FACILITATOR GUIDE

REPUBLIC OF GHANA
MINISTRY OF HEALTH

GHANA HEALTH SERVICE
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Training Course on Inpatient Management of Severe Acute Malnutrition

(Adapted from the 2002 WHO *Training course on the inpatient management of severe acute malnutrition*)

Children 6–59 Months with SAM and Medical Complications

March 2012

This modified version of the 2002 World Health Organisation's *Training Course on Inpatient Management of Severe Acute Malnutrition (SAM)* is the practical application of the 2010 MOH/GHS *Interim National Guidelines for Community-Based Management of Severe Acute Malnutrition in Ghana.* The training course was modified by the MOH/GHS SAM Support Unit in collaboration with the MOH/GHS Regional SAM Support Teams. USAID/Ghana, FANTA-2 Bridge project, UNICEF/Ghana and WHO/Ghana provided technical and financial support to review and modify the training course. This revised training course is made possible by the generous support of the American people through the support of USAID/Ghana and the Office of Health, Infectious Diseases, and Nutrition, Bureau for Global Health, United States Agency for International Development (USAID), under terms of Cooperative Agreement No. AID-OAA-A-11-00014, through the FANTA-2 Bridge, managed by FHI 360.

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Acronyms and Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CCP	Critical Care Pathway
cm	Centimetre(s)
CMAM	Community-Based Management of Severe Acute Malnutrition
CMV	Combined Mineral and Vitamin Mix
dl	Decilitre(s)
F-75	Formula 75 Therapeutic Milk
F-100	Formula 100 Therapeutic Milk
g	Gram(s)
Hb	Haemoglobin
HIV	Human Immunodeficiency Virus
IU	International Unit(s)
IV	Intravenous
kcal	Kilocalorie(s)
kg	Kilogram(s)
L	Litre(s)
M&R	Monitoring and Reporting
mg	Milligram(s)
ml	Millilitre(s)
mm	Millimetre(s)
mmol	Millimole(s)
MUAC	Mid-Upper Arm Circumference
NG	Nasogastric
NGT	Nasogastric Tube
ORS	Oral Rehydration Solution
PML	Princess Marie Louise (Hospital)
ReSoMal	Rehydration Solution for Malnutrition
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
TB	Tuberculosis
WFH	Weight-for-Height
° C	Degrees Celsius
>	Greater Than
≥	Greater Than or Equal To
<	Less Than
≤	Less Than or Equal To

Introduction

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 Inpatient Care facility. 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 course modules (booklets 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 modules provide the basic information to be learned. Information is also provided through demonstrations, photographs, and videotapes.

- The modules are designed to help each participant develop specific skills necessary for case management of severely malnourished children. Participants develop these skills as they read the modules, observe live and videotaped demonstrations, and practise skills in written exercises, group discussions, oral drills, or role plays.

- After practising skills in the modules, participants practise the skills in a real hospital setting, with supervision to ensure correct patient care. A clinical instructor supervises the clinical practice sessions in the Inpatient Care.

- To a great extent, participants work at their own pace through the modules, 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 or she has done the exercise and what improvements could be made.)

For whom is this course intended?

This course is intended for both doctors and nurses who manage children with severe acute malnutrition (SAM) in hospitals. Doctors 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, nurses and doctors 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. Dieticians and nutritionists may also benefit from this course.

Because of their different backgrounds and interests, nurses and doctors may be assigned to separate small groups. However, nurses and doctors from the same hospital may meet together to work on planning exercises for their hospital.

Throughout the **Facilitator Guide** there are **Notes for Nurses' Groups** (when appropriate) printed in shaded boxes. These notes suggest how facilitators can adapt the course materials for nurses' groups as needed. Some of the suggestions may also be used for groups of doctors if they are having difficulty understanding a concept or doing the work at a suitable pace.

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 or her 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 three to six 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 three basic things.

1. You INSTRUCT.

    - Make sure that each participant understands how to work through the materials and what he or she is expected to do in each module and each exercise.
    - Answer the participant's questions as they occur.
    - Explain any information that the participant finds confusing, and help him or her 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 or she obtained his or her 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 or her own hospital.

- Assist the clinical instructor as needed during clinical practice sessions.

2. You MOTIVATE.

   - Compliment the participant on his or her 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 or her questions completely (that is, so that both you and the participant are satisfied).

Who should you NOT 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 modules.

- 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 or she is conducting a clinical session. He or she 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 modules, including the video segments.

For each module, this **Facilitator Guide** includes the following:

- A list of the procedures to complete the module, highlighting the type of feedback to be given after each exercise

- A list of any special supplies or preparations needed for activities in the module
- 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
- Notes on how to adapt the procedures for nurses' groups, if needed
- A place to write down points to make in addition to those listed in the guidelines

Answer sheets are provided in a separate packet. Individual answer sheets should be detached and given to each participant after exercises, during individual feedback or after a group discussion.

At the back of this **Facilitator Guide** is a section titled **Guidelines for All Modules** (on page 84). 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

To prepare yourself for each module, you should:

- Read the module and work the exercises
- Check your answers by referring to the answer sheets (provided as a separate packet)
- Read in this **Facilitator Guide** all the information provided about the module
- Plan with your co-facilitator how work on the module will be done and what major points to make
- Collect any necessary supplies for exercises in the module, 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**
Course Director Guide	1 for the course director
Clinical Instructor Guide	1 for the clinical instructor
Facilitator Guide	1 for each facilitator
Set of 7 modules and Photographs booklet	1 set for each facilitator and 1 set for each participant
Set of laminated job aids	1 set for each facilitator and 1 set for each participant
Answer sheets	1 packet for each facilitator and 1 packet for each participant
Interim National Guidelines for CMAM in Ghana	5 for each group
Extra copy of Critical Care Pathway (CCP) (all 5 pages, stapled)	1 for each facilitator and 1 for each participant
Extra copies of Initial Management page of CCP, loose (for use in exercises)	4 for each participant
Extra copies of Daily Care page of CCP, loose (for use in exercises)	3 for each participant
Extra copies of Monitoring page of CCP, loose (for use in exercises)	2 for each participant
24-Hour Food Intake Chart	2 for each participant
Daily Inpatient Care feed Chart	1 for each participant
Health Facility Tally Sheet	2 for each participant
Health Facility Report Form	2 for each participant
Sample Referral Form from Inpatient Care to Outpatient Care	1 for each facilitator and 1 for each participant, plus a few extras for use in the classroom
Enlarged photocopies of all forms, sheets, and charts	1 set for each group
Videos: 1. Transformation 2. Emergency treatment 3. Teaching home feeding 4. Malnutrition and mental development	1 for each group
Schedule for the course	1 for each facilitator and 1 for each participant
Schedule for clinical sessions	1 for each facilitator and 1 for each participant

Supplies Needed for Work on the Modules

Supplies needed for each person include:

- Name tag and holder
- Two pens
- Two pencils with erasers
- Paper
- Highlighter
- Folder or large envelope to collect answer sheets
- Calculator
- Bag to carry the training materials

Supplies needed for each group include:

- Paper clips
- Pencil sharpener
- Stapler and staples
- One roll masking tape
- Extra pencils and erasers
- Flipchart pad and markers
- Printed role-play exercises

Access is needed to a computer with an LCD projector. Your Course Director will tell you where this is. In addition, certain exercises require special supplies, such as ingredients for feeding formulas or Rehydration Solution for Malnutrition (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 module. Be sure to collect the supplies needed from your Course Director before these exercises.

Facilitator Guidelines for Module 1, Introduction

Procedures*	Feedback
1. Introduce yourself and ask participants to introduce themselves.	—
2. Take care of any necessary administrative tasks.	—
3. Make a presentation on Community-Based Management of Acute Malnutrition (CMAM) services in Ghana, followed by a group discussion.	PowerPoint presentation followed by a group discussion
4. Distribute **Module 1, Introduction** and point out that the *Interim National Guidelines for CMAM in Ghana* are available for reference. Introduce the module, and ask participants to read it in entirety.	—
5. Answer any questions about **Module 1**.	—
6. Explain your role as facilitator.	—
7. Ask participants to tell where they work and describe briefly their responsibility for care of severely malnourished children.	—
8. Continue immediately to **Module 2, Principles of Care**.	—

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

1. Introduce yourself and ask participants to introduce themselves.

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

2. Take care of any necessary 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 meals, 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 inpatient care for clinical practice.

3. Present an overview of CMAM services in Ghana.

Let the participants know that the presentation is available in **Annex B** of **Module 1, Introduction**, for further reference. The presentation will be followed by a group discussion session where participants can ask question with regards to CMAM in Ghana.

4. Introduce the module and the CMAM guidelines.

Explain that **Module 1, Introduction** briefly describes the problem of severe childhood malnutrition and the need for improved case management. It also describes the course methods and learning objectives.

Explain that this module, like all the modules that the participants will be given, is theirs to keep. As they read, they can highlight important points or write notes on the pages if they wish.

Explain that the modules are designed to accompany the *Interim National Guidelines for CMAM in Ghana*, which provides the most recent evidence in the management of SAM. Occasionally, participants will be instructed to refer to the documents. For example, point out the box on page 1 of **Module 1** that refers them to pages 1–7 of the Guidelines.

Ask the participants to read **Module 1, Introduction** now. When instructed to do so, they should read pages 1–7 of the *Interim National Guidelines for CMAM in Ghana*. They should continue reading to the end of the module.

5. Answer questions.

When everyone has finished reading, ask if there are any questions about **Module 1**. Participants may have questions about the equipment and supplies listed in **Annex A**. They may be concerned that some items are not available in their hospitals, or they may wonder why certain items are needed. Explain that the need for each item will be explained in the modules and in the manual. Explain that many hospitals lack some of these items and need to obtain them. There will be opportunities in the course to discuss such problems.

6. Explain 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 organise and lead the clinical practice sessions held at the hospital.

7. Ask participants to describe their responsibility for children with SAM.

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 his or her job is. During the course you will further discuss what they do in their hospitals.

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 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.)*

8. Continue to the next module.

Proceed directly to the next module, **Module 2, Principles of Care**.

