theirs to keep. As they read, they can highlight important points or write notes on the pages if they wish.

Explain that each session of the module is designed to accompany the FMOH guideline for the

Management of acute malnutrition.

Ask the participants to read introduction session now. They should continue reading to the end of the session.

4. Answering questions

When everyone has finished reading, ask if there are any questions about the Introduction. Participants may have questions about the equipment and supplies listed in the Annex A.

They may be concerned that some items are not available in their hospitals or health centers, or they may wonder why certain items are needed. Explain that the need for each item will be explained in the module. Explain that many hospitals or health centers would lack some of these items and need to obtain them. There will be opportunities in the course to discuss problems such as lack of supplies.

5. Explanation of your role as facilitator

Explain to participants that, as facilitator (and along with your co-facilitator, if you have one), your role throughout this course will be to:

- Guide them through the course activities
- Answer questions as they arise or find the answer if you do not know
- Clarify information they find confusing
- Give individual feedback on exercises where indicated
- Lead group discussions, drills, video exercises and role plays
- Observe and help as needed during their practice in clinical sessions.

Explain that there will be a separate clinical instructor who will organize and lead the clinical practice sessions held at the hospital.

6. Participants' responsibility for acutely malnourished children

Explain to participants that you would like to learn more about their responsibilities for caring for severely malnourished children. This will help you understand their situations and be a better facilitator for them. For now, you will ask each of them to tell where they work and what their job is. During the course you will further discuss what they do in their hospitals or health centers.

Begin with the first participant listed on the flipchart and ask the two questions below. Note the answers on the flipchart.

- What is the name of the hospital/health center where you work, and where is it?
- What is your position or responsibility for severely malnourished children?

Note: Have the participant remain seated. You should ask the questions and have the participant answer you, as in a conversation. It is very important at this point that the participant feels relaxed and not intimidated or put on the spot. (Though it may be interesting to you to ask the participant more questions about his responsibilities, do not do that now. This should not be a long discussion.)

7. Continuing to the second session

Proceed directly to the next session, Principles of Care.

Guidelines for PRINCIPLES OF CARE SESSION

	Procedures	Feedback
1.	Distribute the Photographs booklet, and the laminated Weight-for-Height Reference table Introduce the session.	
2.	Participants read through page 18-20 of the module and do Exercise A using the Photographs booklet.	Group discussion
3.	Participants read pages 25-32 of the module. Do a demonstration of how to use the Weight-for-Height Reference table.	
4.	Participants do Exercise B (page 34) using their Weight-for-Height Reference table	Individual feedback
5.	Participants read page 35-40 of the module and do Exercise C (page 41).	Group discussion
6.	Lead group oral drill on weight for height percentage and admission criteria.	Drill
7.	Demonstration: Use of the Therapeutic Treatment Multi-chart	
8.	Participants read pages 43-44 of the module and do the short answer exercise on page 44.	Group-checked
9.	Participants read pages 45-46 of the module and do the short answer exercise on page 47.	Group-checked
10.	Participants read page 48-49. They do the short answer exercise on page 50 and check their own answers (page 51). Then they finish reading the session including page 52.	Self-checked
11.	Video: Transformations Discuss video and photos 21 - 29.	Group discussion
12.	Summarize the session.	
13.	Introduce Initial management session	
	Give home assignments for day 2:	
14.	Read Initial Management session through Exercise C (page 54-87) & do exercises B (p 76). and C (p 83).	

Preparations for the session

For each session, prepare carefully by reviewing the exercises and discussing with your co-facilitator how to work together to lead the group discussions, role plays, etc. This section of the facilitator guidelines describes special supplies or preparation needed for a session

At the end of Principles of Care, you will show a video showing signs of severe malnutrition and transformations that can occur with correct case management. Depending on arrangements made by your Course Director, you may need to take the participants to another room to view the video. Find out what arrangements have been made. Make sure the following equipment and supplies are available. Learn how to operate the equipment and practice using it:

Copy of the videotape Video player Video monitor (connected to the video player) Electrical outlets

1. Introducing the session

Explain that this session describes how to recognize a child with severe malnutrition and how to weigh and measure a child. The session gives an overview of correct case management and provides a rationale for the essential components of case management. The session also describes how the severely malnourished child is different, and why this affects care. Participants will use their Photographs booklets in this session to see signs of severe malnutrition. Later, in the clinical session they will look for these signs in children in the hospital.

Ask participants to read pages 18-20 of the module and do Exercise A using the Photographs booklet. Encourage participants to ask you questions as needed while they are reading or doing the exercise.

2. Exercise A: Individual work followed by group discussion -Identifying signs of severe malnutrition in photographs

An answer sheet for this exercise is provided in a separate packet. The answers are also repeated in this Guide for your convenience. Refer to the answers as you lead this discussion. Remember that the answers given are possible answers. There is room for discussion of almost all of the photos. In many cases the degree of a problem cannot accurately be judged without examining the child.

First point out the signs in Photo 1 (answered as an example in the exercise). Next, for each photo in turn, ask a different participant what signs are visible. Ask the more confident participants first. If a participant does not mention all of the signs, ask “Does anyone see another sign”?

Avoid discussing irrelevant signs at length. Remind them to look for: severe wasting, edema, dermatosis, and eye signs.

Refer to possible answers at the back of this facilitator’s guide page 70.

At the end of the discussion, ask participants to read pages 25-32 of the module. These pages will explain how to carefully weigh and measure a child. Participants will then learn how to use the information on weight and height to determine whether a child is severely malnourished. Hold up the Weight-for-Height Reference table, and explain that participants will need to refer to this.

3. Reading, demonstration

Some groups will easily understand the reading and how to use the Weight-for-Height Reference table. These groups should complete the reading and go on to Exercise B independently.

Nurses’ groups, as well as some other groups, may need a demonstration of how to use the Weight-for-Height Reference table.

4. Exercise B: Individual work followed by individual feedback -Determining weight-for-height percentage

Since this is the first time that you will give individual feedback to a participant, be sure to make the participant feel comfortable. Some techniques to use while giving individual feedback are described on page 66 at the end of this Facilitator Guide.

Participants may not be familiar with Z- scores. If a participant is interested in the concept of Z-scores, encourage him to read from other references. If a participant is uncomfortable with statistics or calculate SD scores, reassure him that a complete understanding of how to calculate is not necessary. The important thing is to know how to use the Weight-for-Height Reference table to determine how the child compares to other children of his length. Children whose weight-for-height percentage is less -3 Z-score are considered severely malnourished.

Compare the participant's answers to those given on the FG answer page 71 for this exercise. Discuss any differences and correct any misunderstandings. If necessary, make up another

example and have the participant try it. For example, ask "If a child is ..... cm long and

weighs ..... kg, what is her weight-for height percentage"?

Point out the first footnote at the bottom of the Weight-for-Height Reference table. "Recumbent" means the same as "supine" or "lying down." This footnote explains that children less than 87 cm should be measured lying down, while children 87 cm and taller should be measured standing up. If it is impossible to measure a taller child standing up (e.g., if the child is too weak to stand), subtract 0.7 cm from the length lying down.

Ask the participants to read page 35-40 of the module and do Exercise C (page 41 of PM).

5. Exercise C: Individual work followed by group discussion -Determining whether a child should be admitted

Participants read the child history in the exercise; look at photos; and use the following admission criteria to decide whether a child should be admitted to the SC or severe malnutrition ward. Tell the participants to use the **Assessment and Classification of a Child with Acute Malnutrition and refer their Weight-for-Height Reference Card** as

needed. They should decide to admit children who have:

— Infants below six months of age with SAM

OR

— Children 6 months to 5 years with SAM who have any one of the medical complications or failed appetite test, OR, +++ edema, OR, WFH < -3 z-score/ MUAC< 11.5 with edema;

OR

— Children with SAM and referred from OTP for in-patient care in SC

OR

— When OTP is not available in your working area or where the care taker lives; or if the care taker's choice is inpatient care, all SAM children need to be admitted for in-patient care even if they don't fulfill the SC admission criteria. (Note: For this admission indication, some of the participants might ask with which therapeutic diet to start. In this case start with either F-75, F-100, or RUTF, based on the clinician's decisions.)

For each photo in turn, ask a different participant what the child's weight-for-height is, whether or not there is edema of both feet, and what decision should be made. Add to the discussion as needed based on the comments given on the answer on page 71 of this facilitator's guide.

After discussing the photos in relation to the admissions criteria recommended in this course, discuss the admissions criteria currently used in participants' own hospitals for severely malnourished children. For example, ask:

- What admissions criteria are used for severely malnourished children in your hospitals? What are the reasons for these criteria?
- Would the children in photos 18, 19, and 20 be admitted to your hospitals? If so, would they be admitted to a SC or severe malnutrition ward, or to some other area of the hospital?
- At the end of the discussion, do the following oral drill.

6. Oral drill: weight-for-height Z-score and admissions criteria

Tell participants that a drill is a fun, lively group exercise. It is not a test, but rather an active way to practice using information.

Ask participants to sit around the table. They will each need their Weight-for-Height Reference table. Tell participants that you will call on them one by one to participate. You will usually call on them in order, going around the table. If a participant cannot answer, you will just go quickly to the next person and ask the question again. Participants should wait to be called on and should answer as quickly as they can begin the drill. Call out the information in the left most column below and ask the first participant to use the reference table and tell the child's weight-for-height Z-score. Then give the additional information in the third column and ask whether the child should be admitted to the severe malnutrition ward.

If a participant cannot answer or makes a mistake, let the next person try. Keep the pace rapid. You may make up additional cases if needed. Some blank spaces are allowed for this.

ORAL DRILL

Sex, length, height/ MUAC	SD score?	Additional information	Does he/she have SAM?	Inpatient
Girl, 82 cm, 7.8 kg	<-3 SD	no edema, Hypoglycemia	yes	yes
Boy, 74 cm, 7.9 kg, MUAC 11.0 cm	= 2 SD	no edema, no complication and pass appetite test	yes	no
Girl, 73.8 cm, 6.2 kg	< -3 SD	+++ edema,	yes	yes
Boy, 67 cm, 6.1 kg MUAC =11.4 cm	= -3 SD	++ edema,	yes	yes
Girl, 67.1 cm, 4.9 kg	< -3 SD	no edema, Pass appetite test, no complication, and OTP present	yes	no
Boy, 90 cm, 10.8 kg	<-2 SD	++ edema (both feet), Pass appetite test, fever (39^0C), and OTP present	yes	yes
MUAC 11.5 cm	= -2SD	no edema	no	no
4 years, MUAC 10 cm		no edema, hypothermic	yes	yes
Boy, 79.3 cm, 9.4 kg	<-1 SD	No edema	no	no

7. Demonstration: Use of the "Multi-Chart for SAM patients in Stabilization Center

Tell participants that the Multi-chart will be used in this course as an aid to remember steps in treatment and monitoring, and also as a record of care. Participants may use different recording forms in their own hospitals. The Multi-chart is an example of more or less a complete form. Participants may eventually wish to incorporate parts of this form in their own record-keeping system.

If you are using an overhead projector, when showing the pages of the Multi-chart. Otherwise, have the group gather closely around the table or a wall where they can see enlarged copies of the Multi-chart pages.

Explain that the **Multi-Chart** is a primary tool used for inpatient treatment and follow up of a child with SAM. All staffs should use the same multi-chart to record all the information needed to manage child with SAM.

Show the Multi-chart and describe it as follows. Describe the different sections of the multi-chart titled Admission and Discharge registration, Anthropometric chart, initial management, weight chart, therapeutic diet, Surveillance chart, routine and special medicine, test results, observation, immunization, discharge and education and point to the relevant section of the page as you talk. (Do not go into too much detail, especially about sections that have not been covered in the module. This is just an introduction. In this demonstration you will focus on the Multi-chart essential for **presenting clinical signs and admission.**

It may be helpful for one facilitator to talk while the other facilitator points to the relevant sections and writes on the form.

Multi-chart essential for presenting clinical signs and admission

This session will focus on Admission and Discharge registration, Anthropometric chart, Surveillance chart, test results and observation sections of the Multi-chart. It has space to record Admission registration, signs of severe malnutrition, the child's temperature, and blood glucose level (point to each section). Later in this session, participants will learn about recording hemoglobin, eye signs, signs of shock, and diarrhea, which is recorded of the **initial management** section of the Multi-Chart. Notice there is also space to record the initial feeding and the antibiotics prescription.

Admission and Discharge registration,

Show the Admission registration section. This page is used to record *name*, *age*, *sex*, *hospital no*, *address*, distance from the house, type of inpatient care, *admission main problems*, *admission date* and *time*, whether new or readmission or transfer in, and breast feeding and complementary feeding status. The discharge part will be filled on discharge and it will be explained in Daily Care session.

Anthropometric chart

This section is used to record results of weight, weight for height, MUAC and edema. It is recorded ever day which you will learn in Daily Care session.

Initial Management

This section is where dangerous medical complications like Shock, diarrhea with dehydration, hypoglycemia, eye problems, management are recorded. It also has small notes that provides guidance for the management.

Weight Chart

This graph is used daily to plot the child's weight so that increases and decreases can easily be seen. It will be explained in detail in the Daily Care Session. Do not try to explain the Weight Chart in detail now.

Surveillance chart

This section is used to record diarrhea, vomiting, dehydration, shock, temperature, respiratory rate, pale conjunctivae, dermatosis and liver size. Results of weight, weight for height, MUAC and edema. They are recorded ever daily and you will learn more in the initial management and Daily Care session of the

module.

Test results

This section is used to record blood glucose, hemoglobin, malaria smear and other laboratory tests. It will be explained in detail in the initial management session. Do not try to explain in detail now.

Observation

It is used to record any clinical findings not included in the other section like eye signs and it is also used to document daily progress of a sick child.

Tell the story of a child named Saron as you (or your co-facilitator) record the following information on the Multi-chart in front of participants:

Saron is a girl age 18 month. She was admitted on the 14th of Tikmt, 2001 at 10:00 a.m. Her hospital number is 464/01. She is from Howolso Kebele Shebedino district in SNNPR.

Saron appears severely wasted. She has oedema of both feet and lower legs (++). She has mild dermatosis (+). Her MUAC is 11.2 cm.

She weighs 6.4 kg and is 72 cm long. Ask a participant to look up Saron's weight for height Z- Score. It is <- 3 Z-score. Record it. Ask if Saron has SAM? Answer yes, because her Wt/ Ht is less than -3 Z-score and also she has + edema. Saron has no diarrhea vomiting or cough, no dehydration or shock. Her RR is 36 and PR is 80 per min.

Saron's rectal temperature is 36° C. Ask a participant if Saron is hypothermic. Answer: No Saron has no skin lesions. Liver is not palpable. She has no pallor.

Saron's blood glucose level is 44 mg/dl, but she is alert. Ask a participant if Saron has hypoglycemia. Answer: Yes.

Saron's hemoglobin is 9 gm/dl. She has no eye problems and has not had measles.

She does not have diarrhea. There is no blood in the stool and no vomiting. Saron is not vaccinated for measles and didn't take vitamin A in the last 6 months.

8. Reading and short answer exercise (group-checked)

Ask participants to continue reading Pages 42 -43 of the module and do the short answer exercise on page 44. The group will discuss the answers together.

At the end of the reading, use the questions on page 47 of the module as a review. Brief answers are given below. Keep the discussion simple and brief. The point is to break up the reading and check participants' understanding.

Some participants may wish to discuss or question some of the principles of treatment described in the module. You are not expected to know the answer to every question asked. If there are questions that you cannot answer, please refer them to the Course Director.

Possible answers to short answer exercise on page 47.

1. The systems of the body slow down with severe malnutrition (reductive adaptation). Rapid changes (such as rapid feeding or fluids) would overwhelm the systems, so feeding must be started slowly and cautiously.
2. Nearly all children with severe malnutrition have bacterial infections, even if the usual signs of infection (such as inflammation or fever) are not apparent.
3. Because the severely malnourished child makes less hemoglobin than usual, he already has extra iron stored in the body. If iron is given at this point, it may lead to free iron in the body, which can cause problems (see page 42-43 of the module).

9. Reading and short answer exercise (group-checked)

Ask participants to continue reading pages 42-43 of the module and do the short answer exercise on page 45. The group will discuss the answers together.

At the end of the reading, use the questions on page 44 as a review. Brief answers are given below. Keep the discussion simple and brief. The point is to break up the reading and check participants' understanding. The details of how to prepare the feeds will be covered in the Feeding session.

Possible answers to short answer exercise on page 44

1. Severely malnourished children cannot tolerate usual amounts of protein and sodium, or high amounts of fat. F-75 is needed as a "starter" formula so that the body will not be overwhelmed in the initial stage of treatment. When the child is stabilized, he can tolerate more protein and fat. F-100 is then used to "catch-up" and rebuild wasted tissues.
2. Both F- 100 and RUTF are used for phase transition and phase 2 feeding to "catch-up" and rebuild wasted tissues as they have high energy and protein content. RUTF doesn't need to be cooked and mix with water. It can be used for outpatient treatment where as F100 is used only for inpatient treatment.
3. Potassium and magnesium - these are needed to correct electrolyte imbalance in the cells.
4. More potassium is needed in the cells, and magnesium is essential for potassium to enter the cells and be retained.

10. Reading and short answer exercise (self-checked)

Ask participants to read pages 45-46 of the module and point out the short answer exercise on page 47 of the module. Explain that participants should do this exercise on their own and check their own answers on page 51. They should then finish the session by reading the last section about discharge policies (page 52).

11. Video and photos: Transformations

In a short training course, participants may not be able to observe in the hospital ward the dramatic changes that can occur over time in severely malnourished children who are correctly managed. Thus, photos and a video are provided to show these changes.

Before or after the video, discuss photos 21 - 29 with participants. These photos show changes in three children over a period of weeks. Information about each photo is provided in the Photographs booklet. (Note: Weight-for-age is given for photos 24 and 25 since height information was not available. Nevertheless, the changes are obvious.)

Show the video segment titled "Transformations." This part of the video provides a review of the signs of severe malnutrition as well as two "success stories" children named Babu and Kenroy. After the video ask participants what signs of recovery they noticed in the children. They may mention such signs as smiling, standing up or moving around, or more flesh.

12. Summary of the session

Participants may wish to view this brief video segment again. That is fine as long as other groups are not waiting to use the video player.

1. Remind participants that the purpose of this session was to give an overview of case management for severely malnourished children and explain some of the reasons for these case management practices. Participants will learn more about each practice in later sessions Participants will practice actually weighing and measuring children, determining weight-for-height percentages, checking for appetite test and medical complications in clinical sessions.
2. Stress the importance of the three phases for the in-patient management of SAM and briefly review the main interventions or care during Stabilization phase, transition phase and Rehabilitation phase
3. Briefly review the process described in section 2.8 and the important things NOT to do on page

49 of the module.

4. Stress the importance of emergency room personnel knowing correct case management procedures for severely malnourished children. Also new hospital staff must be informed and trained.
5. Review any points that you have noted below and answer any questions that participants may still have. (If you cannot answer a question, offer to obtain more information and discuss it later.)

13. Introducing the Session: Initial management

Explain that this session describes measures that should be taken immediately to treat complications and prevent death while stabilizing the severely malnourished child. Some of the procedures described in this session may take place in the emergency room, before the child is admitted to the SC or severe malnutrition ward. If so, emergency room personnel must be taught to recognize severely malnourished children and treat them correctly. They must understand why severely malnourished children must be treated differently than other children.

Point out the learning objectives of this session on page 54.

Demonstrate how to use of the Multi-chart: Show the Multi-chart that is essential for initial management Point to the relevant section of the page as you talk. Revise the case of Saron from the principle care session that was used to demonstrate the multi-chart. It may be helpful for one facilitator to talk while the other facilitator points to the relevant sections and writes on the form.

Point out that section 3.6 of the session relates to the eye signs which should be documented at the initial management section and Observation section of the Multi-chart. Section 3.3 of the session relates to the diarrhea box of the initial management and Surveillance section of the Multi-chart.

Distribute, the laminated F-75 Reference Card

14. Give home assignments for day 2:

Ask Participants to read initial management session through Exercise C (page 54-87) and do Exercises B (page 76 of PM) and C (page 83 of PM) for day 2.

Guidelines for INITIAL MANAGEMENT SESSION

	Procedures	Feedback
1.	Introduce the session and demonstrate how to fill the multi-chart	
2.	Participants read pages 55-80 (as home assignment) of the module. Provide feedback to the short answer exercise and Exercise B and C. • Short answer exercise (page 68 PM) • Exercise B (p 76 PM) and C (p 83 PM)	Self-checked (p 95 PM) Individual feedback (page 83 FG, page 84 FG)
3.	Participants read pages 76 and Do Exercise D (p 91 PM). Read page 93-94.	Individual feedback
4.	Video: Emergency Treatment	
5.	Summarize the Management of complication session.	
6.	Introduce Feeding session & ask participants to read page 80 of the module.	
7.	Give home assignments for day 3: • Read feeding session from pages 98-146 and Annex 3,4,&5 on pages 553-558. • Do short answer exercise on page 155 and 165, and do Exercises B (p 167), C (p 183), D (p 192) & E (p 210).	

Preparations for the session

If an overhead projector is available, you will use it to introduce the Multi-chart and demonstrate how to use the Multi-chart essential for initial management. Practice using the LCD projector of the Multi-chart pages provided. Alternatively, make sure that you have an enlarged copy of the Multi-chart that the group can look at together.

In Exercise A the group will prepare ReSoMal. You will need the following ingredients and supplies, as well as soap and water for hand washing, and clean towels (or paper towels) for drying hands. The Course Director should tell you where to obtain supplies. Have them ready before Exercise A.

The second segment of the video (Emergency Management) will be shown during this session.

1. Introducing the session (it should be done in day 1)

For Exercises C and E, you will need extra copies of the Multi-chart. Make sure that you have at least 3 copies per participant (preferably more, in case mistakes are made).

Explain that this session describes measures that should be taken immediately to prevent death while stabilizing the severely malnourished child. Some of the procedures described in this session may take place in the emergency room, before the child is admitted to the Stabilization Center (SC) or severe malnutrition ward. If so, emergency room personnel must be taught to recognize severely malnourished children and treat them correctly. They must understand why severely malnourished children must be treated differently than other children.

Point out the learning objectives of this session on page 55.

Demonstration: Use of the Multi-chart (it should be done in day 1)

Show the Multi-chart that is essential for initial management Point to the relevant section of the page as you talk. Revise the case of Saron from the principle care session that was used to demonstrate the multi-chart. It may be helpful for one facilitator to talk while the other facilitator points to the relevant sections and writes on the form.

Point out that section 3.6 of the session relates to the eye signs which should be documented at the Initial Management and Observation section of the Multi-chart. Section 3.3 of the session relates to the diarrhea box of the initial management and Surveillance section of the Multi-chart.

Ask Participants to read at home from page 55 -90 of the module and do the Short Answer Exercise on page 68 and Exercise B (p 76) and C (p 83).

2. Reading and short answer exercise and Exercise A and B:

Make sure that you have all of the supplies needed for making ReSoMal in the next exercise. Arrange the supplies where everyone will be able to see and participate.

Short answer exercise

During this section, participants should refer to Photos 6, 30, and 31 (sunken eyes), and Photo 32 (skin pinch). Be sure that they looked in their Photographs booklets for these photos.

Possible answers for this short answer exercise are given of the participant's module.

Exercise A: Group and individual work - Preparing and measuring ReSoMal

Ask all participants to wash their hands. Prepare the ReSoMal using cooled, boiled water so that it can actually be used in the ward.

Prepare ReSoMal according to package directions, or according to instructions on page 65 of the module. Let a different participant do each step. For example, one person adds the packet, another measures the sugar, another measures the water, etc.

When weighing the sugar, be sure to weigh and subtract the weight of any container used on the scale; alternatively, weigh the sugar in a plastic bag that weighs almost nothing.

When the ReSoMal has been prepared, allow each person to taste it.

Next ask each participant to answer the questions on page 76 of the module individually. When they have finished, review the answers as a group, possible answers are given on page 72 of the facilitator's module. After checking each answer, ask a different participant to measure the amount of ReSoMal in that answer. Use a small medicine cup or a 50 ml syringe to measure. Point out that these are very small amounts that will not overwhelm the child's system. They should not be tempted to give more or give it too quickly.

Exercise B: Individual work followed by individual feedback -Identifying initial treatments needed and recording on the Multi-chart

Be sure that they know where to look on the initial management session page for calculations of amounts of IV glucose and IV fluids needed. Explain to the participants the fluid of choice for shock is Ringers' lactate with 5% glucose. The 0.45% saline can also be used.

When giving individual feedback on Kedija and Yohannes, discuss each case with the participant and compare his or her answers to the answer given on page 72 FG. If the participant has made errors, do not simply correct them, but try to find the reason for the misunderstanding and clarify.

Special note to Kedija: Be sure that participants understand that diuretics should never be used to reduce oedema. Kedija receives a diuretic because she is getting a blood transfusion, and it is needed to make room for the blood.

Special note to Yohannes: Because Yohannes has hypoglycemia, signs of shock, and is lethargic, he needs 10% glucose by IV. He does not then need the 50 ml bolus NG since he will be on IV fluids, which will continue to provide glucose. If Yohannes did not have signs of shock, and would thus not receive IV fluids, he would also need the 50 ml bolus NG.

Rounding (or lack of rounding) may cause some discrepancies between participant's answers and those on the answer sheet. Do not be overly concerned about these discrepancies. Explain to participants that they may need to round answers in order to have an amount that can be practically measured. For example, they will need to round amounts of ReSoMal at least to the nearest ml.

Once you have finished providing feedback for Exercise B, ask participants to read until Exercise C and do the exercise. In Exercise C page 83 participants will need extra copies of blank Multi-chart. Show participants where these copies are kept in the classroom. Read out to participants the rest of the information for Mola and ask them to fill this in on his Multi-chart.

During this section of reading, participants should refer to Photo 12 (corneal ulceration).

Demonstration/ role play

Before Exercise C, do this demonstration/role play to help participants understand how **recording** on the Multi-chart is related to **actions** taken in the ward.

Show a blank Multi-chart on the LDC projector (If available). One facilitator will record on this form. The other will act as a "mother" holding a "baby" (a doll or rolled up towel). Each participant in turn will ask the "mother" a question, pretend to examine the baby in some way, or pretend to take blood and say what lab test should be done. The "mother" will have information such as the child's name and age so that she can respond appropriately. The facilitator will record the mother's answers and will also provide information in response to the participant's actions. For example, if the participant pretends to weigh the child, the facilitator will call out the weight and record it. At the end, the group will check to see if anything has been omitted from the Multi-chart.

It is not necessary for participants to ask questions or do the examination in a certain order. For example, a participant may look for signs of shock before another participant looks for edema, or vice versa. Important concepts:

- All of the sections of the Multi-chart relate to important parts of the child's history or examination; and
- The information obtained determines the need for life-saving treatments.

Information for "mother" (one facilitator):

- The child's name is Bekele, a boy. He is 12 months old and breastfed, although he takes some juice from a bottle.
- The mother brought him because of his skin problem (flaking and raw skin in several places).
- He has not had measles.
- There has been no diarrhea, no vomiting, and no blood in the stool.

Information from examination or lab. (The other facilitator provides this information as participants "examine" the child):

- Bekele weighs 5.2 kg and is 68 cm in length.
- severely wasted.
- His axillary temperature is 36.5°C.
- He has no edema.
- His dermatosis is moderate (++).
- There are no signs of shock: He is alert and his hands are warm. Capillary refill is 2 seconds and his pulse is not weak or fast.
- Blood glucose is 4 mmol/l.
- There are no eye problems.

If a participant is confused about what to do next, tell her to look at the Initial Management page and see what else needs to be checked.

At suitable points, interject questions such as, "What is Bekele's weight-for-height percentage? Does Bekele need to be admitted? Does Bekele have hypoglycemia? Hypothermia?" (Answers: <-3 z-score% so needs to be admitted. He does not have hypoglycemia or hypothermia.)

At the end, be sure to ask: "When does Bekele need to be fed? What? How often? How much?" (Answer: Start now! Feed 55 ml F-75 every 2 hours.) Record this in the Feeding box on the Initial Management page.

Explain that Bekele will need an antibiotic. Antibiotic choices will be explained later in the module.

Exercise C: Individual and group work - Identifying more initial treatments needed and recording on the Multi-chart

Participants should see you for individual feedback after the second case of this exercise (Radiel). Giving individual feedback on the first two cases will allow you to see how well each participant understands the material.

When everyone has received individual feedback on the first two cases, do the third case (Etaferahu) together as a group. After much individual work, this group interaction will be appreciated.

Individual feedback (Mola and Radiel):

When giving individual feedback, discuss each case with the participant and compare his or her answers to the answers provided on page 73 FG. If the participant has made errors, do not simply correct them, but try to find the reason for the misunderstanding and clarify.

Group work (Etaferahu):

Show with an LCD Projector of a blank Multi-chart and shock follow up chart or use an enlarged Multi-chart and shock follow up chart. Ask participants to complete a blank Multi-chart as you write on the overhead. Have participants take turns reading aloud the background information given on page 85 in the module. As they read, record the information on the overhead.

Next ask participants in turn to answer questions 3b - 3d of the exercise. Discuss or correct misunderstandings as needed. (Refer to the answer sheet given in the packet as needed.) When question 3d has been answered, record information about amounts of IV glucose on the multi-chart in the special medicine section and IV fluids on the multi-chart in the special medicine section and the shock follow up chart

After answering question 3d, continue to the end of the exercise using this process:

1. Ask participants in turn to read the information given about the case. Record on overhead or enlarged multi- chart and shock follow up chart while participants record on their own forms.
2. Ask participants the questions given in the module and discuss the answers.

Stress the importance of monitoring the child carefully whenever IV fluids or ReSoMal is being given. Emphasize the importance of monitoring every 10 minutes while on IV fluids and every 30 minutes or hour while on ReSoMal. Some participants may feel that such frequent monitoring is impossible; however, it is important because the child may go into heart failure if hydrated too fast. It is critical to notice quickly signs of possible heart failure such as increasing pulse and respirations. Hospital staff should do their best to monitor at the suggested intervals.

Ask the group to read pages 88-90 and do Exercise D on page 91 of the module. The Antibiotics Reference Card will be used in this exercise.

Ask participants to do Case 1 (Debebe) only in Exercise D and then come to you for individual feedback.

Demonstrate how to use the Antibiotics Reference Card using the example about Kalid on page 89 of the module.

3. Exercise D: Individual work followed by individual feedback -Selecting antibiotics and determining dosages

When several drug formulations are listed on the Antibiotics Reference tabel, participants should choose the one that is most likely to be available in their own hospitals. Answers are given for all of the formulations on the answer sheet.

Be sure that the participant understands the Summary table given at the top of the Antibiotics Reference table. This table tells what drugs to use, depending on the presence or absence of complications. The dosage tables show the dosages of each drug for different body weights and drug formulations.

Remind the participant where antibiotics prescriptions should be recorded on the Routine medicines or Special medicines section of the Multi-chart.

Give individual feedback to the participant. When everyone has finished this exercise, the group will see a video about Emergency Treatment.

Ask participants to read about “abdominal distension” on page 93 of PM.

The video can be shown at any point after participants have finished Exercise D of this session. Introduce the video as follows:

4. Video: Emergency Treatment

This brief video will show many of the steps described so far in this module. In real life, these steps must occur very quickly, almost simultaneously. The video will show an emergency team working together rapidly and efficiently. This video shows a child will die without immediate treatment. Watch carefully as the team quickly follows emergency procedures. You will see the process once; then you will see it again with commentary.

After the video, lead a discussion. Ask participants questions such as the following:

- What did you see the emergency team check and why? What did you not see them check for? Note: Checking eyes is not shown. Use of Dextrostix is not shown, but this is not required in this case; when the child is in shock and lethargic, he should get the IV glucose.
- This child has chest in drawing and appears to have fast breathing. What do these signs indicate? Answer: Severe pneumonia. What antibiotic should be given? Answer: Ampicillin with gentamicin Note: The child is left uncovered. This is because he had a fever of 38°C and the room was extremely hot. Usually the child should be covered.
- Can the emergency team at your hospital do these procedures? Be sure that the following points are raised in the discussion:
- This child is in shock, so he will receive IV fluids. **Only** give IV fluids when a child is in shock. (Ask: "What are signs of shock?" Cold hands with slow capillary refill or Additional notes - Make these points only if participants raise these questions: weak, fast pulse.)
- Notice that glucose, fluids, and antibiotics were all given through the same IV line. Notice that pulse and respirations are monitored.
- The mask is too big because it covers the child's eyes. A pediatric mask or nasal catheter would be preferable for a good oxygen flow.
- Participants may ask why the child's arm is shaking. That is unusual, and the reason is unknown. One would expect the arm to be limp. The shaking may be due to hypoglycemic seizure.
- Participants may also ask why femoral blood is taken. That is also unusual. One would expect blood to be taken from the scalp when the IV is inserted.
- Participants may ask why the team checks for palmar pallor. They were trying to see if the child is anemic. They should determine the hemoglobin level before deciding on a transfusion. However, they may have been trying to predict the likelihood that the child will need a transfusion.

5. Summary of the session

1. Remind participants of the learning objectives for this session, listed on page 75 of the module. The skills taught in this module are those intended to prevent death while stabilizing the child. Stress that emergency room staff needs to know these skills, what to do and what not to do.
2. Remind participants that all severely malnourished children need antibiotics. The presence or absence of complications determines the type of antibiotics. Recommendations may vary locally due to resistance to certain antibiotics in some areas.
3. Stress that the Multi-chart is meant to be an aid, to help remember emergency steps. When used as a record, it also is a valuable communication tool.
4. Review any points that you have noted below and answer any questions that participants may still have. (If you cannot answer a question, offer to obtain more information and discuss it later.)

Introducing the Session: Feeding

Explain that this session describes obviously a critical part of managing severe malnutrition; that is, feeding. However, as explained in Principles of Care, feeding must begin cautiously with F-75, in frequent small amounts. This session describes how to start feeding on F-75 during Stabilization phase, transition to F-100 or RUTF during transition phase, and continue with free-feeding on F-100 or RUTF during Rehabilitation phase. This session focuses on preparing the feeds, planning feeding, and giving the feeds according to plan.

Point out the learning objectives of this session on page 98.

Distribute F-100 and RUTF for transition and Rehabilitation phase Reference Card or they can use the chart booklet.

7. Give home assignments for day 3

- *Note:*
- *Ask participants to read from page 98-139 and Annex 3,4 and 5 on page 358-364 as a take home reading and*
- *do short answer exercise on page 104 and 109, and*
- *do Exercises B (p 111), C (p 120), D (p 126) and E (p 139) for day 3.*

Guidelines for FEEDING SESSION

	Procedures	**Feedback**
1	Demonstrate how to fill the multi-chart for Feeding	
2	Participants read pages 98-139 of the module (as home assignment). Participants do group Exercise A: (Page 101) Preparing F-75 and F-100.	Group discussion
3	Provide feedback to the short answer exercise on page 104.	Self-checked (p 147 of PM)
4	Lead group oral drill on determining amounts of F-75 to give during Stabilization phase.	Drill (p 36 FG)
5	Provide feedback to the short answer exercise on page 109 and Exercise B (p 111 PM). - Short answer exercises - Exercise B.	Self-checked (P147 PM) Individual feedback (p 36 FG)
6	Provide feedback to the Exercise C (p 120 PM), D (p 126 PM) and E (p 139 PM)	Individual feedback (Ex C - p 37 FG, Ex D - p 37 FG, Ex E - p 37 FG)
7	Participants read pages 140-142 and do exercise F (p 143) and read p 145. Prepare for the group discussion on Exercise G (p 146). Provide feed back for Exercise F (p 143 PM).	Individual and group feedback Individual feedback for Ex F (p 37 of FG)
8	Conduct the group discussion in Exercise G (p 150 PM).	Group discussion
9	Summarize the Feeding session	
10	Introduce Daily Care session (p 150-181)	
11	Give home assignment for day 4: *-> read from page 152 as a take home reading and* *-> do the short answer exercises on pages 158, 168 and 162 and* *-> do Exercises A (p 163), B (p 169), C (p 169) and D (p 172) for day 4.*	

Preparations for the session

Early in this session, the group will prepare F-75 and F-100. Obtain tin formulation of F75 and F100 from the Course Director. You also need a scoop for measuring F75 and F100 for preparing smaller quantities of F75 and F100 incase very few children are being treated. Water should be boiled and cooled to 70^0C in advance. There may be a designated kitchen area that all of the groups will use. If so, find out whether there is a certain time that your group will use the kitchen area.