Facilitator Guidelines for Module 2, Principles of Care

Procedures	Feedback
1. Distribute **Module 2, Principles of Care**, the **Photographs** booklet, and the laminated **Weight-for-Height Reference Tables**. Introduce the module.	—
2. Ask participants to read through pages 1–8 of the module and complete Exercise A using the **Photographs** booklet.	Group discussion
3. Ask participants to read pages 11–19 of the module. Nurses' groups: Conduct a demonstration of how to use the **Weight-for-Height Reference Tables**.	—
4. Ask participants to complete Exercise B using their **Weight-for-Height Reference Tables**.	Individual feedback
5. Ask participants to read pages 21–24 of the module and complete Exercise C.	Group discussion
6. Lead group oral drill on z-scores, mid-upper arm circumference (MUAC), and classification of SAM.	Drill
7. Ask participants to read pages 26–27 of the module and complete the short answer exercise on page 28.	Group-checked
8. Ask participants to read pages 29–32 of the module and complete the short answer exercise on page 33.	Group-checked
9. Ask participants to read pages 34–36. Have them complete the short answer exercise on page 37 and check their own answers.	Self-checked
10. Ask participants to read pages 38–40 of the module. Then will lead a group discussion and answer any questions.	Group Discussion
11. Watch the video **Transformations**. Discuss the video and photos 21–29.	Group discussion
12. Summarise the module.	—

Preparations for the Module

At the end of **Module 2**, you will show a video that depicts signs of SAM and transformations that can occur with correct case management of children with SAM. 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 LCD projector, computer, and supplies are available.

Learn how to operate the equipment and practise using the equipment:

- The video **Transformations**
- Computer
- LCD projector connected to a computer
- Electrical outlets/cables

1. Introduce the module.

Explain that this module defines SAM, describes how to recognise clinical signs of SAM, and how to weigh and measure a child's mid-upper arm circumference (MUAC) and height/length. The module gives an overview of the recommended procedure for managing SAM and provides a rationale for the essential components of case management. The module also describes how a child with SAM is different, and why this affects care. Participants will use their **Photographs** booklets in this module to see signs of SAM. Later, in the clinical session, they will look for these signs in children in the hospital.

Nurses' groups (when appropriate): Ask the group to read pages 1–8 and tell you when they have finished. Discuss several photos in Exercise A as a group before asking the participants to work individually on the exercise. This exercise can be very time consuming. If you expect that the group will work slowly, you may assign two or three photos to each person rather than having everyone review all of the photos. Then the assigned person can present those photos in the group discussion at the end of the exercise.

2. Complete Exercise A, identifying signs of SAM in photographs, through individual work followed by group discussion.

Ask participants to read pages 1–8 of the module and complete Exercise A using the **Photographs** booklet. Encourage participants to ask you questions as needed while they are reading or doing the exercise.

An answer sheet for this exercise is provided in a separate packet. The answers are also repeated in this **Facilitator's 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, oedema, dermatosis, and eye signs.

Possible Answers to Exercise A

Photo 1: Moderate oedema (++), seen in the 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 oedema (++) 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 oedema would be severe (+++)

Photos 3 and 4 (front and back view of same child):

Child has severe wasting; from the front, the ribs show, and there is loose skin on the arms and thighs; 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: Generalised 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; upper arms are extremely thin with loose skin.
(Also note the sunken eyes, a possible sign of dehydration, which will be discussed later.)
Some discoloration on the abdomen, which may be mild dermatosis; it is difficult to tell from the photo

Photo 7: Mild dermatosis (+); child has skin discoloration, often an early skin change in malnutrition
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
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
Also shows inflammation, a sign of infection

Photo 13: Since only the legs are visible, 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; eyes cannot tolerate light due to vitamin A deficiency; child's eyes must be opened gently for examination; likely to have corneal clouding as in Photo 9

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

3. Instruct participants to read the module and give a demonstration.

Distribute the answer sheet and ask participants to read pages 11–19 of the module. These pages 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 has SAM. Hold up the **Weight-for-Height Reference Tables**, and explain that participants will need to refer to this.

Show the participants a MUAC tape and briefly explain about MUAC and how to use it and the various cutoff points for the MUAC measurements.

At this point, also explain to the participants that Ghana has adapted the use of MUAC as independent criterion for classifying and managing children with SAM. Weight-for-height (WFH) will be taught in Module 2 of this course but will not be used at the facility level for the management of SAM in Ghana.

Some groups will easily understand the reading and how to use the **Weight-for-Height Reference Tables**. 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 Tables**.

Demonstration for nurses' groups (when appropriate): Before Exercise B, review the content of Section 3.2 of the module, and demonstrate how to use the **Weight-for-Height Reference Tables**. Hold up the card and point to the appropriate columns as you speak. Talk through the examples on page 19 of the module. Be sure that participants understand that the left side of the card is for boys and the right is for girls. Show how the lowest weights are in the outside columns on both the boys' and girls' sides, furthest away from the median.

Talk through several more examples such as the following. Ask a participant to tell you the z-score:

- Girl, 73 cm, 7.4 kg: −2 z-score
- Boy, 94 cm, 11.0 kg: −3 z-score
- Girl, 67.2 cm, 5.8 kg: −3 z-score
- *Boy 75 cm, 7.6 kg: < −2 z-score
- *Girl, 81 cm, 7.9 kg: < −3 z-score

Participants may be confused by negative numbers, so use an example of a boy who is 70 cm in length. Ask participants to look along the row of weights and check the top of the column each time, so they see that 8.4 kg is median, 7.8 kg is –1 z-score, 7.2 kg is –2 z-score, etc. Use this example to show that a child who is –3 z-score has a lower weight-for-height than a child who is –2 z-score. Suggest that if participants ever forget about the negative numbers, they can always look at the weights and work out the system for themselves.

*When a weight falls between the weights listed on the card, it may help to first point on the card to the space between the columns where the child's weight falls. Then look at the top of those columns to see which z-score scores the weight lies between. Then look back at the weights to see where the sign should go. In the example of the boy who is 75.0 cm, suppose that his weight is 7.6 kg, which is between 7.5 kg (3 z-score) and 8.1 kg (2 z-score). The 7.6 kg is obviously not < 7.5 kg, but is < 8.1 kg, so the score is written < 2 z-score.

4. Complete Exercise B, on determining z-scores, through individual work followed by individual feedback.

Since this is the first time that you will give individual feedback to the participants, be sure to make them feel comfortable. Some techniques to use while giving individual feedback are described on page 89 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 or her to read **Annex A** of the module. If a participant is uncomfortable with statistics, reassure him or her that a complete understanding of z-scores is not necessary. The important thing is to know how to use the **Weight-for-Height Reference Tables** to determine how the child compares to other children of his or her length. Children whose z-score is less than –3 are considered to have SAM.

Compare participants' answers to those given on the answer sheet 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 girl is ___ cm tall and weighs ___ kg, what is her z-score?'

Point out to the participants 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 to determine the child's height.

Give the participant a copy of the answer sheet for Exercise B.

5. Complete Exercise C, determining whether a child should be admitted, through individual work followed by group discussion.

Ask participants to read pages 21–24 of the module and complete Exercise C.

Participants look at photos and use the following criteria to decide whether a child should be classified as having SAM and whether the child should be managed in Inpatient Care or Outpatient Care. They should decide to classify a child as SAM if he or she has:

- MUAC < 11.5 cm
  AND/OR
- Bilateral pitting oedema (any grade: +, ++, or +++)

Further explain that children with SAM and complications, such as anorexia, no appetite, intractable vomiting, convulsions, lethargy, not alert, and severe dehydration should be managed for SAM in the Inpatient Care until their complications have stabilised and they have regained their appetite and then referred to the Outpatient Care to continue with treatment. Children classified as SAM with no medical complications and good appetite should be managed for SAM in Outpatient Care.

For each photo in turn, ask a different participant what the child's z-score is, whether or not there is oedema of both feet and what decision should be made. Add to the discussion as needed based on the comments below. (These comments are in the answer sheet provided.)

After the participants give their answers, probe further whether the child should be managed in the Inpatient Care or Outpatient Care.

Photo 18: This child should be classified as having SAM. Her WHZ is greater than −3, her MUAC is greater than 11.5 cm, but she has oedema in both feet and lower legs (at least moderate [grade ++] oedema). If the child has no medical complications she should be treated in Outpatient Care, but if she has medical complications she should be treated in Inpatient Care.

Photo 19: This child should be classified as having SAM. Her WHZ is less than −4, and her MUAC is less than 11.5 cm. The child has no apparent oedema. If the child has a good appetite and no medical complications, she should be treated in Outpatient Care, but if she has medical complications she should be treated in Inpatient Care.

Photo 20: This child should be classified as having SAM. His WHZ is less than −4, and his MUAC is less than 11.5 cm.
Note: *It will be important to remove his shirt to examine him. Notice that the mother in this photo is also extremely thin.*

After discussing the photos in relation to the classification of SAM and admissions criteria recommended for Inpatient Care and Outpatient Care, discuss the admissions criteria currently used in participants' own facilities for children with SAM. For example, ask:

- What admissions criteria are used for children with SAM in Inpatient Care in your hospitals? What are the reasons for these criteria?

- Would the children in photos 18, 19, and 20 be admitted for treatment of SAM to your facility? If so, would they be admitted for treatment of SAM in Inpatient Care or Outpatient Care?

- If your facility is not currently using the recommended admissions criteria, could these criteria be adopted?

At the end of the discussion, give each participant a copy of the answer sheet for this exercise.

6. Give the oral drill on z-scores, MUAC, and classification of SAM.

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

Ask participants to sit around the table. They will each need their **Weight-for-Height Reference Tables**. 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 card and tell the child's z-score. Then give the additional information in the third column and ask whether the child should be classified as having SAM.

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 on Z-Score

Sex, length, weight	Z-score?	Additional information	Classify as SAM?
Girl, 82.0 cm, 7.8 kg	< –3	no oedema	Yes
Boy, 74.0 cm, 7.9 kg	–2	no oedema	No
Girl, 73.8 cm, 6.2 kg	< –4	no oedema	Yes
Boy, 67.0 cm, 6.1 kg	–3	++ oedema	Yes
Girl, 55.5 cm, 3.9 kg	< –2	++ oedema	Yes
Girl, 67.1 cm, 4.9 kg	< –4	no oedema	Yes
Boy, 90.0 cm, 10.8 kg	< –2	+ oedema (both feet)	Yes
Girl, 70.5 cm, 6.1 kg	< –3	no oedema	Yes

Oral Drill on MUAC

Age	MUAC	Additional information	Classify as SAM?
22 months	11.5 cm	no oedema	No (child has moderate acute malnutrition but is likely to become severely malnourished)
28 months	9.8 cm	+ oedema (both feet)	Yes
52 months	10.2 cm	no oedema	Yes
43 months	11.2 cm	+++ oedema	Yes
36 months	11.7 cm	+ oedema	Yes
12 months	9.5 cm	no oedema	Yes
60 months	11.2 cm	no oedema	Yes (the child is not within the 0–59 age range, but should be managed for SAM)
5 months	10.4 cm	no oedema	MUAC not measured for children under 6 months, however if child is visibly wasted the child can be managed for SAM

7. Supervise reading and the short answer exercise (group-checked).

Pages 26–27 provide the rationale for some of the case management procedures taught in the rest of the course. Ask the group to read these pages and do the short answer exercise on page 28 as a review. The group will discuss the answers together.

At the end of the reading, use the questions on page 28 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. Some questions about reductive adaptation may be answered by **Annex C** at the end of **Module 2**. 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 the Short Answer Exercise on Page 28

1. The body's systems slow down ('reductive adaptation') and must gradually 'learn' to function fully again. Rapid changes (such as rapid feeding or fluids) would overwhelm the systems, so feeding must be conducted slowly and cautiously.

2. Nearly all children with SAM have bacterial infections. In addition, as a result of reductive adaptation, the usual signs of infection may not be apparent because the body does not use its limited energy to respond in the usual ways, such as inflammation or fever. So, assume that infection is present and treat all children with SAM with broad spectrum antibiotics.

3. Giving iron early in treatment will not cure anaemia, as the child already has a supply of stored iron. Giving iron early in treatment can also lead to 'free iron' in the body. Free iron can cause problems; it promotes the formation of free radicals and bacterial growth and causes some infections to get worse. In addition, the body tries to protect itself from free iron by converting it to ferritin, and this conversion requires energy and amino acids that are diverted from other critical activities.

4. ReSoMal has less sodium and more potassium than regular or low-osmolarity ORS, and children with SAM already have excess sodium in their cells, so sodium intake should be restricted.

8. Supervise reading and the short answer exercise (group-checked).

Ask participants to continue reading pages 29–32 of the module and complete the short answer exercise on page 33. The group will discuss the answers together.

At the end of the reading, use the questions on page 33 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 **Module 4, Feeding**.

Possible Answers to the Short Answer Exercise on Page 33

1. F-75 contains fewer calories than F-100 (and RUTF): 75 kcal per 100 ml instead of 100 kcal per 100 ml.

   F-75 contains less protein than F-100 (and RUTF): 0.9 g per 100 ml instead of 2.9 g per 100 ml.

2. Why is it important to have different formulas (F-75, F-100 and RUTF) for managing SAM?

   Children with SAM 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 stabilised, he or she can tolerate more protein and fat. F-100 or RUTF is then used to 'catch up' and rebuild wasted tissues.

3. CMV is included in F-75, F-100 and RUTF to correct electrolyte imbalance. What are two important minerals in this mix and why?

   Two important minerals in CMV are potassium and magnesium. These are needed to correct electrolyte imbalance in the cells. More potassium is needed in the cells, and magnesium is essential for potassium to enter the cells and be retained.

4. If F-75 and F-100 are made with mineral mix instead of CMV, multivitamin drops, folic acid, and vitamin A (if the child has eye signs) must be given to children.

5. RUTF is an energy- and nutrient-dense ready-to-use food that has the same specifications as F-100, with iron added to it.

9. Supervise reading and the short answer exercise (self-checked).

Ask participants to read pages 34–36 of the module. Point out the short answer exercise on page 37 of the module. Explain that participants should complete this exercise on their own and check their own answers on page 54.

10. Lead reading and group discussion.

Ask the participants to read pages 38–40 of the module on the recommended procedure for referral and discharge for the management of SAM. When the participants have finished reading, lead a group discussion.

The following questions will be used to lead the group discussion:

1. What are the recommended criteria for referral from Inpatient Care?

2. In what situation is a SAM child discharged from the Inpatient Care as having fully recovered?

3. What are the recommended criteria for discharge from Inpatient Care or Outpatient Care after full recovery?

4. What are the other exit categories for children that are not referred or discharged after full recovery?

11. Show the 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 children with SAM 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; the MUAC of the children was not taken.*)

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 watching 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.

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.

12. Summarise the module.

1. Remind participants that the purpose of this module was to give an overview of case management for children with SAM and explain some of the reasons for these case management practices. Participants will learn more about each practice in later modules. Participants will practise actually weighing and measuring the MUAC and cutoffs, the height/length of children and determining z-scores in clinical sessions.

2. Remind the participants of the classification of SAM and the recommended criteria for admission and discharge in Inpatient Care and Outpatient Care.

3. Briefly review the process described in Section 6.4 (page 34) of the module. Also review the important things NOT to do on page 36 of the module.

4. Stress the importance of emergency room personnel knowing correct case management procedures for children with SAM. Also new hospital/facility 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.)

Facilitator Guidelines for Module 3, Initial Management

Procedures	Feedback
1. Distribute **Module 3, Initial Management**, the laminated **F-75 Reference Tables**, and the job aid **Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care**. Introduce the module.	—
2. Ask participants to read through page 9 of the module. Demonstrate the use of the CCP page Initial Management.	—
3. Ask participants to read pages 11–14 of the module and complete Exercise A.	Individual feedback
4. Ask participants to read pages 20–23 of the module and complete the short answer exercise on page 24.	Self-checked
5. Facilitate Exercise B through group and individual work, preparing and measuring ReSoMal.	Group discussion
6. Ask participants to read pages 26–28 and complete Exercise C through individual work on two cases and group work on one case.	Individual and group feedback
7. Ask participants to read pages 36–38 and complete Exercise D.	Individual feedback
8. Show the video **Emergency Treatment**.	—
9. Ask participants to read pages 43–45. Conduct discussion on treating Malaria, HIV, and tuberculosis (TB).	Group discussion
10. Ask participants to read Section 5 of the module (page 46) and prepare for the role play in Exercise E. Conduct the role play.	Individual feedback on CCP Group discussion of role play
11. Summarise the module.	—

Preparations for the Module

If an overhead projector is available, you will use it to introduce the Critical Care Pathway (CCP) and demonstrate how to use the Initial Management page. Make sure that you have an enlarged copy of the CCP that the group can look at together.

In Exercise B, 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 B.

If using:	Ingredients:	Supplies:
Commercial ReSoMal	ReSoMal packet Cooled, boiled water (at least 2 L for a 1-L packet of 84 g)	Mixing spoon Container that holds more than 2 L Measuring cup or medicine cup with ml markings or 50 ml syringe Small cups or spoons for tasting
ReSoMal made from standard ORS	2 packets of 600 ml Ghana standard ORS packet Sugar (at least 50 g) 1 scoop of CMV Cooled, boiled water (at least 2 L)	Same as above, plus: Container that holds more than 2 L Dietary scale that weighs to 5 g Small cups or spoons for tasting

The second segment of the video, **Emergency Management**, will be shown during this module.

For Exercises C and E, you will need extra copies of the Initial Management page of the CCP. Make sure that you have at least three copies per participant (preferably more, in case mistakes are made).

1. Introduce the module.

Explain that this module describes measures that should be taken immediately to prevent death while stabilising the child with SAM. Some of the procedures described in this module may take place in the emergency room, before the child is admitted to the severe malnutrition ward. If so, emergency room personnel must be taught to recognise children with SAM and treat them correctly. They must understand why children with SAM must be managed differently than other children.

Point out the learning objectives of this module on page 2. Explain that participants will first read about hypoglycaemia (low blood glucose) and hypothermia (low body temperature). These two conditions are life-threatening and often occur together in severely malnourished children.

Nurses' groups (when appropriate): Ask the group to pause when they get to the box on page 5 of the module. Ask questions to check their understanding, such as:

- What is hypoglycaemia?
  How do you know if a child has hypoglycaemia?
  If the child does not have hypoglycaemia, how can it be prevented?

All of these questions are answered in Sections 1.1 of the module.

Hold up the **F-75 Reference Table**. Be sure that everyone is looking at the side for persons with severe wasting (Marasmus) and oedema grades + and ++. Point to the columns to show how to read the card. Focus only on how to use the 2-hourly feed column now. The other columns will be used later. Do a few examples with the group. For example, ask, 'How much F-75 would you give a child who weighs 8.2 kg every 2 hours?' (Answer: 90 ml).

Explain that the reverse side of the form is only for children with severe (+++) oedema. The amounts for these children are less because their weights are falsely high. The amounts are appropriate for their estimated true weights.

Talk through Section on how to treat hypoglycaemia. Briefly cover the main points.

- The hypoglycaemic child needs glucose quickly.
  How to give it:
  - If the child can drink, give a 50 ml bolus of 10% glucose orally.
  - If alert but not drinking, give the 50 ml bolus by nasogastric tube (NGT).
  - If lethargic, unconscious or convulsing, give 5 ml/kg body weight sterile 10% glucose by IV, followed by 50 ml 10% glucose by NGT.
- Start feeding F-75 half an hour after giving glucose. Give it every half hour for 2 hours. Give ¼ of the 2-hourly amount shown on the **F-75 Reference Table**.
- When the child's blood glucose is 3 mmol/L or higher, change to 2-hourly feeds of F-75.

Go through the example about Ari on page 6 orally, showing how t*o* use the **F-75 Reference Table**, dividing the amount shown for a 2-hourly feed by 4.

Ask participants to read the section on Treating Hypoglycaemia on page 5 (to review the concepts that you have just presented).

2. Demonstrate the use of the Critical Care Pathway.

Ask participants to read through page 9 of the module. When everyone has reached that point, you will look together at the CCP, a recording form that will be used as an aid in this course.

Tell participants that the CCP (shown in **Annex A**) 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 CCP is an example of a very complete form. Participants may eventually wish to incorporate parts of this form in their own record-keeping systems; however, this is not required.

If you are using an overhead projector, use the transparencies when showing the pages of the CCP. Otherwise, have the group gather closely around the table where they can see enlarged copies of the CCP pages. In this demonstration you will focus on the Initial Management page. Other pages will be explained later.

Show the Initial Management page and describe it as follows. 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.) It may be helpful for one facilitator to talk while the other facilitator points to the relevant sections and writes on the form.

Initial Management Page

This module will focus on this first page of the CCP. It has space to record the signs of severe malnutrition, the child's temperature and blood glucose level (point to each section). Later in this module, participants will learn about recording Hb, eye signs, signs of shock and diarrhoea. Notice there is also space to record the initial feeding and the antibiotics prescription.