You will need an overhead projector or enlarged copies of the therapeutic diet section of multi-chart and Daily Ward Feed Chart. These are used for demonstrations to the whole group on how to complete the forms.

Introducing the session (It should be done on Day 2)

Explain that this session describes obviously a critical part of managing severe malnutrition that is, feeding. However, as explained in Principles of Care, feeding must begin cautiously with F-75, in frequent small amounts. This session describes how to start feeding on F-75 during Stabilization phase, transition to F-100 or RUTF during transition phase and continue with free-feeding on F-100 or RUTF during Rehabilitation phase. This session focuses on preparing the feeds, planning feeding, and giving the feeds according to plan.

Point out the learning objectives of this session on page 145.

1. Demonstration of 24-Hour Intake using the Therapeutic diet section of the Multi-Chart

Does the following demonstration to show how a 24-Hour Intake recording on the Therapeutic diet Chart can help staff to notice feeding problems early? The therapeutic diet section of the Multi-chart will be used to provide details of each feed of the day. It provides the phase, diet name (type of feed) to be given (F-75 or F-100), ml per feed, the number of feeds to be given daily, and ml per day. It also provides the intake per feed and in 24 hours. Participants will use the Therapeutic diet section of the Multi-chart during the daily care session too.

Use an enlarged copy of the form and complete the form in front of the group. One facilitator can record while the other tells the following story.

The child is a girl named Mintiwab who weighed 5.4 kg on admission. It is her second day in the hospital, and she still weighs 5.4 kg. She is supposed to receive 8 feeds of 90 ml F-75 today. Record this information at the top part of the Therapeutic diet chart of the multi-chart.

The feeding day starts at 8:00 am and ends at 4:00 am the next morning, so the 3-hourly feeding times are: 8:00 am, 11:00 am, 2:00 pm, 5:00 pm. etc. List all 8 feeding times in the "Time" column.

At 8:00 AM the nurse offers Mintiwab 90 ml of F-75. She left 5 ml, so the amount taken is 85 ml. She did not vomit any of the feed, and she did not have any watery diarrhea. Ask: Did she take enough? Answer: Yes, she took more than 80%. 85ml is "almost all" (whereas 80% of 90 ml is 72 ml). So, Mark with x the four boxes in front of 8:00 am to show, she took more than 80% of the 8:00 am feed.

Tell participants that you are going to continue to record what happened at the next feeds. Ask them to stop you if they think something different should be done:

11:00 Am 90 ml offered, 0 ml left, 90 ml taken, No vomiting, No diarrhea

2:00 Pm 90 ml offered, 10 ml left, 80 ml taken, No vomiting, No diarrhea

5:00 Pm 90 ml offered, 0 ml left, 90 ml taken, Vomited 45 ml*, No diarrhea

record in the one of the four boxes V write in bracket the amount vomited

*If none of the participants stop you, go on to record the next feed. Someone may stop you here and suggest NG feeding. Since Mintiwab took all of the previous feed before vomiting, it may be best to wait

one more feed before deciding to put in an NG tube.

8:00 Pm 90 ml offered, 20 ml left, 70 ml taken, No vomiting, No diarrhea**

Someone should stop you here and suggest that an **NG tube be used. The child vomited half of the 5:00Pm feed and took less than 80% of the next feeds. This make two consecutive feeds less than 80% of the offered, so NG tube need to be inserted. Additionally, it is already night time.

11:00 Pm 90 ml offered, 45 ml by NGT, 45 ml taken orally, No vomiting, No diarrhea

Discuss the point of this demonstration, which is that staff should not simply record the feeds; they should also notice feeding problems and act promptly by calling a doctor or using an NG tube to finish feeds. They should not wait 24 hours before noticing a problem and taking action.

2. Exercise A: Group work followed by group discussion-Preparing F-75 and F 100

Make sure all read the take home reading through page 100 and Annex 3 on page 349. When everyone has read, the group will prepare F-75 and F-100. (If necessary, preparation can be delayed until it is time for your group to use the kitchen area. The group can continue work on the session while waiting for a turn in the kitchen area.)

Be sure that everyone washes hands.

First make F-75 and then F-100.

Preparation of F-75/ F-100 Feeds using the Tin Formulation

1. Boil water to make it safe for drinking.
2. Ensure that the water temperature is not below 70°C (i.e., cooled for not less than 3-5 minutes after boiling).
3. Add the water to the F-75/ F-100 therapeutic milk powder. See Table 1 & 2.
4. Whisk the mixture vigorously until the powder dissolves in the water.
5. Cool the prepared milk to feeding temperature before administering

Table 1 & 2. Preparation of F-75/ F-100 Feeds using the Tin Formulation; -

WHITE scoop F75	Amount of water (ml)	Reconstituted F75 (ml)
1	25	28
2	50	56
3	75	84
4	100	112
5	125	140
6	150	168
7	175	196
8	200	224
9	225	252
10	250	280
20	500	560
1 Tin (400 G)	2200	2480
2 Tins (800G)	4400	4960

BLUE scoop F-100	Amount of water (ml)	*Volume of F-100 Milk (ml)
1	25	29
2	50	58
3	75	87
4	100	116
5	125	145
6	150	174
7	175	203
8	200	232
9	225	261
10	250	290
20	500	580
1 Tin (400g)	1850	2158
2 Tins (800G)	3700	4316

Note: if tin formulation of F75 is not available use one of the recipes given.

Preparation of F 100 diluted using the Tin Formulation

1. Boil water to make it safe for drinking.
2. Ensure that the water temperature is not below 70°C (i.e., cooled for not less than 3 – 5 minutes after boiling).
3. Add water to F-100 therapeutic milk..
4. Whisk the mixture vigorously until the powder dissolves in the water.
5. Cool the prepared milk to feeding temperature before administering.
6. Give the feed based on the child's body weight.

- **F-100-Diluted is prepared by adding 30% of water which was added to prepare the full-strength F-100**

Table 3. Preparation of f-100 diluted feeds using the tin formulation

Blue scoop of f-100	Water (ml)	*volume of f-100 diluted (ml)
1	33	38
2	65	75
3	98	113
4	130	152
5	163	189
6	195	226
7	228	264
8	260	304
9	293	339
10	325	377
20	650	754
1 Tin (400g)	2405	2806
2 TINS (800G)	4810	5612

After preparing the formulas, let everyone have a taste. (The remaining amount may be used during the next drill or in the hospital ward.)

3. Short answer exercise

Participants already read pages till page 103 of the module about feeding and recording feeds and did the short answer exercise on page 104. They will use the F-75 Reference Card for phase 1 in this section. They check their own answers.

Ask the participants if there are any questions or clarifications in doing the short answer exercise.

Possible question about breastfeeding: Participants may raise a question about feeding F-75 to babies who are "exclusively" breastfeeding. It is very rare to find an exclusively breastfed baby who is severely malnourished. If the baby is severely malnourished, he needs the F-75, but he should be encouraged to breastfeed between feeds. F-75 is a low sodium, low solute milk and is safe for young babies. Breastfeeding counseling may be needed.

Low-birth-weight babies are not likely to meet the definition for severe malnutrition used in this course. They are not usually severely wasted or edematous. Low-birth-weight babies should be breastfed. Their management is not taught in this course.

While participants are working, prepare for the drill below.

4. Drill: Determining amounts of F-75 to give

Ask participants to gather around for the drill. They will need their F-75 Reference Cards for phase 1 feeding or Chart booklet. The purpose of this drill is to practice using the reference cards or the F-75 table in page 18 of the Chart booklet to determine amounts of F-75 to give.

Remind participants of the procedure for drills. You will call on each person in order. If a participant cannot answer, you will go quickly to the next person and ask the question again. Participants should wait until it is their turn and should answer as quickly as they can. It should be a fun, lively exercise.

Begin the drill. Use the case information on the next page. Call out the case information; then ask the first participant to use the reference card and tell how much F-75 should be given. Explain that, unless specified otherwise, the weight given is the weight on admission (or after initial rehydration). Unless otherwise specified, the degree of oedema is also what was present on admission.

If a participant cannot answer or makes a mistake, let the next person try. Keep the pace rapid. You may make up additional cases if needed. Some blank spaces are allowed for this. At several points in the drill, you may stop and have a participant measure out the correct amount from the batch of F-75 just prepared. Choose some larger and some smaller amounts to show the range.

Drill

Case information for drill	Amount F-75 per feed
7.2 kg, 2-hourly feeds	80 ml
8.4 kg, 2-hourly feeds	90 ml
6.1 kg, 3-hourly feeds	100ml
8.8 kg, 4-hourly feeds	195 ml
8.6 kg with severe (+++) edema on admission; now weighs 6.4 kg and has no edema, 4-hourly feeds	145 ml
6.4 kg, 4-hourly feeds	105 ml
7.5 kg, hypoglycemia, 1/2 hourly feeds	21 ml per 1/2 hour (i.e.; 85 ml – 2houly)
9.1 kg, 4-hourly feeds	200 ml
7.4 kg, hypoglycemia, 1/2 hourly feeds	20 ml per 1/2hour (i.e.; 85 ml – 2houly)

5. Short answer exercise and Exercise B Short answer exercise

Participants read and did a short answer exercise on page 165 about feeding and recording feeds on the Therapeutic diet Chart section of the multi-chart. They check their own answers.

Ask the participants if there are any questions or clarifications in doing the short answer exercise.

Exercise B: Individual work followed by individual feedback -Determining F-75 feeding plans for the next day

Participants read through page 109 and did Exercise B as a home assignment. Make sure for this exercise; participants refer to the criteria for NGT feeding on page 110 of the module. Give individual feedback.

Note: While you are giving feedback for exercise B, C, D, and E the other participants read pages 140-142 and do exercise F (p 143 PM) and continue reading to p 145, and then prepare for the group discussion in Exercise G. (p 143)

6. Exercise C, D and E: Individual work followed by individual feedback Exercise C: Feeding during transition phase

Participants read page 168-182 and did Exercise C (p 115-139) as a home assignment. Give individual feedback and be sure that they understand the schedule for feeding during transition given on page 120 of the module and they used the transition phase F-100/RUTF Reference Card for the exercise. Monitoring is very important during transition.

Possible question: Participants may ask if it is permissible to give a child more F-100 if he is crying with hunger. During transition, it is very important to be cautious for the first 2 days. If 4 hours is too long for a child to wait between feeds, it is fine to give 3-hourly feeds, keeping the total daily amount the same. On day 3 of transition, you can start to add 10ml on each feed, if the child is completing the volume given at each feed, up to the maximum volume given on reference card**. The staff need to monitor the child very closely for danger signs.** Later, after transition, more food can be given according to the child's appetite without the need for such close monitoring.

Exercise D: Feeding during Phase 2 (page 126 PM)

When giving individual feedback, be sure that the participant understands how to use the F-100/RUTF Reference Card for Rehabilitation phase. The child should be gaining weight at this point, and the child's **current** weight should be used to determine the appropriate range of volume for feeding. Within this range, the child's appetite determines how much to offer.

Exercise E: Feeding infants less than 6 months (page 139 PM)

In this exercise, be sure the participants referred to the diluted F-100 on page 365, 368 and 370 of the module or page 37-40 of the chart booklet.

Make sure the participants understand F100 undiluted is never used for infants less than 6 months. Be sure also the participants understand the feeding schedule for infants on breast feeding is different from those who are not on breast feeding.

Note: There is no out-patient treatment for infants, since RUTF is not suitable for them. They have to complete their feeding as in-patient until they fulfill the discharge criteria.

After individual feedback, ask the participant to continue reading pages 140-142 of the module and do Exercise F (p 143 PM), continue reading to p 145; and prepare for the group discussion in Exercise G. Explain that Exercise F involves making Daily Ward Feed Chart and determine how much F-75 and F-100 to prepare for the ward where as Exercise G focuses on ways to prepare hospital staff to do new tasks related to feeding.

7. Exercise F: Individual work followed by individual feedback -Planning feeding for the ward

In this exercise, participants complete a Daily Ward Feed Chart by adding three children to the chart and doing the calculations at the bottom of the form.

If you anticipate that participants will have difficulty with this form, use LCD Projector or an enlarged copy of the form to demonstrate to the group how to complete the form. Follow the instructions on page 141 as you demonstrate completion of the form. You may use the information in the example on page 142.

After the exercise, conduct individual feedback as usual.

8. Exercise G: Group discussion - Preparing staff to do tasks related to feeding

Before leading this discussion, review the general guidelines for leading group discussions given at the end of this Facilitator Guide.

Use the questions given in the exercise in the module (page 146) to structure the discussion. In answering the questions, try to focus on one task at a time. For example, you may discuss how to prepare staff to do one of the following tasks:

- Prepare F-75 and F-100
- Measure F-75 and F-100
- Record feedings the multi-Chart
- Feed through an NG tube.

The above are specific tasks. If you try to discuss "feeding" as a whole, the discussion will become general and less helpful.

Of course, answers will vary greatly. Participants may have some very creative ideas. As a model, here are some possible answers to the questions on page 146 of the module, focusing on one task.

Example:

1. Nurses do not know how to prepare F-75 and F-100.
2. Nurses on duty at 7:00 am and 7:00 pm will be responsible for this task. Two nurses from each of these shifts need to be selected to be responsible for preparing feeds. They need to be informed by the head nurse.
3. Examples can be provided by demonstrations. A skilled person should demonstrate how to prepare F75 and F100.
4. The nurses should have supervised practice. A skilled person watches them prepare and corrects any problems.

Note: If the participants finish the day 3 feeding classroom session earlier, the Course Director will inform you of any other work to be done on Day 3; for example, there may be an opportunity to observe a play session or an educational session with mothers.

9. Summary of the session

1. Point out that participants have learned about feeding during phase 1, transition and phase 2. Remind participants of the importance of:
   - starting with small frequent feeds of F-75 during phase 1
   - having a gradual transition to F-100 over 2-3 days during transition phase
   - adjusting the feeding plan on F-100 as the child's weight and appetite increase
   - Review the criteria to move from one phase to another
2. Point out that participants have learned about planning feeding for **individual patients** and for the **ward.** It is important to set aside a planning time every day. Once each patient's 24-Hour Feeding Chart is reviewed and plans made for the day, then a Daily Ward Feed Chart can be completed for the entire ward.
3. Stress the need to prepare carefully hospital staff to do new feeding tasks.

10. Introducing the Daily Care Session

Introduce the Daily Care session.

Distribute blank Multi-chart and Monitoring Records for the exercises.

11. Give home assignments for day 4

Note: Ask participants to

- *read from page 150-181 as a take home reading and*
- *do the short answer exercises on pages 152, 158 and 168 and*
- *do Exercises A (p 162), B (p 163), C (p 169) and D (p 172) for day 4.*

Guidelines for DAILY CARE SESSION

	Procedures	**Feedback**
1	Participants read through page 157 of the module and do a short answer exercises on page 152 and 158.	Self-checked (p 182 PM)
2	Demonstration: Multi-chart relevant for daily care.	
3	Participants read pages 159-161 and do Exercise A (p 162) on treatment of eye problems	Individual feedback (p 42 FG)
4	Individual work followed by Group feedback on Exercise B (p 163): use of the Multi-chart relevant for daily care as a group.	Group feedback (p 43 FG)
5	Demonstration: Monitoring Record. Participants read pages 164-167 and do short answers exercise (p 168).	Self-checked (p 182 PM)
6	Participants do Exercise C (p 169) on use of Multi- chart and monitoring record, followed by group discussion.	Group feedback
7	Participants do Exercise D (p172 PM) on identifying danger signs.	Individual feedback (P 97 FG)
8	Optional demonstration: Weight Chart. Participants read pages 177-181 and do short answers exercise on page 179.	Self-checked (p 183 PM)
9	Summarize the module.	

Preparation for the session

Be sure that you have a supply of blank Multi-chart and Monitoring Records in the classroom. Each participant will need one of each of these forms for exercises in the module.

Introducing the session (It should be done on Day 3)

Explain that this session will focus on the routine tasks, besides feeding, that occur in the ward each day. These tasks, such as bathing, weighing, giving eye drops, and giving antibiotics, are very important for the child's recovery.

This session also focuses on monitoring the severely malnourished child, specifically monitoring pulse, respirations, and temperature. Monitoring is critical so that problems can be identified and treatment can be adjusted as needed.

Point out the learning objectives of the module. Most of these tasks will be practiced on the ward. In the session participants will learn to use seven sections of the multi-chart: the therapeutic diet, the surveillance, Routine Medicines, Special Medicines and Test Results and the Weight Chart. Besides, you can use the Observation Section to document additional information (Hold up the enlarged copy of the Multi-chart.)

For frequent monitoring of pulse rate, respiration rate and temperature, you can use the Monitoring record chart that you could prepare in your facilities.

1. Short answer exercise

Participants read through page 157 of the module and do a short answer exercises on page 152 and 158. They check their own answers on page 283. Ask the participants if there are any questions or clarifications in doing the short answer exercise.

Tell them that, after the short answer exercise, there will be a demonstration of how to use sections of the multi-chart relevant for Daily care.

2. Demonstration of Multi-chart relevant for daily care

Note: The focus of this demonstration is on how to use the form, not on the treatments, which will be discussed later in the session.

Show an enlarged copy of the multi-chart. Point out that one column is used every day. There are enough columns for 21 days or 3 weeks.

Point out the items in the left column on this page. Not every child will have something recorded for every item. For example, some children will not have cough. When a row will not be used, it can be shaded out, or you can write NO.

If a child has eye problem it should be documented on the initial management and observation section of the Multi-chart.

Some items on the Multi-chart require that information be recorded (e.g., the child's weight, the degree of oedema.). Others require that the staff initial when a task is performed. For example, when the nurse gives an antibiotic, she should initial on the form.

Write on an enlarged copy to set up a Multi-chart for a two year-old girl named Birke Abera. She is from Wotera Kebele, Wondo Genet district and SNNPR. You will set up the left column of the form like the example on page 237-240 in the module by entering appropriate times and doses. You will also record information for Birke's first day in the hospital. Talk as you write, for example:

- Birke's first day in the hospital is 8 Jan 2011. so I record the date as 8/01/11for Day 1.
- Birke's weight is 8.8 kg. She has no oedema, so I record 0. Her MUAC is 11.0 cm and WFH is <- 3 Z- score.
- She has watery diarrhea, but no blood in stool or vomiting and she has no sign of dehydration. She also has corneal clouding of left eye, marked on the eye care sub section. And all these are

recorded on the initial management section

- She will be in Phase one so record the feeding plan of Birke in the Therapeutic diet section of the Multi-chart as demonstrated in the Feeding Session
- The next morning, I will record the total amount taken as demonstrated in the Feeding Session.
- Birke has episodes of diarrhea but no vomiting, so I record "Y." And I record "N" for the vomiting. *(Question: Where can I look to find the total volume?*

Answer: on the therapeutic diet section of the multi-chart)

- I record +++ to show that Birke has severe dermatosis.
- Birke has not had a dose of vitamin A in the past month. She is two years old, so I record that she needs a dose of 200, 000 IU. (Explain that participants will learn more about when to give vitamin A later in this session. Do not discuss vitamin A now.) I give Birke 200, 000 IU vitamin A and circled on initial management section.
- Birke will be taking Ampicillin (250 mg IV) 4 times a day, so I record the name of the drug, the dosage, and four times dose, 6 hours apart. (Starting at 06:00 Am)
- I give Birke her first dose of Ampicillin and I put my initial to show that it has been given. Someone else will give the next subsequent doses and initial.
- Birke also need gentamycin 40 mg once a day. I give Birke her first dose of Gentamycin and I put my initial to show that it has been given. Someone else will give the next subsequent doses and initial.
- She will not start deworming tabs and iron until she has been in Rehabilitation phase.
- Birke needs tetracycline drops, so I write under the special medicines section of the Multi-chart. Explain that participants will learn about treatment for eye problems later in this session. Do not discuss treatment of eye problems now.
- I write under the special medicines section of the Multi-chart that she will need bathing with 1% permanganate Birke is too sick to be bathed today, and also it is not available, but I applied Zinc oxide ointment on the oozing spots and dress them with gauze. Then I initial on the form.
- Participants can see how Birke's Multi-chart was filled for 9 days by looking at the example on page 237-240 of the module. Tell them they will practice to fill the Multi-chart in exercise A and subsequent part the session.

3. Exercise A: Individual work followed by individual feedback - Deciding on treatment for eye signs

Before the exercise, review the table on page 160 of the module with the group and answer any questions.

Then, ask participants to do Exercise A on treatment of eye problems

Have your Photographs booklet out, when you give individual feedback.

Note: Use the guidelines in the module. Participants may ask why children with signs of eye infection (pus, inflammation) need additional doses of vitamin A. ***The reason is that pus and inflammation may hide the signs of vitamin A deficiency****. It is best to be safe and give these children the additional doses of vitamin A.*

The next exercise will be done as a group. Those who have received feedback on Exercise A may continue reading in the module until everyone is ready for Exercise B.

Explain that, in Exercise B, they will need to refer to the table about vitamin A on page 157 and to the table about eye drops on page 160.

4. Exercise B: Group work followed by group feedback - Using the Multi-chart for Daily care

The purpose of this exercise is simply to set up a Multi-chart for the Daily Care properly. Although the exercise could be done individually, it will be easier and more interesting if done as a group.

Give each participant a blank Multi-chart. Participants will complete this page as you prompt them. After each prompt, allow enough time to record, but do not go so slowly that participants become bored. If you see that a participant is not writing, look to see what the problem is and explain.

First ask everyone to look at the Multi-chart for Lelisse on page 165 of the module. **Most of the information needed about Lelisse is on her** Anthropometric section of the Multi-chart. Lelisse is severely malnourished and has been admitted to the Stabilization Center. Ask participants to look for her date of admission. Ask them to record this date for Day 1 on the Anthropometric section of the Multi-chart. Then continue prompting as follows:

- Look for Lelisse's admission weight on the Anthropometric section of the Multi-chart Record this as her weight for Day 1.
- Record Lelisse's degree of edema.
- Record the Phase and the type, amount/feed, frequency of feed and the amount per day that she should be given on Day 1 on the Therapeutic Diet Section of the Multi-chart.
- Record whether or not she has diarrhea or vomiting at admission, on the initial management section and Surveillance section of the Multi-chart.
- Record the degree of dermatosis.
- Record the time at which the Routine Medicines are given
- Section of the Multi-chart. Choose a time when another medication will be given.
- Record the dose of vitamin A that Lelisse needs.
- She will not start deworming tabs and iron until she has been in Rehabilitation phase.
- Look at the antibiotics that Lelisse will receive. Recorded on the Routine and Special Medicines Section of the Multi-chart, these are: ampicillin for 2 days, along with Gentamicin for 7 days, followed by amoxicillin for 5 days.
- Notice the times that medications are given in the ward. These are listed on page xxx of the module:
- On the Special Medicines Section of the Multi-chart for Lelisse, write the dose of gentamicin, the route of administration, and the time it will be given,
- Write the dose of Ampicillin, the route of administration, and the times that it will be given.
- Write the dose of amoxicillin, the route of administration, and the times that it will be given, (Note: Check that participants indicate that amoxicillin is not given until Day 3.)
- Look at the information on Lelisse's eye signs. Given on the module at the Initial Management session and record the eye signs at the initial management section and observation section of the Multi-chart. Decide what type of eye drops, if any, Lelisse needs. Record the type(s) of eye drops and the times to give them at the Special Medicines section. (Allow more time here as participants will need to record times to give two drugs.)
- Record Lelisse's dermatosis classification at the Surveillance Chart Section of the Multi-chart and write if she needs to be bathed with 1% potassium permanganate on the special medicines section.
- Lelisse has pus draining from her ear, and it needs to be wicked at least twice daily. Indicate this need on the Observation section of the Multi-chart.
- Distribute copies of the answer sheet for this exercise. Let each participant compare his or her form to the answer sheet. Discuss any differences or any questions that participants may have.

Note: The times selected by participants for wicking the ear may vary, although 8:00 and 2:00 seem logical choices given the times that nursing rounds are done in this example. Wicking should actually be done as often as needed, but by marking certain that it should at least be done twice daily.

5. Demonstration and short answer exercise

Participants will learn about use of the Monitoring Record in this section. Explain the points on the first three paragraphs on page 262 of the module.

Demonstration of Monitoring Record

Use a blank Monitoring Record copy.

Point out that the child's respiratory rate and pulse rate are recorded and temperature is graphed so changes can easily be seen. This monitoring should be done every 4 hours until the patient is stable on F-100. One page can be used for about 5 days if monitoring is done this frequently. If necessary, additional pages can be attached.

Use the following story to show how the form is completed. One facilitator can read the story while the other facilitator records:

- Debella's temperature at 8:00 A.M. on Day 1 is 36° C. (Plot temperature with an X on the line for 36° C in the middle of the left-most column of the graph. Record time below the column.)
- Debella's respiratory rate is 35 breaths per minute. Record in left-most box at top of form. His pulse rate is 90 beats per minute. Record pulse rate below the respiratory rate. Point out that the temperature is on the line to the left of the boxes where the rates are recorded.
- Debella's temperature at 12:00 P.M. is 36.5° C. His respiratory rate is still 35 and his pulse rate is 95. Record these on the Monitoring Record. Connect the points for the temperature graph.
- Debella's temperature at 4:00 P.M. is 37° C. His respiratory rate is still 35 and his pulse rate is back to 90. Record these on the Monitoring Record. Connect the points for the temperature graph. Point out that it is easy to see the increase in temperature.
- Explain that participants will practice using the Monitoring Record in the next exercises. Point out the example of a Monitoring Record on page 260 the module.

Short answer exercise

Review the answers with them as a group for the short exercise on page 164. Tell them to check their own answers on page 168.

Review the Summary of Danger Signs as well as the other danger signs listed on page 165-166 of the module with the group.

6. Exercise C: Group work followed by group feedback

Participants read and did Exercise C.(p 169 PM)

This exercise you will provide the skill how to make entries on a Daily Care part of the in-patient multi-chart and Monitoring Record for severe malnutrition. It also helps to monitor the progress of the child.

They should then prepare for the group discussion in Exercise B by writing answers to the questions listed. Be sure that participants prepare individually for this exercise by writing answers to the questions listed.

Use the questions of the module to structure the discussion. Use the following answers to guide the discussion. Make sure all the participants filled the Multi-Chart and monitoring record for Lelisa. If participants do not raise the answers listed below, mention them yourself.

Possible Answers:

1. Ampicillin IV and tetracycline and atropine eye drops.
2. 9:00 p.m
3. Ampicillin IV and tetracycline eye drop in left eye.

7. Exercise D: Individual work followed by individual feedback -Reviewing Monitoring Records to identify danger signs

Participants read and did Exercise D, (P 172 PM) which is a very important exercise. Provide The Monitoring Records illustrate several different danger signs. Do Case 1 of Exercise C (Lelisse) as a group and provide individual feedback on Chaltu and Bulto.

At the end of individual feedback, review these danger signs with the participant:

- Lelissa - sudden drop in temperature (possibly became uncovered or missed a feed, possible infection).
- Chaltu - increase in both respiratory and pulse rates (possible heart failure).
- Bulto - temperature increase, fast breathing (possible pneumonia).

Monitoring is recommended every 4 hours until after transition and the patient is stable. Ask whether the participant thinks that monitoring can be done every 4 hours in his hospital. If not, how often does the participant think that monitoring can be done?

Note: While you are giving feed back for Exercise D, the other participants read and do the short answer exercise and to check their answers the module.

8. Demonstration and short answer exercise

Section 5.8 of the session describes how to complete a Weight Chart for a severely malnourished child. Most physicians will be familiar with weight charts and will be able to work independently to the end of the session without a demonstration. However, if you anticipate that your group will find the Weight Chart difficult, you may do a demonstration of how to complete it.

Demonstration of Weight Chart

Use an enlarged copy of the Weight Chart. Point out that the vertical axis will show the possible range of weights for the child, and the horizontal axis will show the days that the child is in the hospital. Each point plotted on the graph will show the child's weight on a certain day.

One facilitator should tell the story of a child and describe the graphing process using the italicized narration below. The other facilitator should record information, label the graph, and plot weights following the directions given in regular type below:

- Okelo is a 9-month-old boy. His weight on admission was 6.1 kg, and his length was 67.0 cm. He had moderate (++) edema on admission. Record this information in the spaces to the left of the Weight Chart..
- Now we need to set up the vertical axis of the graph. Point to the vertical axis. Each heavy line going across will represent an even weight such as 5.0 kg, 6.0 kg, etc. Each lighter line will represent 0.1 kg. Point to the heavy lines and lighter lines.
- Since Okelo has some edema, he will lose some weight before he gains. So we cannot put his starting weight at the bottom of the vertical axis. We have to leave some room for weight loss. Since Okelo has mild & moderate edema, we will allow for 1 kg weight loss. If he had severe oedema, we would allow for a 2 kg weight loss, if the Child is ≤ 7 kg or 3 kg weight loss, if the Child is > 7 kg. His starting weight is 6.1 kg so we will write 6.0 kg by the first heavy line from the bottom of the chart. 6.1 kg will be on the first light line above this. Label the heavy line for 6.0 kg.
- We can now label the other heavy lines that intersect the vertical axis. There is no need to label the lighter lines. We will just remember that each one represents 0.1 kg. Label the remaining heavy lines 5.0 (bottom line), 7.0 kg, 8.0 kg, and 9.0 kg (top line).
- Now we can indicate the desired discharge weight on the graph. Draw a heavy line across the graph at 6.5 kg and label it "desired discharge weight".
- Now the graph is set up. We can plot the admission weight of 6.1 kg. To do this, we follow the line up from Day 1, and across from the weight 6, and make a mark at the intersection. The mark can be a heavy dot or an X. Point to show how to find the intersection of lines above Day 1 and

across from weight 6.1. Make a mark such as an X to plot the point.

- On the next day we would plot a point for the weight on Day 2. The weight on Day 2 is the same, 6.1 kg. We then connect the points with a line. Plot a point for this weight and connect the points.
- On Day 3 Okelo has lost some weight. He weighs 5.9 kg. Plot the weight for Day and connect the points.
- On Day 4 Okelo has lost some more weight. He weighs 5.5 kg. He starts F-100 on Day 4. Plot the weight for Day 4 and connect the points. Underneath the point for Day 4
- write "F-100".
- On Day 5 Okelo has gained some weight. He weighs 5.6 kg. Plot the weight for Day 5 and connect the points.
- On Day 6 Okelo has gained some more weight. He weighs 5.7 kg. Plot the weight for Day 6 and connect the points.
- Over the next days Okelo continues to gain weight.
- Plot points for Day 7 (5.8 kg), Day 8 (5.9 kg), Day 9 (5.9 kg), and Day 10 (6.1 kg). Connect the points.
- You can easily see from looking at the graph that Okelo first lost some weight due to oedema and then gained weight once he started on F-100. Point to show the line going down and then up again.

Short answer exercise

Participants read and did a short answer exercise on 179. They check their own answers on page 182. Ask the participants if there are any questions or clarifications in doing the short answer exercise.

9. Summary of the session

1. Ask participants to tell you why it is important to keep good records of daily care, weights and results of monitoring. They may have a number of ideas. For example, good records are important for communicating with other staff (e.g., when the shift changes). Monitoring is important to quickly identify danger signs.
2. Review the learning objectives on page 186 of the module and explain that participants will have a chance to do some of these tasks during clinical practice.
3. Review any points that you have noted below, and answer any questions that participants may still have. (If you cannot answer a question, offer to obtain more information and discuss it later.)

Guideline for MONITORING AND PROBLEM SOLVING SESSION

	Procedures	Feedback
1.	Introduce the Monitoring and Problem Solving session	
2.	(on p 180 and 186) Participants read through page 187 of the module and do two short answer exercises	Self-checked (P 242 PM)
3.	Participants read pages and do Exercise A (p 195) and B (p 196) on identifying progress and problems in two cases.	Individual feedback Group Discussion Group discussion
4.	Participants read pages 208 and complete the Weight Gain Tally Sheet in Exercise C (p 210-212). Then they prepare for group discussion by answering questions on page 212 of the module.	
5.	Participants read pages 218 and do Exercise D (p 219-220) on determining common factors in deaths.	Group discussion
6.	Lead discussion (p 235-241 PM) following use of Monitoring Checklists in the ward. (Timing of this activity will vary.)	Group discussion
7.	Summarize the session.	
8.	Introduce OTP session	
9.	Give reading home assignment	

Preparation for the session

Calculators will be very helpful for some of the written exercises in this session.

If time allows, during the clinical sessions on Day 3 and/or Day 4, participants will complete monitoring checklists like those given in Annex D of this module. Take copies of the monitoring checklists on Days 3 and 4.

1. Introducing the session

Monitoring is important both for identifying progress and for identifying problems. This session focuses on monitoring as a way to identify problems so that they can be solved.

First, the session describes a general process for identifying and solving problems. Next, the session shows how problems can be identified by monitoring **individual patient** progress, weight gain and care. Finally, the session discusses monitoring of **ward procedures.**

Point out the learning objectives on page186 of the module. Stress that an important concept in this session is to look for the cause of a problem before deciding on a solution. The example on page 187 will show the importance of this concept.

2. Short answer exercises

Participants read until page 195 of the module and did the short answer exercises on page 180 and 186**.**

Review the answers with them as a group for the short answer exercise. Tell them to check their own answers on page 242.

The short answer exercise on page 194 is about calculating daily weight gain. A calculator will be very helpful.

Following the process described for calculating daily weight gain, use the flipchart to present the example on page 195 for the group. You may also wish to do the first problem of the short answer exercise as a demonstration for the group. Look to see that participants are completing it correctly and give individual feedback to ensure that each participant understands how to calculate daily weight gain.

Ask participants to continue reading and do exercises A and B.

3. Exercise A: Individual work followed by individual feedback- identifying progress and problems with cases

Before this exercise, review with participants the criteria for failure to respond on page 195. Stress that these are listed merely as a guide to identifying problems. There may be other signs of problems as well.

Participants may give slightly different answers from those on the answer sheets. They may find additional evidence of progress or problems. Their answers should be similar to those given and should be reasonable.

For some of the signs of progress or problems listed by the participant, ask “How do you know this?” The participant should be able to show where he got the information from the Multi-chart.

For example, it is important to note that Sara is not eating well. This is evident on her Therapeutic Diet section of the Multi-chart. It is also important to notice that Sara has not started to lose her oedema even on Day 5. This is evident on the Multi-chart.