For some children, this page will be used only briefly. However, if the child is in shock or needs rehydration, this page may be used for a number of hours as the child is given intravenous (IV) fluids or ReSoMal.

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

- *Dikki is a boy 20 months of age. He was admitted on 16 December 2010 at 9:00. His hospital number is 502.*

- *Dikki is referred from Outpatient Care after his condition deteriorated while in treatment.*

- *Dikki appears severely wasted. He has oedema of both feet and lower legs (++). He has mild dermatosis (+).*

- *He weighs 7.0 kg, and his MUAC is 10.9 cm.* Ask if Dikki should be managed in Inpatient Care. **Answer:** He should be managed in Inpatient Care because he has bilateral pitting oedema (+) and MUAC < 11.5 cm.

- *Dikki's rectal temperature is 36° C.* Ask a participant if Dikki is hypothermic. **Answer:** No, but he should be kept warm.

- *Dikki's blood glucose level is < 3 mmol/L, but he is alert.* Ask a participant if Dikki has hypoglycaemia. **Answer:** Yes. Ask another participant what should be done. **Answer:** Give Dikki 50 ml bolus of 10% glucose orally.

- *Dikki's Hb is 9 g/dl. His blood type is B+. He has no eye problems and has not had measles. He does not have signs of shock. He does not have diarrhoea. There is no blood in the stool and no vomiting.*

- *Dikki is first fed 75 ml of F-75 at 9:30.*

Point out the spaces for recording monitoring while a child receives IV fluids or ReSoMal, but do not try to explain these sections now. Participants will learn about them in the next sections of the module.

Dikki needs antibiotics, but do not record those now. Participants will learn about antibiotics later in the module.

Daily Care Page

Show the Daily Care page. **Module 4, Feeding** and **Module 5, Daily Care** will focus on this page of the CCP. This page is used every day once the child has been admitted to the ward. Notice there is room for 21 days on the form.

Monitoring Record Page

Show the Monitoring Record. This page is used to record results of monitoring respiratory rate, pulse rate, and temperature. This record will be explained in **Module 5, Daily Care**.

Weight Chart Page

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 **Module 5, Daily Care**. Point out that it can be used for 28 days. Do not try to explain the Weight Chart in detail now.

Comments/Outcome Page

This page is used as needed to record comments on any special instructions or training given to parents. It is also where immunisations are recorded. When a child is discharged, defaults, is referred, or dies, the outcome is described on this page. The patient outcome section can be very useful in identifying and solving problems on the ward.

Return to the **Initial Management** page and re-focus the group on this page. This is the only page of the CCP that participants will use in this module. They should not be concerned about the other pages at this point.

Nurses' groups (when appropriate): If the group includes slow readers, you may talk through Sections 1.3 and 1.4 instead of asking them to read these sections. Explain the main points in the module. Point to the relevant sections of the Initial Management page as you talk. The **SIGNS OF SHOCK** box of the Initial Management page is a reminder of the signs of shock and the actions to take. The **HAEMOGLOBIN** section tells when a transfusion is needed.

If the reading skills of the group are good, ask them to read section 3.0 and then stop. Ask the group questions to check understanding such as:

- What signs of shock must be present for a severely malnourished child to receive IV fluids?
- What amount of IV fluids should be given?
- How often should the respiratory and pulse rate be monitored? Why?

Likewise, ask the group to read Section 1.4 and then stop. Ask questions such as:

- How can you tell if a child has severe anaemia?
- What should be done for a child with severe anaemia?

3. Complete Exercise A, identifying initial treatments needed and recording on the CCP, through individual work followed by individual feedback.

Ask participants to continue reading the module, pages 11–14, and then complete Exercise A, in which they will use parts of the Initial Management page of the CCP.

Participants should ask you for individual feedback after doing the first case, Tina. Giving feedback at this point will allow you to ensure that each participant is on the right track and to correct any misunderstandings. Before participants continue with the next two cases, be sure that they know where to look on the Initial Management page for calculations of amounts of IV glucose and IV fluids needed.

Nurses' groups (when appropriate): Those who quickly finish the first case (Tina) and receive feedback may continue to work independently on the rest of the exercise. When everyone has received individual feedback on Tina, continue the rest of the exercise (Kalpana and John) as a group.

Read the case description aloud and point out the signs on the CCP excerpts given in the module. Ask the questions aloud and discuss each answer.

When discussing John, it will be helpful to show an overhead of the Initial Management page, record on it and point to the relevant sections as you talk.

Be sure to discuss special notes about Kalpana and John given on the next page.

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

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

Special note – John: Because John has hypoglycaemia and signs of shock and is lethargic, he needs 10% glucose by IV. He does not then need the 50 ml bolus via nasogastric tube (NGT) since he will be on IV fluids, which will continue to provide glucose. If John did not have signs of shock, and would thus not receive IV fluids, he would also need the 50 ml bolus via NGT.

At the end of feedback, give participants the answer sheet. Rounding (or lack of rounding) may cause some discrepancies between a 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.

4. Supervise reading and the short answer exercise.

Ask participants to read pages 20–23 of the module and complete the short answer exercise on page 24. Point out that Section 1.5 of the module relates to the **EYE SIGNS** box of the Initial Management page. Section 1.6 of the module relates to the **DIARRHOEA** box of the Initial Management page.

While participants are working, 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.

During this section of reading, participants should refer to Photo 12 (corneal ulceration); Photos 6, 30, and 31 (sunken eyes) and Photo 32 (skin pinch). Be sure that they look in their **Photographs** booklets for these photos.

5. Complete Exercise B, preparing and measuring ReSoMal, through group and individual work.

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 23 of the module. Let a different participant do each step. For example, have one person add the packet, another measure the sugar, another measure 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 24 of the module individually. When they have finished, distribute the answer sheet and review the answers as a group. 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.

Nurses' groups (when appropriate): Before Exercise C, complete this demonstration/role play to help participants understand how **recording** on the CCP Initial Management page is related to **actions** taken in the ward.

Show a blank Initial Management page on the overhead projector. 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 CCP.

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 oedema, or vice versa. Important concepts:

Nurses' groups (when appropriate):

- All of the sections of the Initial Management page relate to important parts of the child's history or examination.
- The information obtained determines the need for life-saving treatments.

Information for 'mother' (one facilitator):

- The child's name is Babu, 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 diarrhoea, no vomiting, and no blood in the stool.

(Continued on the next page.)

Record this in the Feeding box on the Initial Management page.

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

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

- Babu weighs 5.2 kg and MUAC of 11.3cm.
- He appears severely wasted.
- He has bilateral pitting oedema (++).
- His dermatosis is moderate (++).
- His rectal temperature is 36.5° C.
- 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, 'Does Babu need to be admitted to Inpatient Care?' 'Does Babu have hypoglycaemia?' 'Hypothermia?' (**Answers:** Babu has a MUAC < 11.5 cm and bilateral pitting oedema, so he needs to be admitted to Inpatient Care. He does not have hypoglycaemia or hypothermia.)

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

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

6. Complete Exercise C, identifying more initial treatments needed and recording on the CCP, through individual and group work.

Ask participants to read pages 26–28 of the module and begin Exercise C. In Exercise C, participants will need extra copies of blank Initial Management pages. Show participants where these copies are kept in the classroom. Read out to participants the rest of the information for Marwan and ask them to fill this in on his CCP on page 29.

Participants should see you for individual feedback after the second case of this exercise (Ram). 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 (Irena) together as a group. After much individual work, this group interaction will be appreciated.

Nurses' groups (when appropriate): If the group seems to understand how to use the Initial Management page, follow the instructions given above for all groups.

If the group is having difficulties, ask participants to do only the first case (Marwan) individually. Then do both Ram and Irena as a group. Instructions for Irena are given on the next page. Use a similar process for Ram.

Individual Feedback (Marwan and Ram)

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

Group Work (Irena)

Show an enlarged blank Initial Management page. Ask participants to complete a blank Initial Management page. Have participants take turns reading aloud the background information given on page 32 in the module. As they read, record the information on the CCP.

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 and IV fluids on the Initial Management page.

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.

2. Record on enlarged copy of the Initial Management page of the CCP while participants record on their own forms.
3. 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 any signs of possible heart failure, such as increasing pulse and respirations. Hospital staff should do their best to monitor at the suggested intervals.

At the end of the exercise, give each participant an answer sheet, which includes all three cases.

Nurses' groups (when appropriate): Most nurses do not have responsibility for prescribing drugs. Therefore they do not need to spend a great amount of time learning how to select antibiotics (Section 3 of the module).

Before Exercise D, review the following key points with the group:

- An antibiotic is needed for every child with SAM.
- The choice of antibiotic will depend on the complications present (as well as antibiotic recommendations in the Ghana standard treatment guidelines).
- The dose should be based on the child's weight, not age.

Demonstrate how to use the **Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care** in Annex B using the example about Khalil on page 38 of the module.

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

7. Complete Exercise D, selecting antibiotics and determining doses, through individual work followed by individual feedback.

Ask the group to read pages 36–38 and complete Exercise D. The **Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care** will be used in this exercise. The third case (Dipti) is optional. You may omit this case if the group is behind schedule or if the antibiotic recommendations in the course are inconsistent with those in the local area due to resistance.

When several drug formulations are listed on the **Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care**, 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 **Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care**. This table tells what drugs to use, depending on the presence or absence of complications. The dose tables show the doses of each drug for different body weights and drug formulations.

Be sure that the participants understand the weight groupings on the dose tables. For example, the middle range, '6 up to 8 kg' includes children weighing 6 kg and children weighing 7.99 kg. Children weighing 8 kg are in the highest range, '8 up to 10 kg'.

On the reverse side of the reference card, the weights given are more specific because precise dosing is more important for these drugs. Use the closest weight given. For example, if the

child weighs 7.8 kg, use the column for 8.0 kg to determine the dose. If the child weighs 7.5 kg, if possible, measure a dose that is halfway between the dose for 7.0 kg and 8.0 kg.

Remind the participant where antibiotics prescriptions should be recorded on the Initial Management page of the CCP.

Some participants may be concerned about resistance to the recommended antibiotics in their areas. The antibiotic recommendations may be adapted locally if necessary.

Give the participants an answer sheet. When everyone has finished this exercise, the group will see a video about Emergency Treatment. In the meantime, participants can continue work on the module by reading page 46 and doing the written part of Exercise E.

8. Show the video: Emergency Treatment.

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

- This brief video shows 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 that 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 like 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 or a glucometre 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 are these signs of? **Answer:** Severe pneumonia. What antibiotic should be given? **Answer:** Give gentamicin and ampicillin. If the child responds, complete the treatment at home with oral amoxicillin.

- What was different from the guidelines given in the manual and module? ***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 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 paediatric mask or nasal catheter would be preferable for a good oxygen flow.

- The skin pinch is done to determine (later) whether rehydration seems to have occurred. We do not know if this child has diarrhoea.

Additional notes: Make these points only if participants raise these questions:

- 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 hypoglycaemic 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 anaemic. They should determine the Hb level before deciding on a transfusion. However, they may have been trying to predict the likelihood that the child will need a transfusion.

9. Lead the group discussion.

Ask participants to share experience on the common practice at their hospitals for the management of children with SAM and HIV, malaria, and tuberculosis (TB).

Ask: Does the management of SAM in these cases differ from what is indicated on pages 43–45? What are some of the differences in your hospitals?

Explain to participants that it is important that children with SAM and HIV and/or TB infections receive the same nutrition care as described in **Module 4, Feeding**. The HIV and TB infections should be managed/treated according to the Ghana standard treatment guidelines.

10. Complete Exercise E, briefing staff on a child's conditions and needs, through individual work followed by individual feedback, then role play and discussion.

Ask participants to continue work on the module by reading page 46 and doing the written part of Exercise E.

When everyone is ready, there will be a role play in which an admitting doctor briefs the head nurse on a child's condition and needs.

This exercise should show how a CCP can be a helpful tool in communicating with staff about what has happened during initial management, and what needs to happen during daily care. Participants will need blank copies of the Initial Management page of the CCP for this exercise.

Since this is the first role play in the course, review the general facilitator guidelines about role plays at the end of this guide on page 90.

When a participant has finished the Initial Management page for Rayna, he or she should show it to you. Check it quickly and give the participant the CCP page provided in the answer sheets. Then ask the participant to list points that the admitting doctor should make, and questions that a nurse might ask, as instructed on page 46.

Select a participant to play the role of the doctor and another to play the role of the nurse. For this first role play, select participants who appear to be confident and comfortable in front of a group. Check to make sure that they have listed some reasonable points and questions in their modules. If necessary, give them some hints from the answer sheet.

Ask the participants playing roles to behave as a normal doctor and nurse might behave. The doctor should refer to the Initial Management page for Rayna as an aid. The doctor should inform the nurse what to do next, when to feed the child and how much, etc. The nurse should ask realistic questions that a nurse might have.
During the role play, other participants should observe and make notes on things done well and suggestions for improvement.

In the discussion following the role play, be sure that the tone is positive. If some points listed on the answer sheet were not made, mention those points. Distribute the answer sheet.

11. Summarise the module.

1. Remind participants of the learning objectives for this module, listed on page 2 of the module. The skills taught in this module are those intended to prevent death while stabilising the child. Stress that emergency room staff need to know these skills, what to do and what not to do.

2. Remind participants that all children that have SAM 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 Initial Management page of the CCP is meant to be an aid, to help remember emergency steps. When used as a record, it also is a valuable communication tool.

4. Remind participants about testing for HIV, TB, and malaria, and treating malaria and TB and caring for HIV according to the standard treatment guidelines.

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.)

Facilitator Guidelines for Module 4, Feeding

Procedures	Feedback
1. Distribute **Module 4, Feeding** and the laminated **F-100 and RUTF Reference Tables**. Introduce the module.	—
2. Ask participants to read through pages 1–8 of the module and complete Exercise A.	Group discussion
3. Ask participants to read pages 10–11 of the module and complete the short answer exercise.	Self-checked
4. Lead group oral drill on determining amounts of F-75 to give.	Drill
5. Ask participants to read pages 13–16. Demonstrate the **24-Hour Food Intake Chart**.	—
6. Ask participants to complete the short answer exercise on page 18.	Self-checked
7. Ask participants to read page 19 and complete Exercise B.	Individual feedback
8. Ask participants to read pages 29–33 and complete Exercise C.	Individual feedback
9. Lead the group oral drill on determining amounts of RUTF to give during transition and rehabilitation.	Drill
10. Ask participants to read pages 38–40 and do Exercise D.	Individual feedback
11. Ask participants to read pages 47–49 and complete Exercise E (preparing a schedule for the ward). They may work with others from their own hospital on this exercise.	Group discussion
12. Ask participants to read pages 52–53and complete Exercise F.	Individual feedback
13. Ask participants to read pages 56–57 and prepare for the group discussion in Exercise G.	Group discussion
14. Ask participants to read pages 59–74 (additional materials), followed by summary presentation and group discussion.	Presentation and group discussion
15. Summarise the module.	—

Preparations for the Module

Early in this module the group will prepare F-75 and F-100 and discuss RUTF. Obtain all ingredients and equipment/supplies for preparing the recipes. Note that you will need a dietary scale and possibly a blender or a hot plate for cooking. Water should be boiled and cooled 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 enlarged copies of the **24-Hour Food Intake Chart** and **Daily Feeds Chart**. These are used for demonstrations to the whole group on how to complete the forms.

1. Introduce the module.

Explain that this module describes what is obviously a critical part of managing severe acute malnutrition, that is, feeding. However, as explained in **Module 2, Principles of Care**, feeding must begin cautiously with F-75, in frequent small amounts. This module describes how to start feeding on F-75, transition to RUTF, and referral to Outpatient Care to continue with management on RUTF. A small proportion of children will transition on F-100 and continue with free-feeding on F-100 in Inpatient Care. This module focuses on preparing the feeds (F-75 and F-100), planning feeding, and giving the feeds according to plan.

Point out the learning objectives of this module on page 2.

Ask participants to read until page 8 of the module. When everyone has reached that point, the group will prepare F-75 and F-100 and discuss RUTF. (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 module while waiting for a turn in the kitchen area.)

2. Complete Exercise A, preparing F-75 and F-100, through group work followed by group discussion.

Follow the recipes carefully. Be sure that everyone washes hands. If the recipes are made correctly, the prepared formulae can be used in the ward.

First make F-75 and then F-100. Point out differences in the recipes. You may prepare one recipe with a whisk and one with an electric blender to show both methods.

Have participants take turns doing the steps in the recipes (e.g., measuring an ingredient, stirring). Ask participants to notice steps where errors are likely to be made and point these out. For example, in the recipes given in the module, it is critical to add just enough water to make 1,000 ml of formula; a common error might be to add 1,000 ml, which would make the formula too dilute.

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

Discuss with the group questions such as:

- What aspects of preparing these recipes would be difficult in your facility?
- How can you make sure recipes are prepared correctly?
- Are the necessary ingredients available for these recipes, or for the recipes given in the module?
- Do any new supplies need to be purchased, such as correctly sized scoops?

After you have finished, discuss RUTF, its composition, and how it is used. Discuss with the participants how to conduct the RUTF appetite test and the key RUTF messages.

3. Supervise reading and the short answer exercise.

Participants will use the **F-75 Reference Table** in this section. Be aware that the reverse side of the card is for children with severe (+++) oedema. While participants are working, prepare for the drill below.

4. Give the drill on determining the amounts of F-75 to give.

Ask participants to gather around for the drill. They will need their **F-75 Reference Table**. The purpose of this drill is to practise using the reference cards 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.

Oral Drill on Determining Amounts of F-75 to Give

Case information for drill	Amount F-75 per feed
7.2 kg, no oedema, 2-hourly feeds	80 ml
8.4 kg, no oedema, 2-hourly feeds	90 ml
6.1 kg, no oedema, 2-hourly feeds	65 ml *(use amount for 6.0 kg, the next lower weight on chart)*
7.9 kg, no oedema, 2-hourly feeds	85 ml
6.4 kg, mild (+) oedema, 3-hourly feeds	105 ml
8.6 kg, no oedema, 4-hourly feeds	190 ml
9.15 kg, moderate (++) oedema, 3-hourly feeds	150 ml
10.6 kg, severe (+++) oedema, 2-hourly feeds	90 ml
8.4 kg, severe (+++) oedema, 3-hourly feeds	105 ml
8.8 kg, mild (+) oedema, 4-hourly feeds	195 ml
8.6 kg, severe (+++) oedema on admission; now weighs 6.4 kg and has no oedema, 4-hourly feeds	145 ml (continue using severe oedema chart and starting weight for this child while on F-75)
7.5 kg, hypoglycaemia, moderate (++) oedema, ½-hourly feeds	20 ml per ½ hour (80 ml ÷ 4)
7.4 kg, hypoglycaemia, severe (+++) oedema, ½-hourly feeds	15 ml per ½ hour (60 ml ÷ 4)
9.0 kg, severe (+++) oedema on admission; now weighs 6.8 kg and has no oedema, 4-hourly feeds	150 ml
6.9 kg, severe (+++) oedema, 2-hourly feeds	55 ml

After the drill, tell participants that the next section of reading will explain how to record feeds on a **24-Hour Food Intake Chart** and on the Daily Care page of the CCP. Hold up both of these forms for everyone to see.

The **24-Hour Food Intake Chart** will be used to provide the details of each feed of the day. The Daily Care page simply provides a brief summary of the feed plan and the amount taken during the day. Participants will use only a small part of the Daily Care page at this point, that is, the three lines related to the feed plan. Point out these three lines on the Daily Care page.

Reading

Ask participants to read pages 13–16 of the module about feeding and recording feeds.

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 has SAM. If the baby has SAM, he or she should be given F-100-Diluted; if he or she has bilateral pitting oedema, then F-75 should be used until the oedema resolves. The aim of managing malnourished infants under 6 months of age is to re-establish breastfeeding. Therefore, breastfeeding should be encouraged in between feeds. F-75 and F-100-Diluted are low-sodium, low-solute milks and are safe for infants. Breastfeeding counselling will be very important.

Mention to the participants that they will learn about the management of SAM in infants under 6 months of age later in the module.

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 oedematous. Low-birth-weight babies should be breastfed. Their management is not taught in this course.

Nurses' Groups (when appropriate): After participants read pages 13–16, ask how they will know if a child needs an NGT. Answer: The child needs an NGT if he or she does not take 80% of the F-75 orally (i.e., he or she leaves more than 20%) for two or three consecutive feeds.