4. Exercise B: Individual work followed by group discussion -Identifying Causes and solutions of problems

This exercise discusses possible causes of failure to respond and possible solutions. It is important to note that Lema is not gaining weight on F-100. One can see this by looking at the recorded weights on the Daily Care page and by looking at Lema's Weight Chart.

According to the possible criteria, both Sara and Lema are failing to respond. These criteria are simply a guide to help identify children who are having problems.

They should then prepare for the group discussion in Exercise B by writing answers to the questions listed. Be sure that participants prepare individually for this exercise by writing answers to the questions listed.

Use the questions in the module (page 208-209) to structure the discussion. Use the answers on page 86 of the facilitator guide as a guide for possible answers. If participants do not raise the ideas listed on the answer sheet, mention them yourself. Stress that the causes are just possible causes. Investigation will be needed to determine the real causes.

Note of caution related to Case 2, Lema: Tuberculosis is often over-treated in severely malnourished children. Participants should not be too eager to jump to a diagnosis of tuberculosis just because a child is not gaining weight. Usually, if a child is not gaining on F-100, the reason is inadequate intake. The clues in this case are as follows: the antibiotic is not helping; there is no weight gain in spite of good intake; a chest x-ray shows a shadow on the lungs; and there is a household contact who has TB. **Stress that low weight gain is usually due to inadequate intake, so always check intake first!**

At the end of the discussion, ask them to read pages 210-211 of the module and do Exercise C to prepare for a group discussion. This exercise focuses on monitoring weight gain for the ward as a whole. Since only children on F-100 are expected to gain weight, participants will look at weight gain only among these children.

5. Exercise C: Individual work followed by group discussion -Determiningwhether there is a problem with weight gain on the ward

Completing the Weight Gain Tally Sheet for the Ward may seem like a cumbersome process to some participants. Point out that it only needs to be done once a month, preferably for the same week each month. The tally sheets can be a good basis for discussion and problem solving with staff.

As participants do individual work to prepare for the discussion, they may ask you to check their calculations and their tally sheets. Do so using the first part of the answer sheet provided. (Do not give the answer sheet to the participant).

Be sure that participants prepare for the discussion by writing answers to questions. Use these questions to structure the discussion. Participants should raise the points given on the answer sheet. If they do not, raise these points yourself.

Other possible questions to discuss:

Do you think that the problem of poor weight gain on this ward would have been noticed without completing a tally sheet?

Is it practical to use this process (calculating and tallying weight gains) once a month in your hospital? If not, how could you still be aware of problems?

After the discussion, ask participants to read pages 219-220 and do Exercise D, which will also be followed by a group discussion.

6. Exercise D: Individual work followed by group discussion -Determiningcommon factors in deaths

Use the questions given in the exercise to structure the discussion. Participants should mention the points made in the answer sheet. They may have other ideas as well. Be sure to mention any points from the answer sheet that the participants do not raise.

Stress that it is very important to review the circumstances of deaths. Common factors in these deaths may suggest important problems that need to be solved, such as the extensive problems in the emergency room at this hospital.

7. Lead Discussion on Monitoring Checklist in the ward

- Note that the time needed for the discussion may vary depending on the issues raised.
- Facilitator is expected to lead this part using his own approach.

8. Summary of the session

1. Review the problem solving process outlined in the introduction on page xxx of the module. Stress the importance of investigating causes before deciding on solutions.
2. Review the importance of the key performance indicators of SC or inpatient care and the monthly TFU reporting.
3. Review any points that you have noted below, and answer any questions that participants may still have. (If you cannot answer a question, offer to obtain more information and discuss it later.)

9. Introducing involving mother in SC care

Introduce the involving mother Session.

10. Give home assignments for day 5

Ask participants to read from page 244-247 as a take home reading and do Exercises A (p 246) and B (p 224) for day 5.

Guidelines for INVOLVING MOTHERS IN CARE SESSION

	Procedures	Feedback
1.	Introduce the session entitled Involving Mothers in Care (pg 244)	
2	Participants read page 245 of the session and prepare for the discussion on Exercise A (p 246 PM).	Group discussion
3	Participants read page 247 of the session and prepare for the role plays in Exercise B (p 248). Conduct the role plays.	Group discussion
4.	Participants read pages 249-253 * and Show video: Teaching mothers about home feeding. Conduct a group discussion of the video and Exercise C (254).	Group discussion
5.	Participants read page 255 of the module Show video: Malnutrition and mental development. *	Group discussion
6.	Participants read page 256-257 of the module and Participants finish reading the session.	Individual
7.	Summarize the session	

* If it is more convenient, the group may do all of the reading in these steps and then view both videos.

Preparation for the session

Two video segments are shown in this module. Be sure that you have the videotape and know when and where the video player is available.

For the role plays in Exercise B, it will be helpful to have some props: a baby doll with clothes, a basin for bathing, a towel, a cup and saucer for feeding. If these are not available, be creative about substitutions. For example, a rolled-up sweater can be a "baby".

Photocopy and cut out role descriptions for role play in Exercises B.

1. Introducing the session

Explain that emotional, mental, and physical stimulation are critical for children who have been severely malnourished. This session describes ways that hospitals can involve mothers to ensure that children receive such stimulation, both in the hospital and later at home.

It is hoped that participants have observed or will observe examples of how to involve mothers in the hospital ward. For example, they may have seen a teaching session or a play session that involved mothers. They will also see a video showing these types of sessions with mothers.

Point out the learning objectives on page 244 of the module.

Ask participants to read through page 245 of the module and prepare for the group discussion in Exercise A.

2. Exercise A: Group discussion - Ways to involve mothers and other family members

From personal experience and from ward visits, participants are sure to have many ideas of ways to involve family members, and things that can hinder involvement.

You may wish to structure the discussion by asking each participant in turn for one idea. Record the ideas on the flipchart.

Note: No answer sheets are given for the exercises in this session as they are all discussions or role plays for which there are no definite "right" answers. After the discussion, ask participants to read page 249 of the module and then come to you for instructions for the role-play.

3. Exercise B: Role-play - Teaching a mother to bathe or feed a child

You will need to assign roles to four people for this exercise. For Role Play 1, assign someone to be a "bossy nurse" and someone to be the mother. For Role Play 2, assign someone to be the "nice nurse" and someone to be the mother. Others will observe and take notes.

Provide props as needed (for example, a baby doll, a basin for bathing, a towel, a cup and saucer) or creative substitutions for these.

Give role descriptions to those who will play roles. Role descriptions are on the following page.

After each role play lead a brief discussion using the questions given in the module. Review the teaching process outlined on page 243 of the module. You may need to explain about "checking questions". These are questions asked to ensure that the learner understands. They should not be questions that are simply answered with "yes" or "no". They should be more open-ended questions that ask, "How, what, how many, etc".

For example, if a nurse has taught a recipe, she might then ask the mother checking questions such as: What ingredients will you use? How much oil will you put in? How much will you feed your child?

Role Descriptions for Exercise B

Role Play 1 - Nurse

You are a bossy and cold nurse. You are experienced, and you feel that you know better than all of the mothers. You tend to feel it is their fault that their children are malnourished.

You are supposed to teach a mother how to bathe her child. Instead of first showing her how, you start off by saying, "Let's see how you do...". Then you are critical of how she undresses the child, holds the child, etc. You end up taking over the procedure.

You are a young mother, and this is your first child. You have no husband to help you, and you are very poor.

Role Play 1 - Mother

Your 15-month-old daughter has been on the ward for two days. She is better and is taking F-75 well by mouth now. She will be given a bath today. Although you are accustomed to bathing your daughter at home, you are nervous about doing it with the nurse watching you. You fear that the nurse will criticize you.

Role Play 2 - Nurse

You are going to teach a mother how to feed her child and encourage the child to eat. You first explain what you are going to do; then you show the mother how to hold the child etc.; then you encourage her to try. You give helpful, positive suggestions. If the mother asks a question, you assure her that it is a good question, and you answer it carefully.

You are a helpful and kind nurse. You feel it is important for mothers to learn how to feed and care for their children in the hospital.

Role Play 2 - Mother

You are very timid and frightened about being in the hospital. You are afraid your son, age 20 months, will die.

Your son was unable to eat on arrival at the hospital and was fed by NG tube for the first day. At the last two feeds, the nurse fed him successfully orally. At this feed, she will show you how to feed him.

4. Video: Teaching mothers about home feeding Exercise C: Group discussion - Teaching mothers to feed children at home

Explain that this video segment will show a teaching session how a nutritious food is prepared at home (a home food described in the session). In the video, the mother is preparing a large amount of food for a hospital ward. Amounts used in the home would be smaller, as in the recipe in the module.

5. Reading and Video: Malnutrition and mental development

Participants read page 255 of the module.

Explain that this video shows how mental development can be encouraged through play in the hospital ward, at home, and in the community. At three points in the video there are opportunities for discussion. Questions for discussion will appear on the screen. These questions are printed below for your reference. Stop the tape and take a moment to discuss these questions.

First discussion point in video

How can you:

- Make parents feel welcome?
- Show your respect?
- Encourage play and interaction?
- Make the ward friendly?

What should parents be allowed to do?

Second discussion point in video

Can you use any of these ideas (from the video)? How will you:

- Use everyday activities?
- Involve mothers?

After the video, ask participants what they thought was done well in the teaching session and what could have been done better. How were examples given in the teaching session? How did mothers practice?

Participants may wish to view the video again. This is fine as long as you have time.

Ask participants to begin thinking about how they will teach mothers about feeding in their own hospitals. Use the questions in Exercise C to structure a discussion.

Third discussion point in video

Talk about:

- Toys
- How to start a program of play and interaction. Stress that mental stimulation may be achieved during normal, everyday activities (such as washing and cooking) and by playing with simple, homemade toys. It does not require great amounts of time or expense.

6. Reading: After the video and discussion, ask participants to read page xx of the module.

7. Summary of the session

Emphasize the importance of involving mothers and family members in care at the hospital, as well as the importance of preparing them to continue good care at home.

1. Perhaps ask each participant to say one thing he will do in his hospital to encourage families to participate in care or to make the ward more stimulating for children. This can be a small thing, such as providing chairs for parents or putting colorful pictures on the walls or it may be a large task such as changing a hospital policy.
2. Review any points that you have noted below and answer any questions that participants may still have. Tell participants that you have enjoyed working with them. If there are any further activities, such as a closing ceremony or a questionnaire to complete, give participants the relevant instructions.

Guidelines for OUT PATIENT TREATMENT PROGRAM (OTP)

	Procedures	Feedback
1.	Introduce the OTP Session (p 260) and principles of OTP SAM management (p 261-262 PM)	
2.	Participants read principles of OTP management, assessment and classification of SAM and recommended admission criteria to diagnose SAM and do short answer exercise (p 265 PM)	Self-checked and group discussion
3.	Oral drill: Admissions criteria for OTP (p 57 FG)	
4.	Demonstrate: Use of the Out-Patient Treatment card (OTP Card)	
5.	Participants read routine medicines (p 268-278) and do Exercise A on Page 279.	Individual feedback
7.	Participants read from page 282-285 and do Exercise B (p 286 PM): monitoring of progress and failure to respond	Individual feedback
8.	Video show on organization of OTP	
9.	Summarize session.	

Preparation for the Session

Prepare carefully by reviewing the exercises and discussing with your co-facilitator how to work together to lead the group discussions and give individual feedback etc. This session of the facilitator guideline describes the Outpatient care for management of SAM.

Make sure all the routine medicines are available and there are enough blank OTP cards to practice for each participant.

1. Introducing the Session (It should be done in Day 5)

This session describes the skills and knowledge specifically needed for outpatient care for management of children with SAM in health centers and hospitals. Mention that the majority of severe acute malnutrition cases, around 85%, are normally treated in the outpatient therapeutic component of Therapeutic Feeding program (TFP).

Point out the learning objectives on page 260 of the module.

This session provides an overview of admission and discharge processes and criteria, medical treatment, nutrition rehabilitation, and follow up of OTP.

Explain that this session describes also how to organize the OTP and the discharge criteria for OTP.

2. Oral drill: Admissions criteria for OTP

At the end of the discussion, do the following oral drill reviewing the information for each case and determine if the child should be admitted in OTP or not, explain why.

Tell participants that a drill is a fun, lively group exercise. It is not a test, but rather an active way to practice using information.

Ask participants to sit around the table. They will each need their Weight-for-Height Reference table. Tell participants that you will call on them one by one to participate. You will usually call on them in order, going around the table.

If a participant cannot answer, you will just go quickly to the next person and ask the question again. Participants should wait to be called on and should answer as quickly as they can

Begin the drill. Call out the information in the columns below and ask the first participant to use the reference table and tell the child's weight-for-height percentage and ask whether the child should be admitted to for OTP or In-patient care.

If a participant cannot answer or makes a mistake, let the next person try. Keep the pace rapid

ORAL DRILL

	Age(in months)	Appetite	Bilateral pitting oedema	MUAC in cm	Admission to OTP care?
Child 1	7	Yes	No	10.2	Yes, based on MUAC and child has appetite.
Child 2	24	Yes	No	11.2	Yes, based on MUAC and child appetite.
Child 3	20	No	No	9.8	No, based on MUAC and child fail appetite.
Child 4	16	--	+++	11.7	No,child severe bilateral pitting oedema(+++)
Child 5	36	Yes	+	11.6	Yes,child has bilateral pitting oedema + and pass appetite test.
Child 6	12	No	No	9.5	No,child has SAM and fail appetite,refer to SC.
Child 7	50	Yes	No	10.2	Yes,based on MUAC and pass appetite.
Child 8	45	Yes	No	11.1	Yes,based on MUAC and pass appetite test.
Child 9	7	Yes	No	10.7	Yes,based on MUAC and pass appetite test.
Child 10	5	No	+	-----	No,infant has SAM based on bilateral pitting oedema, because of age refer to SC.

4. Demonstration (Use of the Out Patient Therapeutic Card (OTP card)

Tell participants that the OTP card will be used in this course as an aid to remember steps in treatment and monitoring, and also as a record of OTP care.

Using an enlarged copy of the OTP card and have the group gather closely around the table or a wall where they can see enlarged copies of the OTP card.

Explain that th**e OTP card** is a primary tool used for outpatient treatment and follow up of a child with SAM.

Show the OTP card and describe it as follows. Describe that the OTP card has two main sections: the Front page, which is used to record Admission details and the back page to record some admission and follow up information. Describe the different sections of the OTP card.

The front page has 7 sections titled: Admission registration section where you document child general information, General Danger signs, Admission anthropometry, History, Physical examination, Routine admission medication, and Transfer in and out information. The backside has the following section: Section to document name, week, and date, Anthropometry, General Danger signs, History, Physical examination, Routine admission medication, and Action Taken during follow up. (Do not go into too much detail, especially about sections that have not been covered in the module. This is just an introduction. In this demonstration, you will focus on the OTP card section relevant for Admission.

A. Front Part (Admission Detail) part

Admission registration,

Show the Admission registration section. This page is used to record name, age, sex, hospital registration number, address, Facility name, distance from the house, sent by whom, date of admission, and Admission status.

General Danger signs

This section is used to record the four danger signs: Seizure, lethargy, vomiting every thing, and unable to feed

Admission Anthropometry

This section is used to record results of weight in Kg, height in cm, MUAC in cm and oedema as P: for present and A for absent. It is recorded ever day which you will learn alter in the module.

History

This section is used to record diarrhea, vomiting, cough, blood in the stool, and breast feeding. If there is other problem, you can specify in the last row of this section. They are recorded daily, and you will learn more in the session 2 of the module.

Physical Examination

This section is used to record respiratory rate and temperature. Circle the range where the child respiratory rate lies. They are recorded ever daily recorded daily and you will learn more in the session 2 of the module.

Routine admission medication

This section is used to record the routine medicines for OTP: Amoxicillin, Measles Vitamin A, Anti-malarial, and Folic Acid.

Transfer in and out information

This part is used to record whether the child is transferred in from inpatient or other OTP and transferred out to inpatient or other OTP. Explain how to fill the different rows of the two parts.

B. Back Side (Follow up part)

Using the back of the OTP card explain how to record some admission information. The first column is used to record admission information so that it will be easier to compare during follow up.

Tell them to transfer some of the admission information from the front page to the back (follow up Part) and record in the cells which are not shaded in the Adm. Column. In addition, there is a part where they can record the amount of RUTF prescribed under the Routine medication section.

Tell them to record any action taken during follow up including the date in the Action taken box or section).

Tell the story of a child named Ahmed as you (or your co-facilitator) record the following information on the OTP card in front of participants:

Ahmed is a boy age 17 month. He was admitted on the 16t of August 2002. It is a new admission. His Reg number is Bat/00001/OTP.

Ahmed appears wasted. He has no oedema of both feet and lower.

He weighs 6.4 kg and is 74 cm long. His MUAC is 10.4 cm. Ask a participant to look up Ahmed's weight for height percentage. Is it <70%. Ask if Ahmed has SAM? Answer yes, because his wt. for ht is less than 70 % of the median and also his MUAC is less than 11 cm.

Ahmed's axillary temperature is 36° C. Ask a participant if Ahmed is hypothermic. Answer: No

He has diarrhea but there is no blood in the stool. He has no vomiting and cough. He has no danger sign.

He is prescribed Amoxicillin 250 mg twice daily and he is also provided with 200,000 IU of Vitamin A. The nurse prescribed for him 15 Sachets of RUTF for one week.

Tell the participants to do exercise A and there will be a group discussion

Filling OTP Card: Individual work followed by group Discussion

Tell Participants to read and fill the OTP card (p 266). When everyone is ready, do the exercise in-group. Make sure that the co-facilitators support the participants during the group discussion.

After the group discussions, tell participants to read section 8.3. Management of Severe Acute Malnutrition in OTP (pages 273-275)

Routine Medications

Participants read about routine medications. Ask the participants if there are any questions or clarifications

Exercise B: Individual work followed individual feedback Monitoring Progress and Failure to Respond

Participants read from page 276-285 and do the four cases in Exercise B (p 286). This exercise discusses on determining whether a child is making progress or failing to respond. Provide individual feedback as usual.

5. Video show on organization of OTP

After participant read on organization of OTP, show a brief video showing the organization of OTP.

6. Summary of the session

1. Review the assess and classify table to identify who needs OTP and the admission procedure.
2. Review the key treatment and care provided in OTP for SAM and the difference from In-patient care.
3. Review how child progress, failure to respond is assessed and action is taken. Stress the importance of investigating causes before deciding on solutions.
4. Review the importance of OTP card in child monitoring.
5. Review any points that you have noted below, and answer any questions that participants may still have. (If you cannot answer a question, offer to obtain more information and discuss it later.)

Guidelines for MANAGEMENT OF MODERATE ACUTE MALNUTRITION

	Procedures	Feedback
1.	Introducing the session and learning objectives of the session (pg. 294)	
	Participants read principles of supplementary feeding programme (pg. 295-298) and do short answer exercise on page 299	Self- checked
2.	Demonstrate on how to use the TSFP card	
3.	Participants read from pg. 301-305 and do exercise A	Individual feedback and group discussion
4.	Summarize session.	

Preparation for the session

Explain that this session describes the management of moderate acute malnutrition within the routine health systems. This session highlights the definition and principles of MAM. And the linkages with SAM management processes.

During this session, they will also practice filling the TSFP Card.

Introducing the session

This session describes the skills and knowledge specifically needed for the management of moderate acute malnutrition.

Point out the learning objectives on page 294 of the participant manual.This session provides an overview of principles of management of MAM, admission and discharge processes and criteria, medical treatment, nutrition rehabilitation, and follow up of SFP.

Explain that this session describes also how to organize the OTP and TSFP services

Short Answer exercise: self-checked

Ask participants to read from pg. 295-298 up to routine medication and treatment for MAM and do the short answer exercise on pg.299. Discussions can be done at completion of the short answer exercise for further clarifications.

Demonstrate on how to use the TSFP card

Distribute copies of TSFP cards to each participant.

Tell participants that the TSFP card will be used in this course as an aid to remember steps in treatment and monitoring, and also as a record of MAM care.

Explain that the TSFP card is a primary tool used for MAM treatment and follow up of a child / PLW with MAM.

Exercise A: Individual reading and small group discussion

Ask participants to read from pg. 301-305 nutrition rehabilitation at TSFP up to organize OTP and TSFP services and do exercise A. Conduct a group discussion when all participants have completed the exercise.

Summarize the session

Review the principles of SFP, admission and discharge procedure for MAM cases.

Review the key treatment and care provided in TSFP for MAM.

Review the importance of TSFP card in case monitoring.

Review any points that you have noted below, and answer any questions that participants may still have

GUIDELINES FOR ALL SESSIONS FACILITATOR TECHNIQUES

A. Techniques for motivating participants

Encourage interaction

1. During the first day, you will talk individually with each participant several times (for example, during individual feedback). If you are friendly and helpful during these first interactions, it is likely that the participants will (a) overcome their shyness; (b) realize that you want to talk with them; and (c) interact with you more openly and productively throughout the course.
2. Look carefully at each participant's work (including answers to short-answer exercises). Check to see if participants are having any problems, even if they do not ask for help. If you show interest and give each participant undivided attention, the participants will feel more compelled to do the work. Also, if the participants know that someone is interested in what they are doing, they are more likely to ask for help when they need it.
3. Be available to talk with participants as needed.

Keep participants involved in discussions

1. Frequently ask questions of participants to check their understanding and to keep them actively thinking and participating. Questions that begin with "what","why", or "how" require more than just a few words to answer. Avoid questions that can be answered with a simple "yes" or "no".
2. After asking a question, PAUSE. Give participants time to think and volunteer a response. A common mistake is to ask a question and then answer it yourself. If no one answers your question, rephrasing it can help to break the tension of silence. But do not do this repeatedly. Some silence is productive.
3. Acknowledge all participants' responses with a comment, a "thank you" or a definite nod. This will make the participants feel valued and encourage participation. If you think a participant has missed the point, ask for clarification, or ask if another participant has a suggestion. If a participant feels his comment is ridiculed or ignored, he may withdraw from the discussion entirely or not speak voluntarily again.
4. Answer participants' questions willingly, and encourage participants to ask questions when they have them rather than to hold the questions until a later time.
5. Do not feel compelled to answer every question yourself. Depending on the situation, you may turn the question back to the participant or invite other participants to respond. You may need to discuss the question with the Course Director or another facilitator before answering. Be prepared to say "I don't know but I'll try to find out".
6. Use names when you call on participants to speak, and when you give them credit or thanks. Use the speaker's name when you refer back to a previous comment.
7. Maintain eye contact with the participants so everyone feels included. Be careful not to always look at the same participants. Looking at a participant for a few seconds will often prompt a reply, even from a shy participant.

Keep the session focused and lively

1. Keep your presentations lively:
   - Present information conversationally rather than read it.
   - Speak clearly. Vary the pitch and speed of your voice.
   - Use examples from your own experience, and ask participants for examples from their

experience.

2. Write key ideas on a flipchart as they are offered. (This is a good way to acknowledge responses. The speaker will know his suggestion has been heard and will appreciate having it recorded for the entire group to see.)
3. When recording ideas on a flipchart, use the participant's own words if possible. If you must be briefer, paraphrase the idea and check it with the participant before writing it. You want to be sure the participant feels you understood and recorded his idea accurately.
4. Do not turn your back to the group for long periods as you write.
5. At the beginning of a discussion, write the main question on the flipchart. This will help participants stay on the subject. When needed, walk to the flipchart and point to the question.
6. Paraphrase and summarize frequently to keep participants focused. Ask participants for clarification of statements as needed. Also, encourage other participants to ask a speaker to repeat or clarify his statement.
7. Restate the original question to the group to get them focused on the main issue again. If you feel someone will resist getting back on track, first pause to get the group's attention, tell them they have gone astray, and then restate the original question.
8. Do not allow several participants to talk at once. When this occurs, stop the talkers and assign an order for speaking. (For example, say "Let's hear Dr Samua's comment first, then Dr Salvador's, then Dr Lateau's.") People usually will not interrupt if they know they will have a turn to talk.
9. Thank participants whose comments are brief and to the point.
10. Try to encourage quieter participants to talk. Ask to hear from a participant in the group who has not spoken before, or walk toward someone to focus attention on him and make him feel he is being asked to talk.

Manage any problems

1. Some participants may talk too much. Here are some suggestions on how to handle an overly talkative participant:
   - Do not call on this person first after asking a question.
   - After a participant has gone on for some time say, "You have had an opportunity to express your views. Let's hear what some of the other participants have to say on this point." Then rephrase the question and invite other participants to respond, or call on someone else immediately by saying, "Dr Samua, you had your hand up a few minutes ago".
   - When the participant pauses, break in quickly and ask to hear from another member of the group or ask a question of the group, such as, "What do the rest of you think about this point"?
   - Record the participant's main idea on the flipchart. As he continues to talk about the idea, point to it on the flipchart and say, "Thank you, we have noted your idea". Then ask the group for another idea.
   - Do not ask the talkative participant any more questions. If he answers all the questions directed to the group, ask for an answer from another individual specifically or from a specific subgroup. (For example, ask, "Does anyone on this side of the table have an idea"?)
2. Try to identify participants who have difficulty understanding or speaking the course language. Speak slowly and distinctly so you can be more easily understood and encourage the participant in his efforts to communicate.

   Discuss with the Course Director any language problems that seriously impair the ability of a participant to understand the written material or the discussions. It may be possible to arrange help for the participant.

   Discuss disruptive participants with your co-facilitator or with the Course Director. (The Course Director may be able to discuss matters privately with the disruptive individual.)

Reinforce participants' efforts

1. As a facilitator, you will have your own style of interacting with participants. However, a few techniques for reinforcing participants' efforts include:
   - Avoiding use of facial expressions or comments that could cause participants to feel embarrassed;
   - Sitting or bending down to be on the same level as the participant when talking to him;
   - Answering questions thoughtfully, rather than hurriedly;
   - Encouraging participants to speak to you by allowing them time;
   - Appearing interested, saying "that's a good question/suggestion".
2. Reinforce participants who:
   - Try hard
   - Ask for an explanation of a confusing point
   - Do a good job on an exercise
   - Participate in group discussions
   - Help other participants (without distracting them by talking at length about irrelevant matters).

B. Techniques for relating modules to participants' jobs

1. Discuss the use of these case management procedures in participants' own hospitals. The guidelines for giving feedback on certain exercises suggest specific questions to ask. Be sure to ask these questions and listen to the participant's answers. This will help participants begin to think about how to apply what they are learning.
2. Reinforce participants who discuss or ask questions about using these case management procedures by acknowledging and responding to their concerns.

C. Techniques for adapting for nurses

1. Use the suggestions for adapting materials for nurses' groups (when appropriate) given in shaded boxes in the Facilitator Guide. These suggest additional demonstrations or explanations that may be needed. They also suggest parts of exercises that may be omitted, or that may be discussed as a group rather than done individually.
2. Be sensitive to the needs of your group. Give enough explanation that participants do not become frustrated. However, be aware that too much explanation can be boring and can be seen as condescending.
3. If your group becomes very frustrated, or is very far behind in the schedule, talk with the Course Director about adjustments that may be needed, such as omitting additional exercises or sections of reading.

D. Techniques for assisting co-facilitators

1. Spend some time with the co-facilitator when assignments are first made. Exchange information about prior teaching experiences and individual strengths, weaknesses and preferences. Agree on roles and responsibilities and how you can work together as a team.
2. Assist one another in providing individual feedback and conducting group discussions. For example, one facilitator may lead a group discussion, and the other may record the important ideas on the flipchart. The second facilitator could also check the Facilitator Guide and add any points that have been omitted.
3. Each day, review the teaching activities that will occur the next day (such as role plays, demonstrations, and drills), and agree who will prepare the demonstration, lead the drill, play each role, collect the supplies, etc.
4. Work together on each module rather than taking turns having sole responsibility for a module.

When participants are working:

- Look available, interested and ready to help.
  - Watch the participants as they work, and offer individual help if you see a participant looking troubled, staring into space, not writing answers, or not turning pages. These are clues that the participant may need help.
- Encourage participants to ask you questions whenever they would like some help.
- If important issues or questions arise when you are talking with an individual, make note of them to discuss later with the entire group.
- If a question arises which you feel you cannot answer adequately, obtain assistance as soon as possible from another facilitator or the Course Director.
- Review the points in this Facilitator Guide so you will be prepared to discuss the next exercise with the participants.

When providing individual feedback:

- Before giving individual feedback, refer to the appropriate notes in this Guide to remind yourself of the major points to make.
- Compare the participant's answers to the answer sheet provided.
- If the participant's answer to any exercise is incorrect or is unreasonable, ask the participant questions to determine why the error was made. There may be many reasons for an incorrect answer. For example, a participant may not understand the question, may not understand certain terms used in the exercise, may use different procedures at his hospital, may have overlooked some information about a case, or may not understand a basic process being taught.
- Once you have identified the reason(s) for the incorrect answer to the exercise, help the participant correct the problem. For example, you may only need to clarify the instructions. On the other hand, if the participant has difficulty understanding the process itself, you might try

using a specific case example to explain. After explaining, ask the participant questions to be sure he understands.
- Give the participant a copy of the answer sheet, if one is provided.
- Always reinforce the participant for good work by (for example):
  - commenting on his understanding
  - showing enthusiasm for ideas for application of the skill in his work
  - telling the participant that you enjoy discussing exercises with him
  - letting the participant know that his hard work is appreciated.

When leading a group discussion

- Plan to conduct the group discussion at a time when you are sure that all participants will have completed the preceding work. Wait to announce this time until most participants are ready, so that others will not hurry.
- Before beginning the discussion, refer to the appropriate notes in this Guide to remind yourself of the purpose of the discussion and the major points to make.
- Always begin the group discussion by telling the participants the purpose of the discussion.
- Often there is no single correct answer that needs to be agreed on in a discussion. Just be sure the conclusions of the group are reasonable and that all participants understand how the conclusions were reached.
- Try to get most of the group members involved in the discussion. Record key ideas on a flipchart as they are offered. Keep your participation to a minimum, but ask questions to keep the discussion active and on track.
- Always summarize, or ask a participant to summarize, what was discussed in the exercise. Give participants a copy of the answer sheet, if one is provided.
- Reinforce the participants for their good work by (for example):

  - praising them for the list they compiled
  - Commenting on their understanding of the exercise
  - Commenting on their creative or useful suggestions for using the skills on the job
  - Praising them for their ability to work together as a group.

When coordinating a role play:

Before the role play, refer to the appropriate notes in this Guide to remind yourself of the purpose of the role play, roles to be assigned, background information, and major points to make in the group discussion afterwards.

As participants come to you for instructions before the role play:

- Assign roles. At first, select individuals who are outgoing rather than shy, perhaps by asking for volunteers.
- Give role play participants any props needed, for example, a baby doll, a discharge card.
- Give role play participants any background information needed. (There is usually some information for the "mother" or "nurse" which can be photocopied or clipped from this Guide.)
- Suggest that role play participants speak loudly.
- Allow preparation time for role play participants.

When everyone is ready, arrange seating/placement of individuals involved. Have the players stand or sit apart from the rest of the group, where everyone can see them.

Begin by introducing the players in their roles and stating the purpose or situation. For example, you may need to describe the age of the child, assessment results, and any treatment already given.

- Interrupt if the players are having tremendous difficulty or have strayed from the purpose of the role play.

- When the role play is finished, thank the players. Ensure that feedback offered by the rest of the group is supportive. First discuss things done well. Then discuss things that could be improved.
- Try to get all group members involved in discussion after the role play. In many cases, there are questions given in the module to help structure the discussion.
- Ask participants to summarize what they learned from the role play.

ANSWER SHEETS FOR EXERCISES IN THE MODULE

SESSION 2: PRINCIPLES OF CARE

Answers to Exercise A, Principles of Care, page 23 PM

Exercise A, principles of care

Photo 1: Moderate oedema (++) seen in feet and lower legs.
Severe wasting of upper arms. Ribs and collar bones clearly show.

Photo 2: Severe dermatosis (+++). Note fissure on lower thigh.
Moderate edema (++) at least. Feet, legs, hands and lower arms appear swollen. The child's face is not fully shown in the photo, but the eyes may also be puffy, in which case the edema would be severe (+++).

Photos 3 and 4:
These show the front and back of the same child. The child has severe wasting. From the front, the ribs show, and there is loose skin on the arms and thighs. The bones of the face clearly show. From the back, the ribs and spine show; folds of skin on the buttocks and thighs look like "baggy pants."

Photo 5: Generalized oedema (+++). Feet, legs, hands, arms, and face appear swollen.
Probably moderate dermatosis (++). Several patches are visible, but you would have to undress the child to see if there are more patches or any fissures. There may be a fissure on the child's ankle, but it is difficult to tell.

Photo 6: Severe wasting. The child looks like "skin and bones." Ribs clearly show.
The child's upper arms are extremely thin with loose skin. There is some discoloration on the abdomen which may be mild dermatosis; it is difficult to tell from the photo.

Photo 7: Mild dermatosis (+). This child has skin discoloration, often an early skin changes in malnutrition. There is some wasting of the upper arms, and the shoulder blades show, but wasting does not appear severe.

Photo 8: Pus, a sign of eye infection

Photo 9: Corneal clouding, a sign of vitamin A deficiency

Photo 10: Bitot's spot, a sign of vitamin A Deficiency Inflammation (redness), a sign of infection

Photo 11: Corneal clouding, a sign of vitamin A deficiency. The irregularity in the surface suggests that this eye almost has an ulcer.

Photo 12: Corneal ulcer (indicated by arrow), emergency sign of vitamin A

deficiency. If not treated immediately with vitamin A and atropine, the lens of the eye may push out and cause blindness.

This photo also shows inflammation, a sign of infection.

Photo 13: Since only the legs are visible, we cannot tell the extent of oedema. Both feet and legs are swollen, so it is at least ++. Notice the "pitting" oedema in lower legs

Photo 14: Moderate (++) dermatosis. Note patches on hands and thigh. You would have to undress the child to see how extensive the dermatosis is. Generalized oedema (+++). Legs, hands, arms and face appear swollen.

Photo 15: Severe (+++) dermatosis and wasting (upper arms). Moderate (++) oedema (both feet), lower legs, possibly hands.

Additional photos discussed in relation to eye signs:

Photo 16 shows a photophobic child; his eyes cannot tolerate light due to vitamin A deficiency. The child's eyes must be opened gently for examination. He is likely to have corneal clouding as in Photo 9.

For contrast, Photo 17 shows a baby with healthy, clear eyes.

Answers to Exercise B, Principles of Care, Page 34 PM

Shetaye, girl, length 63 cm, weight 5.0 kg: WFL < -3 Z score; SAM

Robel, boy, height 101 cm, weight 11.8 kg: WFH < -3 z score: SAM

Tigist, girl, length 69.8 cm, weight 6.3 kg; WFL = -3 z score; MAM

Kumsa, boy, length 82 cm, weight 7.5 kg: WFL< -3 z score: SAM

Answers to Exercise C, Principles of Care, page 41 PM

Photo 18:

This child should be admitted. Her weight-for-length is above –3 SD, but she has oedema of both feet, as well as lower legs (at least moderate ++ oedema) and failed the appetite test

Photo 19:

This child should not be admitted to the severe malnutrition ward. Her weight for length is above –3 SD, and there is no apparent oedema.

Note: If you were to look on a weight-for-age chart, you would find that this child's weight-for-age is very low. This child is stunted. She is small for her age but adequate weight-for-length. This child has no severe acute malnutrition. Her weight-for length is above –3 SD, and there is no apparent edema.

Photo 20:

This child should not be admitted for in-patient care if there is OTP service in the area. He is less than -3 z-score but has no complication and passed the appetite test. If OTP service is not available, he should be admitted.