Help the nurses understand what 80% means: 80% is 'almost all' of the feed. Show examples using a glass of drinking water.

- Put 100 ml water in a clear glass. Ask a participant to imagine where the water would be after drinking 80 ml and draw a line on the glass at that spot. Then ask her to drink to the line. Show the amount left to the group. Ask the group what percentage the participant took (80%) and what was left (20%). Measure the amount left to see how accurate the participant's guess was. If about 20 ml is left, the guess was accurate.
- Again put 100 ml in a glass and show the amount to the group. This time, have a participant mark where half would be and drink to that line. Show the group the amount left. Ask participants what percentage was taken (50%). Ask participants if enough was taken. It should be clear, just from looking in the glass, that half (50%) is less than 80% and clearly not enough.

In many cases, it will be obvious whether or not 80% has been taken. However, if unsure, one can use simple math or a calculator. To make the calculation, it is important to remember the relationship between percentages and decimal fractions. Write the following on the flipchart:

$$80\% = 80/100 = 0.80$$

Ask a participant to use her calculator to figure out what 80% of 60 ml is. (Multiply 0.80 × 60 ml. **Answer:** 48 ml.) If 60 ml is offered, any amount less than 48 ml is not enough. 60 ml – 48 ml = 12 ml. Likewise, if more than 12 ml is left, the child has not taken enough.

Give one more example. A child is offered 75 ml of F-75 orally. Show this amount in a glass. He takes 55 ml (pour out this amount) and leaves 20 ml. Show the amount left in the glass. Ask: Did the child take enough? Let half the group judge based on appearance, and the other half by doing a calculation (0.80 × 75 ml = 60 ml). Compare the results. **Answer:** He took 55 ml, which is less than 60 ml (80%) and not quite enough.

Note: *If F-75 is not given in graduated cups or marked glasses, it will take extra effort to measure the amount left after each feeding. Leftovers will need to be poured into a graduated cup or syringe for measuring. If a syringe will be used for NG feeding, leftovers may be measured in the syringe, and then dripped through the NGT.*

Demonstration of the 24-Hour Food Intake Chart

Do the following demonstration to show how a **24-Hour Food Intake Chart** can help staff notice feeding problems early. 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.

A girl child named Marina weighs 5.4 kg on admission. It is her second day in the hospital, and she still weighs 5.4 kg. Marina does not have bilateral pitting oedema. She is supposed to receive 12 feeds of 60 ml F-75 today. Record this information at the top of the form.

The feeding day starts at 8:00 and ends at 6:00 the next morning, so the 2-hourly feeding times are: 8:00, 10:00, 12:00, 14:00, etc. List all 12 feeding times in the 'Time' column.

At 8:00 the nurse offers Marina 60 ml of F-75. She left 5 ml, so the amount taken is 55 ml. She did not vomit any of the feed, and she did not have any watery diarrhoea. Record that 60 ml was offered, 5 ml was left, and 55 ml was taken. Ask: Did she take enough? **Answer:** Yes, she took more than 80%. 55 ml is 'almost all' of 60 ml. (80% of 60 ml is 48 ml.) Marina did not need NG feeding, so record 0 in the NG column.

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.

10:00 60 ml offered, 0 ml left, 60 ml taken, 0 NG, no vomiting, no diarrhoea

12:00 60 ml offered, 10 ml left, 50 ml taken, 0 NG, no vomiting, no diarrhoea

14:00 60 ml offered, 0 ml left, 60 ml taken, 0 NG, vomited 30 ml, no diarrhoea

16:00 60 ml offered, 20 ml left, 40 ml taken, 0 NG, no vomiting, no diarrhoea*

* If no one stops you, go on to record the next feed. Someone may stop you here and suggest NG feeding. Since Marina took all of the previous feed before vomiting, it may be best to wait one more feed before deciding to put in an NGT.

18:00 60 ml offered, 30 ml left, 30 ml taken, 0 NG, no vomiting, no diarrhoea*

* Someone should stop you here and suggest that an NGT be used. The child vomited half of the 14:00 feed and took less than 80% of the next two feeds. Night is coming, and she will need to be fed well through the night or she is likely to become hypoglycaemic. If no one stops you, record more feeds in which Marina takes less than 80%. Someone should stop you soon.

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 NGT to finish feeds. They should not wait 24 hours before noticing a problem and taking action.

6. Supervise the short answer exercise.

Have the participants read and complete a short answer exercise about feeding and recording feeds on the **24-Hour Food Intake Chart**. They can check their own answers and continue reading page 19 of the module.

Nurses' groups (when appropriate): Although participants can check their own answers to the short answer exercise, a facilitator should check the answers of any participant who seems to be having difficulty.

7. Complete Exercise B, determining F-75 feeding plans for the next day, through individual work followed by individual feedback.

In this exercise participants will need to refer to the criteria on page 19 of the module. These criteria are repeated in the footnotes at the bottom of the **F-75 Reference Table**.

After giving individual feedback, be sure to give each participant a copy of the answer sheet. It is important to finish Exercise B by the end of Day 3 if possible. Some groups may be able to finish Exercise C.

Nurses' Groups (when appropriate): Have the nurses complete Cases 1 and 2 (Delroy and Pedro) of Exercise B independently and come to you for individual feedback.

Complete Case 3 (Rositha) orally as a group.

If the group is working slowly, Case 4 (Suraiya) may be omitted. Alternatively, you may use Suraiya as another demonstration in which participants stop you when an NGT is needed. Describe Suraiya's first 2 days in the hospital (page 27 of the module). Put up a blank overhead of the **24-Hour Food Intake Chart** and use the information on page 28 to complete it, feed by feed, for Suraiya for Day 3. Participants should stop you and tell you to insert an NGT at 22:00 or 24:00 when Suraiya feeds poorly for the second or third time. If they stop you, congratulate them for doing better than Suraiya's 'real' nurses, who let her go for the rest of the night without food. Discuss Suraiya's feed plan for Day 4.

8. Complete Exercise C, feeding during transition using RUTF or F-100, through individual work followed by individual feedback.

Ask participants to continue doing individual work by reading pages 29–33 and completing Exercise C. If it is already the end of Day 3, Exercise C may be assigned for homework to be done on the middle day of the course (Day 4). The Course Director will inform you of any other work to be done on Day 4; for example, participants from the same facility may work together on Exercise E (preparing a ward schedule), or there may be an opportunity to observe a play session or an educational session with mothers.

If Exercise C is given as homework, remember to give individual feedback when the group returns. When giving individual feedback, be sure that participants understand the importance of giving RUTF or F-100 slowly and gradually during transition. Be sure that they understand the schedule for feeding during transition given on pages 31–32 of the module. Monitoring is very important during transition.

Emphasise that the majority of children with SAM will be able to take RUTF during transition. For the small number of children that are unable to take RUTF or that continue to refuse it, F-100 is used during transition.

Possible questions**:**

1. Participants may ask what they should do if a child is consuming very small amounts of RUTF even after the 3-day period of transition. If the medical complications are stabilising and the child is having difficulty consuming RUTF, F-100 should be used for transition. However, the RUTF appetite test should continue to be conducted during each feed until the child is able to take sufficient amounts of RUTF (at least 150 kcal per day) for them to be referred to Outpatient Care. If the child cannot tolerate RUTF completely despite many trials, the child should rehabilitate in Inpatient Care using F-100. Further explain that only a very small number of children will be expected to rehabilitate until full recovery using F-100.

2. Participants may ask if it is permissible to give a child more F-100 if he or she is crying with hunger. During transition, it is very important to be cautious. 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. If a child continues to cry for more, it is acceptable to give more only if the staff is able 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.

After individual feedback give the participant a copy of the answer sheet.

9. Give the drill on determining the amounts of RUTF to give during transition and rehabilitation.

Ask participants to gather around for the drill. They will need their **RUTF Reference Table**. The purpose of this drill is to practise using the look-up table to determine amounts of RUTF to give during transition and rehabilitation.

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. You may make up additional cases if needed. Some blank spaces are allowed for this.

Oral Drill on Determining Amounts of RUTF to Give

Case information for drill (child's weight)	Amount of RUTF per day
4.8 kg in rehabilitation (200 kcal/kg/day)	2.0 packets
7.2 kg during transition (150 kcal/kg/day)	3.0 packets
8.1 kg in rehabilitation (200 kcal/kg/day)	3.0 packets
6.3 kg in rehabilitation (200 kcal/kg/day)	2.5 packets
5.5 kg during transition (150 kcal/kg/day)	2.25 packets
4.5 kg during transition (150 kcal/kg/day)	2.0 packets

10. Complete Exercise D, feeding RUTF and free feeding on F-100, through individual work followed by individual feedback.

Ask the participant to continue doing individual work by reading pages 38-40 and completing Exercise D. Explain that the **F-100 Reference Table** will be used in Exercise D.

Also remind the participants that rehabilitation using RUTF will start in Inpatient Care and continue in Outpatient Care. Health care providers managing children in Outpatient Care will need to undergo a separate training course on the management of SAM in Outpatient Care.

Nurses' groups (when appropriate): Instead of having the nurses read Section 4 (pages 37–39) individually, you may talk through this section.

Hold up the **F-100 Reference Table**. Explain that, after transition, this card is used to determine the appropriate range of feeds of F-100. Point out that the first set of ranges is for 4-hourly feeds of F-100, the second set of ranges is for daily volumes. The child can have as much as desired within these ranges.

Carefully talk through the important points on pages 38–40 of the module. (Omit the alternative methods of calculating the range for Delia.) Give examples of children that have finished transition, and ask participants to tell you what to write on the top of the 24-Hour Food Intake Chart.

Examples:

Weight 6.4 kg, finished all feeds yesterday, last feed was 200 ml
Write: *Give 6 feeds of 210↑ml. Do not exceed 235 ml.*

Weight 8.3 kg, did not finish feeds yesterday, last feed was 250 ml
Write: *Give 6 feeds of 250↑ml. Do not exceed 300 ml.*
(Note that the range for the next lower weight, 8.2 kg, was used.)

In Exercise D, complete Cases 1 and 2 (Delroy and Pedro) orally as a group. Ask participants to complete Case 3 (Rositha) independently and come to you for individual feedback.

When giving individual feedback, be sure that the participant understands how to use the **F-100 Reference Table**. 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.

After individual feedback, give the participant a copy of the answer sheet for Exercise D.