Notice that the mother in this photo is also extremely thin.

No Photo: This child should be admitted. Her weight-for-length is less than -3 z score, and she is less than 6 months. All infants less than 6 months with severe acute malnutrition should be managed as in-patient.

No Photo: This child should be admitted because he has Marasmic Kwash. His weight-for-length is less than -3 z score, and he has edema. Children with severe wasting and oedema should be managed as inpatient.

SESSION 3: INITIAL MANAGEMENT

Answers to Exercise A, Medical complications, page 72

1. **Rafael**
   a) 5 ml x 7.3 kg = 36.5 ml, rounded to 37 ml ReSoMal every 30 minutes for 2 hours
   b) Least amount: 5 ml x 7.3 kg = 36.5 ml, rounded to 37 ml ReSoMal.
   c) Greatest amount: 10 ml × 7.3 kg = 73 ml ReSoMal.

Note that 36.5 ml is rounded up to 37 ml.

2. Selamawit

   a) 5 ml × 11.6 kg = 58 ml ReSoMal every 30 minutes for 2 hours
   b) 5 ml × 11.6 kg = 58 ml ReSoMal is the least amount
   c) 10 ml × 11.6 kg = 116 ml ReSoMal is the greatest amount

Answers to Exercise B, initial management, page 76

Case 1 - Teblet

   a) Teblet's percentage of median is = -3 z score.
   b) Yes, Teblet should be admitted since she has hypothermia and marasmic kwash.
   c) Teblet is hypothermic because her temperature is less than 35.0°C.
   d) Teblet is not hypoglycaemic since her blood sugar is above 54 mg/dl.
   e) Teblet does not have severe anaemia since her haemoglobin is well above 4 g/dl.
   f) Teblets is not in shock. She is not lethargic or unconscious, and she does not have cold hands.
   g) Two things that should be done for Teblet immediately:
      i. Keep her warm to prevent hypothermia
      ii. Start F-75; give 70 ml every 2 hours

Note: Experienced participants may also mention antibiotics. Antibiotics are needed and will be discussed later in the module.

Case 2 - Kedija

   a) Give a 50 ml bolus of 10% glucose or sucrose. Since she can drink, give it orally.
   b) Begin F-75 half an hour after giving glucose. Every half-hour for 2 hours, give VV of the recommended 0-hourly amount (which is 90 ml for 8 kg child).
      V x 90 ml = 22.25 ml
      So the amount to give every half-hour is about 22 ml. (Round amounts to the nearest ml.)
   c) Yes, Kedija has very severe anemia since her hemoglobin is 3.9 mg/l.

She needs a blood transfusion. Since Kedija has no signs of congestive heart failure, she can be given whole fresh blood. Stop all oral intake during the transfusion. Give a diuretic and then transfuse 80 ml whole fresh blood slowly over 3 hours. (10 ml x 8kg = 80 m

Case 3 -- Yohannes

a) Four treatments that Yohannes needs immediaely:

- Oxygen
- 5 ml/kg sterile 10% glucose by IV
- IV fluids
- Active re-warming (kangaroo technique or heater/lamp)

Note: Experienced participants may mention the need for antibiotics. Antibiotics are needed and will be discussed later in the module.

b) Give 29 ml sterile 10% glucose by IV. (5 ml x 5.8 kg = 29.0 ml)

Note: Since Yohannes will receive IV fluids containing glucose, there is no need to follow his 10% IVglucose with a 50 ml bolus by NG tube.

c) Give 87 ml IV fluids in first hour. This amount is calculated as: 15 ml x 5.8 kg = 87 ml

d) Repeat the same amount of IV fluids (87 ml) for next hour.

e) ReSoMal and F-75

f) F-75: 65 ml

Answers to Exercise C, Initial management, page 83 PM

Case 1 - Mola

a) Three things that should be done immediately for Mola:

- Give 50 ml bolus of 10% glucose orally
- Give 100 000 IU vitamin A and atropine eye drops immediately
- Actively re-warm him (kangaroo technique or heater/lamp)

INITIAL MANAGEMENT

SIGNS OF SHOCK	**None** **Lethargic/unconsious** **Cold hand** **Slow capillary refill(>3 seconds)** **Weak/fast pulse**									
	If lethargic or unconscious, plus cold hand, plus either slow capillary refill or weak/fast pulse, give oxygen. Give IV glucose as described under Blood Glucose (left). Then give IV fluids:									
	Amount IV fluids per hour: **15 ml x ___ kg (child's wt)** = _____ml									
	Start:	Monitor every 10 minutes				*2nd hr	Monitor every 10 minutes			
Time						*				
Resp. rate						*				
Pulse rate						*				

If respiratory & pulse rates are slower after 1 hour, repeat same amount IV fluids for 2nd hour; then alternate ReSoMal and F-75 for up to 10 hours as in right part of chart below. If no improvement on IV fluids, transfuse whole fresh blood.

TEMPERATURE:- 35 °C Rectal (axillary)

If rectal <35.5°C (95.9°F), or axillary<35°C (95°F), actively warm child. Check temperature every 30 minutes.

EYE CARE

MEASLES	**Yes**		**No**	**Oral doses vitamin A**: If corneal clouding or ulceration, give vitamin A & atropine immediately. Record on Special Medicine section.	
EYE SIGNS	**None**	**Left**	**Right**		
Bitots' spot				<6 months	50,000 IU
Pus/inflammation				6-11 months	(100,000 IU)
Corneal clouding				≥ 12 months	200,000 IU
Corneal ulceration		X			

Note: Experienced participants may mention the need for antibiotics. Antibiotics are needed and will be discussed later in the module.

b) In a half-hour, give F-75. Give VV of 2-hourly amount for a 6.2 kg child: VV x 70 ml = 17.5 ml (Round up to 18 ml.)

Case 2 - Radiel

a) Answers are given on the multi-chart for Radiel on the next page.
b) 22-44 ml ReSoMal alternate hours with F-75 for up to 10 hours.
c) Signs of overhydration:

- Increase in pulse and respiratory rates (both)
- Jugular veins engorged
- Increasing oedema, e.g., puffy eyelids

d) Answers are given on the multi-chart for Radiel.
e) Signs of improving hydration:

- He has passed urine (recorded at 10:30 monitoring)
- He is no longer thirsty
- Gained weight

f) RR and PR have dropped
g) Give F-75. Give 50 ml (based on new weight of 4.5 kg)
h) less than 2 years old, he should be given 50 - 100 ml ReSoMal after each loose stool to replace stool loss.

Case 3: Etaferaw

a) Etaferaw is not hypoglycaemic. Etaferaw is not hypothermic.

b) Yes, she needs vitamin A,

c) Etaferaw is lethargic, has cold hands, and has slow capillary refill and fast pulse.

Give 15 ml x 6.1 kg = 91.5 ml IV fluids (ringers lactate or normal in 5% glucose) in the first hour.

d) Etaferaw should be given the same amount of IV fluids (ringers lactate or the next hour.

e) See initial management section on Etaferaw's multi chart below.

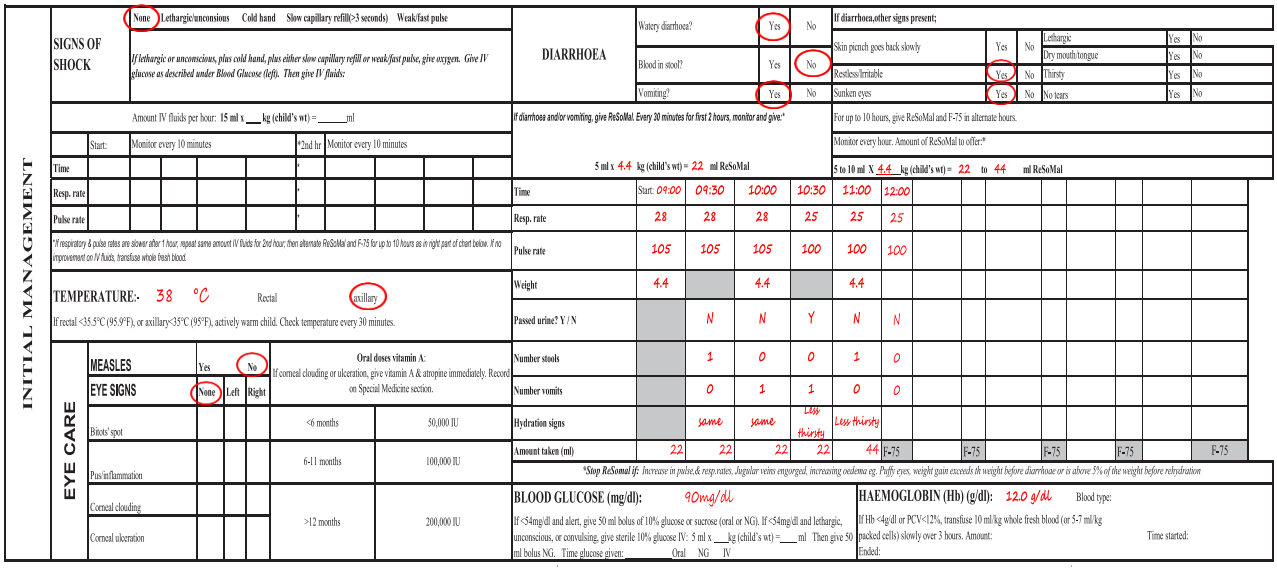
f) At 12:30 she needs ReSoMal. Calculate range of amounts as follows:

5 - 10 ml x 6.2 kg = 31 - 62 ml ReSoMal per hour This range of amounts should be entered on the multi-chart

g) 70 ml of F-75 every 2 hours (This amount should be recorded in the Feeding section of the multi-chart)

h) Since Etaferaw is 25 months old, she needs 100 - 200 ml ReSoMal after each watery diarrhea.

Etaferaw, 25 months old girl.



INITIAL MANAGEMENT

SIGNS OF SHOCK: None; Lethargic/unconsious; Cold hand; Slow capillary refill(>3 seconds); Weak/fast pulse

If lethargic or unconscious, plus cold hand, plus either slow capillary refill or weak/fast pulse, give oxygen. Give IV glucose as described under Blood Glucose (left). Then give IV fluids:

Amount IV fluids per hour: 15 ml x ___ kg (child's wt) = _____ml

Start: Monitor every 10 minutes *2nd hr Monitor every 10 minutes

Time; Resp. rate; Pulse rate

*If respiratory & pulse rates are slower after 1 hour, repeat same amount IV fluids for 2nd hour; then alternate ReSoMal and F-75 for up to 10 hours as in right part of chart below. If no improvement on IV fluids, transfuse whole fresh blood.

TEMPERATURE:- 38 °C Rectal axillary

If rectal <35.5°C (95.9°F), or axillary<35°C (95°F), actively warm child. Check temperature every 30 minutes.

EYE CARE

MEASLES: Yes / No

EYE SIGNS: None / Left / Right

Bitots' spot; Pus/inflammation; Corneal clouding; Corneal ulceration

Oral doses vitamin A: If corneal clouding or ulceration, give vitamin A & atropine immediately. Record on Special Medicine section.

<6 months	50,000 IU
6-11 months	100,000 IU
>12 months	200,000 IU

DIARRHOEA

Watery diarrhoea? Yes / No

Blood in stool? Yes / No

Vomiting? Yes / No

If diarrhoea and/or vomiting, give ReSoMal. Every 30 minutes for first 2 hours, monitor and give:*

5 ml x 4.4 kg (child's wt) = 22 ml ReSoMal

If diarrhoea,other signs present;

Skin pinch goes back slowly	Yes	No	Lethargic	Yes	No
Restless/irritable	Yes	No	Dry mouth/tongue	Yes	No
Sunken eyes	Yes	No	Thirsty	Yes	No
			No tears	Yes	No

For up to 10 hours, give ReSoMal and F-75 in alternate hours.

Monitor every hour. Amount of ReSoMal to offer:*

5 to 10 ml X 4.4 kg (child's wt) = 22 to 44 ml ReSoMal

Time	Start: 09:00	09:30	10:00	10:30	11:00	12:00								
Resp. rate	28	28	28	25	25	25								
Pulse rate	105	105	105	100	100	100								
Weight	4.4		4.4		4.4									
Passed urine? Y / N		N	N	Y	N	N								
Number stools		1	0	0	1	0								
Number vomits		0	1	1	0	0								
Hydration signs		same	same	Less thirsty	Less thirsty									
Amount taken (ml)	22	22	22	22	44	F-75		F-75		F-75		F-75		F-75

*Stop ReSomal if: Increase in pulse,& resp.rates, Jugular veins engorged, increasing oedema eg. Puffy eyes, weight gain exceeds 4% weight before diarrhoae or is above 5% of the weight before rehydration

BLOOD GLUCOSE (mg/dl): 90mg/dl

If <54mg/dl and alert, give 50 ml bolus of 10% glucose or sucrose (oral or NG). If <54mg/dl and lethargic, unconscious, or convulsing, give sterile 10% glucose IV: 5 ml x ___kg (child's wt) = ___ml Then give 50 ml bolus NG. Time glucose given: _____Oral NG IV

HAEMOGLOBIN (Hb) (g/dl): 12.0 g/dl Blood type:

If Hb <4g/dl or PCV<12%, transfuse 10 ml/kg whole fresh blood (or 5-7 ml/kg packed cells) slowly over 3 hours. Amount: Time started: Ended:

Answers to Exercise D, Initial Management, page 91 PM

Case 1 - Debebe

a. Amoxicillin, oral

b.

Drug	Route	Dose	Frequency	Duration
Amoxicillin	*oral*	*1 tablets* *(or 5 ml syrup)*	*every 12 hours*	*7 days*

Case 2 -- Hana

a. Gentamicin and Ampicillin

b. IV, using butterfly needle. Since Hana would need to receive 5 IM injections daily (1 injection gentamicin, and 4 of ampicillin) for the first two days, it is preferable to use a butterfly needle to keep a vein open for injecting drugs.

c.

drug	**route**	**dose**	**Frequency**	**Duration**
Gentamycin	IV/IM	30 mg or 0.75ml	Once daily	7 days
Ampicillin	IV	300 mg or 1.75 ml	Every 6 hours	2 days

d. Stop IV ampicillin and give oral amoxicillin for next 5 days. (Continue gentamicin during this time. Since only one injection of gentamicin is required daily, it may be given by IM injection.)

Answers for SESSION 4: FEEDING

Answers to Exercise B, Feeding, page 111 PM

Case 1—Dendir

a. Yes, he took all of each feeding.

b. Yes. He has had no vomiting, only modest diarrhoea, and he finished all of his feeds, so he is ready to change to 3-hourly feeding.

c. DATE 05/12/10 TYPE OF FEED F-75 GIVE 8 feeds of 60 ml

d. 6:00am,9:00am, 12:00pm, 3:00pm, 8600pm, 9:00pm, 12:00am, 3:00am

Note: In these modules participants use a.m. and p.m. if they are more accustomed to a24-hour clock they can also use.

Case 2 - Petros

a. Yes, Petros took more than 80% of the 640 ml on Day 2.

b. No, because he vomited his last feed and is a reluctant eater, Petros should stay on 3-hourly feeds.

c. DATE: 7/12/10 TYPE OF FEED: F-75 GIVE: 8 feeds of 80 ml

Case 3 - Rosa

a. 4:00 pm on Day 3

b. Yes, because she has taken more than 2 consecutive feeds completely by mouth.

c. Rosa should change to 3-hourly feedings because she is finishing her feeds and has only moderate diarrhea (that is, less than 5 watery stools per day).

d. *DATE: 9/02/10 TYPE OF FEED: F-75 GIVE: 8 feeds of 80 ml

N.B: *While the child is on F-75, keep using the starting weight to determine feeding amounts

Answers to Exercise C, Feeding, page 120 PM

Case 1 - Dendir

a. Since Dindir is on his 3rd day of transition offer 95 ml of F-100 at 6:00 am feeding.

b. Enter this information on the multi-chart,

4		5		6	
07/12/10		08/12/10		09/12/10	
TR		TR		TR	
F-100		F-100		F-100	
85		85		95	
6		6		6	
520		520		570	
510		520		550	
X	X	X	X	X	X
X	X	X	X	X	X↑
X	X	X	X	X	X
X	X	X	X	X	X↑
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X↑
X	X	X	X	X	X
X	X	X	X	X	X

Case 2 - Petros

a. No, he must stay at the same amount for the first two days of transition.

b. The nurse should explain that it is important to be cautious while Petros's body adjusts to more food. It is good that Petros is hungry; that is a sign of improvement. However, too much food too quickly would be dangerous. On Day 7 (the third day of transition) he will gradually be given more F-100. The mother should be encouraged to breastfeed Petros between feeds of F-100.

Case 3 - Rosa

a. Yes, she is ready for transition. Her oedema appears to be gone, and she eagerly finished all of her 4-hourly feedings of F-75 on Day 6. And she haspassed acceptance test.

b. Day 7, first day of transition -- Give same amount of F-100 as was given of F-75 on previous day:

DATE:
12/02/01 TYPE OF FEED: F-100 GIVE: 6 feeds of 105 ml

c. Day 8, second day of transition - Stay with same amount of F-100:

DATE:13/02/01 TYPE OF FEED: F-100 GIVE: 6 feeds of 105 ml

d. Day 9, third day of transition – Increase by 10 ml per feed as long as she takes all:

DATE: 14/02/01 TYPE OF FEED: F-100 GIVE: 6 feeds of 115 ml

Answers to Exercise D, Feeding, page 162 PM

Case 1 -- Dendir

a. 135 ml

b. 105 ml – 155 ml

c. 135ml (on this question assume on day 7, he still leaves some amount of 135 ml offered.)

d. 135 ^ml (meaning increase by 10 ml, if finishing feeds). Do not exceed 155 ml.

e. 160 is the starting amount. It should not be increased on Day 9, as 160 ml is the maximum amount for a child weighing 4.4 kg. (When his weight increases on subsequent days, he may have more.)