11. Complete Exercise E, preparing a schedule for activities on the ward, followed by group discussion.

Ask the participants to read pages 47-49 of the module. Explain that Exercise E involves making a schedule for the ward. If arrangements have been made so that participants from the same hospital can work together on Exercise E, explain these arrangements.

Note: *This exercise may be done on Day 4 by groups from the same hospital. If so, you may be assigned to facilitate a hospital group for this exercise rather than your usual small group.*

Depending on how much time is available, you may need to fix a time limit for this exercise. One hour may be suitable. Stress that the schedule does not have to be perfect. This is an opportunity to discuss options and draft a possible schedule.

Some participants may feel that they are powerless to change the schedule at their hospitals. If this is the case, suggest that they develop a schedule that accepts absolute constraints, but perhaps incorporates some changes that others in the hospital might be able to make if they were convinced of the importance.

When most people are ready, lead a group discussion. (Some participants may wish to continue work on their schedules later on their own.) Ask participants:

- Was there a need to adjust shifts, kitchen hours, or other aspects of your hospital's schedule to accommodate feeds? What adjustments did you make?

- How did you provide times in the schedule for play and educating parents about feeding their children?

12. Complete Exercise F, planning feeding for the ward, through individual work followed by individual feedback.

Ask participants to continue reading pages 52–53 and complete Exercise F. In this exercise, participants complete a Daily Feeds Chart by adding three children to the chart and doing the calculations at the bottom of the form.

> **Nurses' groups (when appropriate):** If you anticipate that participants will have difficulty with this form, use an enlarged copy of the form to demonstrate to the group how to complete the form. Follow the instructions on page 52 as you demonstrate completion of the form. You may use the information in the example on page 53.

After the exercise, conduct individual feedback as usual. Give the participant a copy of the answer sheet. ***Note:*** *On the answer sheet, at the bottom, the blank line should be filled with '12' since feeds are prepared every 12 hours on this ward. The amount for 24 hours is divided by 2 to determine the amount for 12 hours.*

13. Complete Exercise G, preparing staff to do tasks related to feeding, through group discussion.

Ask the participant to read pages 56–57 and prepare for the discussion in Exercise G. The discussion will focus on ways to prepare hospital staff to do new 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 58) 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
- Conducting the appetite test and observe feeding with RUTF
- Giving key RUTF messages to the caregiver
- Record feedings on a **24-Hour Food Intake Chart**
- Feed through an NGT

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 58 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 and 19:00 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. Information can be provided by written recipes.
4. Examples can be provided by demonstrations. A skilled person should demonstrate how to prepare the recipes.
5. The nurses should have supervised practice. A skilled person watches them prepare the recipes and corrects any problems.
6. A problem might be lack of ingredients. The kind of milk available might vary from day to day. Several recipes should be available for different kinds of milk. Training should be provided in how to make all of these recipes.

14. Discuss the management of SAM in infants under 6 months.

Ask participants to read additional material on pages 59–67**.** When the group finishes reading, discuss and answer questions with the group on Section 6.1 on breastfed infants under 6 months who have a lactating mother or caregiver for wet nursing.

Use the following questions to guide the discussion:

- What are the common causes of SAM in infants under 6 months?
- What criteria are used to classify SAM in infants under 6 months?
- When should we add iron to F-100-Diluted and why should iron be added in F-100-Diluted?
- Describe how to regulate and monitor F-100-Diluted in infants with a lactating mother.
- When should an infant with a lactating mother be discharged from Inpatient Care?
- What is the supplementary suckling technique? Describe how it works.

When you have finished with the group discussion, ask participants to continue reading pages 67–73. When the group has finished, the facilitator will lead another discussion on Section 6.2 on infants under 6 months and infants over 6 months weighing less than 4.0 kg **without** the prospect of breastfeeding

Use the questions below to guide the discussion:

- What is the dietary treatment of infants under 6 months with no prospect of breastfeeding?
- What are the criteria for progressing from stabilisation to transition in infants under 6 months?
- How are infants under 6 months with no prospect of breastfeeding managed in the rehabilitation phase?
- What are the criteria for progressing to rehabilitation phase?
- What are the criteria for discharging infants under 6 months from Inpatient Care?

Point out to the participants the table that summarises the management of SAM in infants under 6 months on page 74 of the feeding module.

15. Summarise the module.

1. 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 Food Intake Chart** is reviewed and plans made for the day, then a Daily Feeds Chart can be completed for the entire ward.

2. Remind participants of the importance of:
    - Starting with small frequent feeds of F-75
    - Having a gradual transition to RUTF or F-100 over 3 days
    - Adjusting the feeding plan on RUTF or F-100 as the child's weight and appetite increase

3. Stress the need to carefully prepare hospital staff to do new feeding tasks.

4. Provide a summary on how to manage infants 0–6 months with SAM.

5. Review any points that you have noted in the box below. Answer any questions that participants may still have. (If you cannot answer a question, offer to obtain more information and discuss it later.)

Facilitator Guidelines for Module 5, Daily Care

Procedures	Feedback
1. Distribute **Module 5, Daily Care**. Introduce the module.	—
2. Ask participants to read through pages 1–3 of the module and complete short answer exercise. Demonstrate the Daily Care page of the CCP.	Self-checked
3. Ask participants to read pages 7–10 and complete the short answer exercise.	Self-checked
4. Ask participants to read pages 12–16 and complete Exercise A on treatment of eye problems.	Individual feedback
5. Ask participants to complete Exercise B on the use of the Daily Care page of the CCP as a group.	Group feedback
6. Demonstrate the Monitoring Record of the CCP. Ask participants to read pages 21–26 and complete short answer exercise.	Self-checked
7. Ask participants to complete Exercise C on use of the Daily Care page and Monitoring Record.	Individual feedback
8. Ask participants to complete Exercise D on identifying danger signs.	Individual feedback
9. Give the optional demonstration on the Weight Chart. Ask participants to read pages 36–37 and complete short answer exercise.	Self-checked
10. Ask participants to complete Exercise E on preparing and using a weight chart.	Individual feedback
11. Summarise the module.	—

Preparations for the Module

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

1. Introduce the module.

Explain that this module 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 module also focuses on monitoring the child with SAM, 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 on page 2 of the module. Most of these tasks will be practised on the ward. In the module, participants will learn to use three pages of the CCP: the Daily Care page, the Monitoring Record, and the Weight Chart. (Hold up the enlarged copies.)

2. Supervise reading and the short answer exercise, and give the demonstration.

Ask participants to read through page 3 of the module, complete the short answer exercise, and check their own answers. Tell them that, after the short answer exercise, there will be a demonstration of how to use the Daily Care page of the CCP.

Demonstration of the Daily Care Page

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

Show an enlarged copy of the Daily Care page. 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 eye problems. When a row will not be used, it can be shaded out, or you can write NONE.

Some items on the Daily Care page require that information be recorded (e.g., the child's weight, the degree of oedema, the volume of feed taken). Others require that the staff initial when a task is performed. For example, when the nurse gives an antibiotic or multivitamin, she should initial on the form.

Write on the enlarged copy to set up a Daily Care page for a 2-year-old girl named Bianca. You will set up the left column of the form like the example on page 6 in the module by entering appropriate times and doses. You will also record information for Bianca's first day in the hospital. Talk as you write, for example:

- Bianca's first day in the hospital is 8 January, so record the date as 8/1 for day 1.
- Bianca's weight is 8.8 kg.
- She has no oedema, so record 0.
- Bianca has diarrhoea but no vomiting, so record only 'D'. (If she had vomiting only, record 'V'. If she had diarrhoea and vomiting, record both 'D' and 'V'.)

- She will be taking F-75.

- She will be fed 2-hourly, so record that she will receive 12 feeds daily.

- At the end of the day, or the next morning, record the total volume that she took during day 1. (Question: Where do I look to find the total volume? Answer: On the 24-Hour Food Intake chart.)

- Bianca will be taking amoxicillin (5 ml syrup) three times a day, so record the name of the drug, the dose, and times for three doses, 8 hours apart. These are times when medications are normally given in the hospital. Draw a box to show that amoxicillin should be given at these times for 5 days. The box will show the nurses when to give the antibiotic and when to stop giving it. For some children, it may be necessary to draw several boxes for different drugs.

- Give Bianca her first dose of amoxicillin at 8:00 and initial the page to show that it has been given. Someone else will give the next dose and initial at 16:00 and 24:00.

- Bianca will need a single dose of folic acid upon admission. It is convenient to give it to her at 8:00 since she will be getting amoxicillin at that time. Record that she received 5 mg of folic acid and initial.

- Bianca has not had a dose of vitamin A in the past month. She is 2 years old, so 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 module. Do not discuss vitamin A now.)

- Bianca is given 200,000 IU vitamin A and a multivitamin. Initial by both of these.

- She has no worms, so write ‘NONE’ by ‘drug for worms’.

- Bianca needs tetracycline drops, so circle that and write that drops should be given at 8:00, 14:00, 20:00, and 2:00. Indicate that the drops are needed in both eyes (the good eye should be treated first). Bianca does not need atropine, so write ‘NONE’. (Explain that participants will learn about treatment for eye problems later in this module. Do not discuss treatment of eye problems now.)

- Bianca is given a drop of tetracycline in her left eye. Initial the page. Other nurses will give the later doses and initial the form.

- Record +++ to show that Bianca has severe dermatosis.

- Circle that she will need bathing with 1% permanganate. Bianca is too sick to be bathed today, so she will be sponged with 1% permanganate solution on the oozing spots, which will be dressed with gauze. Initial the form.

Participants can see how Bianca's Daily Care page was filled for 9 days by looking at the example on page 6 of the module.

3. Supervise reading and the short answer exercise.

Ask participants to read page 7–10 of the module and complete the short answer exercise.

Note: *For vitamin A, 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 short answer exercise is about vitamin A. Look to see that participants are completing it correctly.

Nurses' groups (when appropriate): Before participants do the short answer exercise on page 11, review the guidelines for giving vitamin A on pages 9–10 and answer any questions. It may be helpful for the group to complete the short answer exercise together orally. To complete this exercise as a group, ask each participant in turn to answer a question.

If participants complete the short answer exercise independently, you may want to give individual feedback to ensure that each participant understands when to give vitamin A.

4. Supervise reading and complete Exercise A, deciding on treatment for eye signs, through individual work followed by individual feedback.

Ask participants to read page 12–16 of the module and complete Exercise A on treatment of eye problems.