Case 2 – Petros

a) Since Petros weighs 5.05 kg, his appropriate range of daily volume is 750 –1100 ml of F-100.

b) He took 900 ml, which is in this range.

c) There is no cause for concern since Petros ate in his range and is gaining weight. His

d) weight gain in g/kg has been good most days since he started F-100, and he had an excellent gain between Days 7 and 8.

DATE:14/12/01 TYPE OF FEED: F-100 GIVE: 6 feeds of 160 ml

Do not exceed 185 ml

Case 3 - Rosa

a. 780 – 1144 ml

b. Rosa may have an infection causing her temperature to increase and causing her to eat less.

c. Both of the above.

Answers to Exercise E, Feeding, page 139 PM

Case 1: Almaz

1. False: She is admitted for in-patient care because **she is less than 6 months old** and W/L is less than <-3 Z-score.

2. 55 ml per feed F 100 diluted

3. False

4. False, SS is stopped if Almaz gains weight at least 10 gm/day and maintained

5. False: She can be discharged if she maintains adequate weight gain on breast milk only irrespective of the Wt for height.

Answers to Exercise F, Feeding, page 143 PM DAILY WARD FEED CHART

DATE _____ *17/05/01* _____ **WARD** _____ *Severe- stabilization Centre*

Name of Child	F-75		F-100 Transition		F-100 Phase 2	
	Number feeds	Amount/ feed (ml)	Number feeds	Amount/ feed (ml)	Number feeds	Amount/ feed (ml)
Meena					6	240
Tayib	6	80				
Abdul					6	180
Mamit			6	200		
Nishan	6	95				
Keflu					6	210
Hadgu					6	270
Beshir	6	120				
Lemesa			6	250		
Paulos	6	130				
Fatuma			6	160		
Samuel					6	170
Total		420 ml		610 ml		1070 ml

SESSION 5: DAILY CARE

Answers to Exercise A, Daily Care, page 133 PM

1. Photo 8:

   Vitamin A - Days 1, 2, and 15 Gentamycin or tetracycline eye drops only
   (Pus may hide signs of vitamin A deficiency, so additional doses of vitamin A are given on Days 2 and 15 to be on the safe side.)

2. Photo 9:

   Vitamin A - Days 1, 2, and 15 Gentamycin or tetracycline eye drops and Atropine eye drops

3. Photo 10:

   Vitamin A - Days 1, 2, and 15 Gentamycin or tetracycline eye drops only

   Note: Although Bitot's spots alone do not require eye drops, inflammation suggests infection and requires Gentamycin or tetracycline drops.

4. Photo 12:

   Vitamin A - Days 1, 2, and 15 Gentamycin or tetracycline eye drops and Atropine eye drops.
   Note: First dose Vitamin a A is part of emergency care to be recorded on the initial management section.

5. Photo 15:
   Bath for 10-15 min/day in 1% potassium permanganate solution.
   If potassium permanganate solution is not available, affected areas may be dabbed with gentian violet.
   Apply barrier cream like castor oil ointment, petroleum jelly or paraffin gauze dressing.
   If the diaper area is colonized with Candida use nystatin ointment or cream after bathing. Be sure to dry the child after a bath.

Answers to Exercise B, Daily Care, page xx PM

Registration # .....

Sheet # 1064

Referred from: Leku HC

Age (d/m/y specify):.. 18 months

Sex:..F

Breastfeeding (Y/N):... Y

Complementary feeding (Y/N): Y

Major Problems
1. Oedematous SAM
2. Dermatosis +++
3

Date of admission(EC) (DD/MM/YY): 14/02/2010

Time: 7:30 (AM) PM

Re-admission (Y/N): N

(**Relapse** or **Returned defaulter**: circle type of

From:.....

Old registration #:.....

Full Name: Lelissae Gemechu

Address (Kebele, Woreda, Region): Ramada, Shededino, SNNPR

Anthropometric Chart																	
	Date	14/02/10															
	Height (cm)	76															
	Weight (kg)	7															
	WFH z-score	< -3															
	MUAC (cm)	10.8															
	Bilateral pitting oedema (0, +, ++, +++)	+															
	Wt gain (g/kg/day)																

INITIAL MANAGEMENT

SIGNS OF SHOCK

None **Lethargic/unconsious** **Cold hand** **Slow capillary refill(>3 seconds)** **Weak/fast pulse**

If lethargic or unconscious, plus cold hand, plus either slow capillary refill or weak/fast pulse, give oxygen. Give IV glucose as described under Blood Glucose (left). Then give IV fluids:

Amount IV fluids per hour: **15 ml x ____ kg (child's wt)** = _____ml

	Start:	Monitor every 10 minutes					*2nd hr	Monitor every 10 minutes			
Time							*				
Resp. rate							*				
Pulse rate							*				

**If respiratory & pulse rates are slower after 1 hour, repeat same amount IV fluids for 2nd hour; then alternate ReSoMal and F-75 for up to 10 hours as in right part of chart below. If no improvement on IV fluids, transfuse whole fresh blood.*

TEMPERATURE:- Rectal (axillary)

If rectal <35.5°C (95.9°F), or axillary<35°C (95°F), actively warm child. Check temperature every 30 minutes.

EYE CARE

MEASLES **Yes** **No**

EYE SIGNS	**None**	**Left**	**Right**
Bitots' spot			
Pus/inflammation			
Corneal clouding		X	
Corneal ulceration			

Oral doses vitamin A:
If corneal clouding or ulceration, give vitamin A & atropine immediately. Record on Special Medicine section.

<6 months	50,000 IU
6-12 months	100,000 IU
>12 months	(200,000 IU)

DIARRHOEA

Watery diarrhoea? Yes (No)

Blood in stool? Yes (No)

Vomiting? Yes (No)

If diarrhoea and/or vomiting, give ReSoMal. Every

30 minutes for first 2 hours, monitor and give:*

ROUTINE MEDICINE	Date		14/02/10	
	Antibiotics-1 *Time* :			
	Antibiotic 2: Time Ampicillin 350 mg IV QID	6:00 AM	BS	
		12:00 PM	TN	
		6:00 PM	SB	
		12:00 AM	KL	
	Antibiotic 3: Time Gentamycin 35 mg IV	6:00 AM	BS	
	Deworming in phase 2			

SPECIAL MEDICINE	Antibiotics-4 *Time* :		
	ReSoMal (ml)		
	IV Fluids		
	Blood		
	NG Tube		
	Vitamin A	BS	
	Drugs for eye problems		
	Tetracycline 1 drop 4 X daily	BS	
		TN	
		SB	
		KL	
	Atropine 1 drop 3 X daily	BS	
		TN	
		SB	
	Others Zinc oxide	BS	

TEST RESULTS	Date	14/02/10	
	Hemoglobin (g/dl)	9g/dl	
	Glucose Test (mg/dl)	72mg/dl	
	Malaria Test		
	TB Test		
	HIV Test		

SURVEILANCE CHART	Date	14/02/10		
	Diarrhoea (Tally)	N		
	Vomit (Tally)	N		
	Dehydration (Y/N)	N		
	Cough (Y/N)	N		
	Septic Shock (Y/N)	N		
	Respiratory Rate	35		
	Palmer pallor (Y/N)	Y		
	Temp. AM Ax/Rect	38		
	Temp. PM Ax/Rect	37.8		
	Deramtosis(0, +, ++, +++)	+++		
	Liver Size (cm)	0		
	Failure to Respond			

Answers to Exercise D,daily Care, page 172 PM

Case 1 - Lelissa

1. Her temperature drops suddenly to 35.7°C.

2. Yes, a sudden drop in temperature is a danger sign. Lelissa is approaching hypothermia.

3. It is possible that Lelissa became uncovered during the night or missed a feed, either of which can lead to hypothermia.

   Lelissa is already being treated with antibiotics for infection, so it is less likely that infection is a cause of the decrease in temperature. However, there may be a hidden infection that is not responding to the antibiotics that she has been given.

4. No, Lelissa's pulse and respirations remain fairly steady.

Case 2 - Chaltu

1. Yes, Chaltu's respiratory rate increased by 5 and pulse rate increased by 25 beats per minute between 2:am. and 6:00 am on Day 2.

2. Confirm (Re-check) both respiratory and pulse rates.

3. Alert the doctor immediately. Do not give any more food or fluids until the doctor has examined the child.

4. Chaltu shows signs of possible heart failure. She may have taken too much ReSoMal along with the F-75 being given by NG. Or there may be a hidden, non-responding infection (with suppressed fever).

Case 3 - Bulto

1. His temperature increases from 37.1°C to 38.5°C. Yes, this is a danger sign.

2. No, there is no increase by 25 beats/minute or more.

3. Yes, 40 breaths per minute is considered fast breathing in a 2-year-old. Bulto has had fast breathing since 22:00 p.m. on Day 2.

4. Yes, the doctor should be alerted.

5. Fast breathing and chest indrawing are signs of pneumonia (severe pneumonia). This was not apparent on admission and is not responding to Amoxacillin. Bulto should be given IV Ampicillin for two days followed by oral Amoxacillin for 5 days and Gentamicin IM daily for at least five days.

SESSION 6: MONITORING AND PROBLEM SOLVING

Answers to Exercise A page 196 PM Monitoring and Problem Solving,

Case 1 - Sara

a) Sara is not making much progress. The only progress evident is that her diarrhea has stopped.
b) Yes, there are problems. On Day 5 Sara has still not started to lose her oedema,

Case 2 - Lema

a) Lema had no weight gain (0 g /kg/day).
b) Yes, in some ways Lema has made progress. He has lost his oedema. He no longer has dermatosis. His diarrhoea has stopped. He is now on phase 2 and on F-100.
c) Yes, there are problems. Lema has not gained weight for 4 days in phase 2 or F-100 in spite of eating well. Lema's fever continues and is at 38°C.

Possible Answers to Exercise B page 208 PM

Case 1 - Sara

These are possible answers to the questions in the exercise. Participants may mention some of these answers during the discussion. Other answers may also be correct.

a) Possible causes of Sara's failure to respond:

- She missed a night feed; perhaps she is not being fed well at night.
- Perhaps she is not being encouraged to eat.
- Perhaps she has an unrecognized infection, or her antibiotic is not effective.
- Perhaps her food is not being prepared correctly. (This would affect other children as well.)
- Mineral mix may not have been added to the feed. (Potassium and magnesium are very important for loss of oedema.)

.

b) Possible ways to investigate causes:

- Observe feedings in the ward; watch carefully how Sara is fed.
- .Look for a possible infection.
- Look for signs of ruminating (e.g., smell on clothes).
- Review Sara's 24-Hour Food Intake Charts from earlier days.
- Observe feed preparation.

c) Possibly the nurses thought that Sara was better off, so they paid less attention to her. They did not spend the time necessary to encourage her to eat.
d) Talk to the staff about Sara's needs and make her the focus of attention. Also teach Sara's mother or caretaker how to hold Sara and feed her with encouragement.

Case 2 - Lema

a) No, Lema is not being given enough F-100 by the nurses during Phase II, In addition, he was taking inadequate amount in some days .
b) Ampicillin and Gentamicin has not taken care of Lema's infection.
   - Lema may have tuberculosis (TB).
   - He has inadequate intake of F-100.

Answers to Exercise C, page 212

Aron

- Aron's average daily weight gain from 13/4 to 19/4 was 11.06 g/kg: 77.4 ÷ 7 = 11.06 g/kg
- This is a good average daily weight gain, so Aron's name should be listed in the good column of the Weight Gain Tally sheet.

Keflom

- Keflom's average daily weight gain from 13/4 to 19/4 was 4.66 g/kg:
- 32.6 ÷ 7 = 4.66 g/kg
- This is a poor average daily weight gain, so Keflom's name should be listed in the poor column of the Weight Gain Tally sheet.

Saba

- Saba's average daily weight gain from 13/4 to 19/4 was 6.15 g/kg:
- 43.07 ÷ 7 = 6.15 g/kg
- This is a moderate average daily weight gain, so Saba's name should be listed in the moderate column of the Weight Gain Tally sheet.

Answers to questions for discussion

1. If 10% of children on a ward have poor weight gain, there is a problem. On this ward, 20% of the children (4 out of 20) have poor weight gain. So yes, there is a problem with weight gain on this ward.
2. Common factor:
3. 3of the 4 children with poor weight gain have no caretaker. 20% of the children (4 out of 20) on the ward have poor weight gain (< 5 g/kg/day). 3 of these 4 have no caregiver at the hospital with them. The common factors do suggest a possible cause. Without special attention from a mother or caregiver, these children may not be encouraged to eat.
4. To investigate the cause, it will be important to observe feedings on the ward. It would also be a good idea to see if all of the children with moderate or good weight gain have caretakers with them, and it the caretakers help with feeding.

A separate problem investigation should be done for Lulit.

Answers to Exercise D page 221 PM Possible answers to questions for discussion

1. Circumstance of death.

Ketema - Ketema died about 10:00 pm on his first day in the hospital. Ketema had been in the hospital less than 24 hours. The cause of death is recorded as unknown. However, at his last monitoring, his breathing rate and pulse rate had increased dangerously, probably due to over hydration. Ketema had been given normal saline IV in the emergency room (incorrect and dangerous case management). The IV was continued for 6 hours.

Betre - In emergency Betre was given IV plasma and a diuretic for low albumin and edema (incorrect and dangerous case management). Betre died 23 hours after admission. At death, his potassium level was low, his albumin high, and his oedema had increased from ++ to +++.

Lulit -- Lulit was found dead at 4:00 am in the morning on Day 3. Milk curds were coming out of her mouth. She had been vomiting during the day. Possibly she choked on her vomit.

2. Common factors.

In the cases of Ketema and Betre there are common factors. Both cases received incorrect initial case management, particularly in the emergency room. Ketema should not have been given an IV at all since he was not in shock; if he had needed IV fluids, he should have been given one recommended for severely malnourished children for only 2 hours, and he should have been monitored every 10 minutes. The normal saline IV given to Ketema for 6 hours may have caused heart failure due to over hydration.

Betre should not have been given IV plasma or a diuretic. Since Betre is very malnourished, we can assume he is deficient in potassium. Giving a diuretic will

make this deficiency worse, as potassium is lost in the urine. (This could explain why his oedema got worse.)

Neither Ketema nor Betre was given an antibiotic. Both needed antibiotic.

Lulit's case appears to be different and unrelated to emergency room practices. Her death may be due to lack of attentiveness of the staff at night. Also, Lulit still had diarrhoea and vomiting on her third day in the ward, and it is not known whether she continued to receive ReSoMal after each loose stool.

3. Monitor case management practices or ward.

Monitor initial case management practices, particularly in the emergency room. Pay special attention to incorrect use of IV fluids, albumin, and diurectics. Monitor to ensure that antibiotics are being prescribed.

Investigate night staffing and ward procedures at night. Investigate whether Lulit continued to receive ReSoMal after each loose stool.

SESSION 8: OUT PATIENT TREATMENT PROGRAM (OTP)

Answers to Exercise A Page 279 PM

a) Because of the high occurrence of silent infection among children with severe acute malnutrition have .

b) Sara`s RUTF and BP100 dose: -

c) 4½sachets /day and 32 sachets per week.

d) 7 bars per day and 49 per week.

- Wash hand with soap and water.
- Do not share with others because it is medicine
- Provide clean water to drink with the RUTF.

Answers to Exercise B Page 286, PM

Case 1: Bekele

a) -His progress is not satisfactory, primary failure to respond, still has edema in 21 days
b) -Refer him for In-patient care.

Case 2: Taye

- His progress is not satisfactory, has not gained weight for 3 consecutive weeks, needs home visit.

Case 3: Molla

a) His MUAC at admission was 10.4cm, No medical complication and passed appetite test-He was admitted as SAM at OTP.
b) Yes, Molla is making progress- his weight is increasing, MUAC is increased, no oedema, has appetite
c) Give Albendazole 400mg stat and continue OTP follow up, because he is making progress and encouraging the mother/caretaker until fully recovered/cured.

Case 4. Debalke

a) His OTP card is filled on follow up part shows missed data – appetite test at each visit is missed,
b) Debalke 's progress is not satisfactory -His MUAC and Wt. increment has slight change
c) 2nd and 3rd visit appetite test result if checked.
d) Continue in OTP and review progress in 3rd visit

Session 9: Moderate Acute Malnutrition (MAM)

Answer for Exercise A page 306, PM

Q1. **Fatima**`s condition is deteriorating at TSFP, so Admit her to OTP and follow her closely.

Q2. **Biniyam**- Refer him to SC because he has medical complications

Q3. **Shemsu**- Check for presence of medical complications and do appetite test to decide where to manage OTP or SC

Q4. **Samuel** – Normal nutritional status and congratulate the mother, counsel her to continue breast feeding and complementary feeding.

Q5. **Getu** – Let him continue his follow up in OTP until he attains the discharge criteria.

SESSION 10: MONITORING AND REPORTING FOR TFP

Answers to Exercise A, Page 336, PM

1. 5 deaths / 20 exits = 25% (alarming)

2. Death rate 13.3%
Cure rate 33.3% (alarming) Defaulter rate 13.3%
Non-responder rate 6.7% Transfer out rate 33.3%

3. Death rate 6.3%
Recovery rate 62.5% Defaulter rate 12.5%
Non-responder rate 18.8% Transfer out rate 0%

4. Death rate 14.7%
Cure rate 58.8% Defaulter rate 17.6%
Non-responder rate 3.9% Transfer out rate 4.9%

Answers to Exercise B, Page 337, PM

1. **Bulbul HP (OTP) service.**

- Cure rate 82 % (Good), because it is > 75%.
- Defaulter rate 9% (acceptable) because it is <15%.
- Death rate 9% (Alarming), because any death in OTP should alarm the HWs.

2. **Achura HP (TSFP) service**

- Cure rate: 78% (Good) because it is >75%.
- Defaulter rate 11% (acceptable) because it is < 15%.
- Death rate (Alarming) because it is > 3%