Nurses' groups (when appropriate): Before the exercise, review the table on page 17 of the module with the group and answer any questions. Explain that, in Exercise A, they will need to refer to the table about vitamin A on page 9 and to the table about eye drops on page 15.

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

Those who have received feedback on Exercise A may continue reading in the module until everyone is ready for Exercise B.

5. Complete Exercise B, using the Daily Care page of the CCP, through group work followed by group feedback.

The purpose of this exercise is simply to set up a Daily Care page 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 Daily Care page. 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 Initial Management page for Lani on page 20 of the module. Most of the information needed about Lani is on her Initial Management page. Lani has SAM and has been admitted to Inpatient Care. Ask participants to look for her date of admission. Ask them to record this date for Day 1 on the Daily Care page. Then continue prompting as follows:

- Look for Lani's admission weight on the Initial Management page. Record this as her weight for Day 1.
- Record Lani's degree of oedema.
- Record whether or not she has diarrhoea or vomiting.
- Record the type of feed that she should be given on Day 1.
- Record the number of feeds that Lani should receive on Day 1.
- You do not know how much she will take during the day, so leave the 'total volume taken' blank.
- Look at the antibiotics that Lani will receive. Recorded on the Initial Management page, these are: gentamicin for 7 days, along with ampicillin for 2 days followed by amoxicillin for 5 days.
- Notice the times that medications are given on the ward. These are listed on page 19 of the module: 8:00, 14:00, 16:00, 20:00, 24:00, 2:00.
- On the Daily Care page for Lani, write the dose of gentamicin, the route of administration, and the time it will be given, and draw a box to show when it should be given. (Do not initial on the form yet. You are simply setting up the form, not giving the drugs.)
- Write the dose of ampicillin, the route of administration, and the times that it will be given, and draw a box to show when it should be given.

- Write the dose of amoxicillin, the route of administration, and the times that it will be given, and draw a box to show when it should be given. (***Note:*** *Check that participants indicate that amoxicillin is not given until Day 3.*)

- Record the time at which folic acid will be given. Choose a time when another medication will be given.

- Record the dose of vitamin A that Lani needs.

- Lani does not have worms, so write 'NONE by 'drug for worms'.

- Look at the information on Lani's eye signs given on the Initial Management page. Decide what type of eye drops, if any, Lani needs. Record the type(s) of eye drops and the times to give them. (Allow more time here as participants will need to record times to give two drugs.)

- Record Lani's dermatosis classification and circle if she needs to be bathed with 1% potassium permanganate.

- Lani has pus draining from her ear, and it needs to be wicked at least twice daily. Indicate this need on the Daily Care page at the bottom. Wicking of the ear is the recommended treatment for ear wicking.

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 times on the form, it is more likely to be done.*

6. Give the demonstration, and supervise reading and the short answer exercise.

Participants will learn about use of the Monitoring Record in this section. Have participants read the first three paragraphs on page 21 of the module (or orally cover the points in these paragraphs).

Demonstration of Monitoring Record

Put up an enlarged copy overhead of the Monitoring Record.

Point out that the child's respiratory rate and pulse rate are recorded at the top, 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 7 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:

- *Dikki's temperature at 9:00 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.)

- *Dikki'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.

- *Dikki's temperature at 13:00 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.

- *Dikki's temperature at 17:00 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 practise using the Monitoring Record in the next exercises. Point out the example of a Monitoring Record on page 22 of the module.

Ask participants to continue reading pages 23-26 and then complete the short answer exercise on page 27.

Nurses' groups (when appropriate): Review the **Summary of Danger Signs** on page 24 of the module with the group, as well as the other danger signs listed on page 25.

After the group has done the short answer exercise independently, review the answers with them as a group.

7. Complete Exercise C, on the use of the Daily Care page and Monitoring Record, through individual work followed by individual feedback.

In this exercise, participants will make entries on the Daily Care page that they set up for Lani in Exercise C. If their own work was correct, they may make entries on the form that they set up earlier. If there were many mistakes, they may use the answer sheet provided for Exercise C instead of their own work.

Participants will also need a blank Monitoring Record for this exercise.

Give individual feedback as usual. The purpose of this exercise is mainly to learn how to use the forms. In the next exercise participants will practise interpreting the Monitoring Record to identify danger signs. Point out the job aid on **Danger Signs for the Management of SAM in Children under 5 Years**

Give the participant a copy of the answer sheets (two pages). Ask the participant to complete Exercise D.

Nurses' groups (when appropriate): Exercise C may be done as a group exercise in the same way that Exercise B was done. Read aloud the information about Lani as each participant records on a Monitoring Record. If necessary, a facilitator may simultaneously record on an overhead of the Monitoring Form. Discuss the questions at the end of the exercise. Distribute the answer sheet and discuss any differences.

8. Complete Exercise D, reviewing Monitoring Records to identify danger signs, through individual work followed by individual feedback.

This is a very important exercise. The Monitoring Records illustrate several different danger signs. At the end of individual feedback, review these danger signs with the participant:

- Lani – sudden drop in temperature (possibly became uncovered or missed a feed, possible infection)
- Carla – increase in both respiratory and pulse rates (possible heart failure)
- Bijouli – 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 or her hospital. If not, how often does the participant think that monitoring can be done?

Give the participant a copy of the answer sheet. He or she may continue to read and work independently on the module.

Nurses' groups (when appropriate): Complete Case 1 of Exercise D (Lani) as a group. Then have participants continue the exercise independently. Give individual feedback on Carla and Bijouli.

9. Give the optional demonstration, and supervise reading and the short answer exercise.

Section 8 of the module describes how to complete a Weight Chart for a child with SAM. Most physicians will be familiar with weight charts and will be able to work independently to the end of the module 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. When appropriate, nurses' groups would have a demonstration.

Optional 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 italicised narration below. The other facilitator should record information, label the graph, and plot weights following the directions given in regular type below.

- *Opu is a 9-month-old boy. His weight on admission was 6.1 kg. He had moderate (++) oedema on admission.* Record this information in the spaces to the left of the Weight Chart.

- What is the desired discharge weight for Opu? Explain that since Opu has bilateral pitting oedema, we will determine Opu's desired target weight when he has lost the bilateral pitting oedema.

- *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 Opu has some oedema, 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 Opu has moderate oedema, we will allow for 1 kg weight loss. If he had severe oedema, we would allow for a 2 or 3 kg loss. 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 kg (bottom line), 7.0 kg, and 8.0 kg (top line).

- *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 6.1, 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, mark the point X.

- *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, Opu has lost some weight. He weighs 5.9 kg.* Plot the weight for Day 3 and connect the points.

- *On Day 4, Opu has lost some more weight, Opu has lost all his bilateral pitting oedema on Day 4. He now weighs 5.5 kg. The RUTF appetite test is conducted on Day 4: Opu is eating RUTF well, and he passes the appetite test.* Plot the weight for Day 4 and connect the points. Underneath the point for Day 4 write 'RUTF'.

- *Since Opu lost his bilateral pitting oedema on Day 4, look up his new weight on the* ***Guidance Table to Identify 15% Target Weight for SAM in Children 6–59 Months****.* Participants should find that Opu's desired discharge weight (15% target weight) is 6.3 kg. Record this to the left of the Weight Chart.

- *Now we can indicate the desired discharge weight on the graph.* Draw a heavy line across the graph at 6.3 kg and label it 'desired discharge weight'.

- *On Day 5, Opu has gained some weight. He is eating the RUTF very well. He weighs 5.6 kg.* Plot the weight for Day 5 and connect the points.

- *On Day 6, Opu has gained some more weight and was able to consume all of the required RUTF for the day. He weighs 5.7 kg.* Plot the weight for Day 6 and connect the points.

- *Opu is alert. His condition has improved. Opu is ready to be referred to Outpatient Care on Day 7. He weighs 5.7 kg.* Connect the points.

- Note that Opu will continue care in Outpatient Care where he will be required to achieve his desired target weight for 2 consecutive weeks prior to discharge.

- *You can easily see from looking at the graph that Opu first lost some weight due to oedema and then gained weight once he started on RUTF.* Point to show the line going down and then up again. A similar trend will be noted if the child is taking F-100; however if the child is taking F-100 he or she will achieve the desired target weight while in Inpatient Care for at least 2 consecutive days before discharge.

Participants should read pages 36–37 and complete the short answer exercise on page 38. They should check their own answers and continue to Exercise E.

Nurses' groups (when appropriate): Facilitators may want to check answers to the short answer exercise individually to be sure that nurses understand how to read the Weight Chart.

10. Complete Exercise E, preparing a Weight Chart, through individual work followed by individual feedback.

When giving individual feedback, be sure that participants understand why Daniel lost weight, i.e., that he was losing oedema fluid. Remind participants that children are not expected to gain weight until they are on RUTF or F-100.

Ask participants if Weight Charts like this one are kept in their hospitals. Ask if they can see the usefulness of this type of chart in showing a 'picture' of weight gains and losses.

Give the participant a copy of the answer sheets (two pages).

11. Summarise the module.

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 2 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.)

Facilitator Guidelines for Module 6, Monitoring, Problem Solving, and Reporting

Procedures	Feedback
1. Distribute **Module 6, Monitoring, Reporting, and Problem Solving**. Introduce the module.	—
2. Ask participants to read through pages 1–9 of the module and complete two short answer exercises.	Self-checked
3. Ask participants to complete Exercise A on identifying progress and problems in two cases.	Individual feedback
4. Ask participants to read pages 22–24 and prepare for group discussion in Exercise B.	Group discussion
5. Ask participants to read pages 27–29 and complete the **Weight Gain Tally Sheet** in Exercise C. Then have them prepare for group discussion by answering questions on page 32.	Group discussion
6. Ask participants to read pages 33–35 and complete Exercise D on determining common factors in deaths.	Group discussion
7. Ask participants to read page 45 and complete the short answer exercise.	Self-checked
8. Ask participants to read pages 47–56 and prepare for the role play in Exercise E. Conduct the role play.	Group discussion
9. Lead discussion following use of Monitoring Checklists in the ward. (Timing of this activity will vary.)	Group discussion
10. Ask participants to read pages 59–64 and demonstrate reporting for SAM using the tally sheet and monthly reports, followed by group discussion.	Group Discussion
11. Ask participants to read pages 66–67 and complete Exercise F, followed by group discussion.	Group Discussion
12. Summarise the module.	—

Preparations for the Module

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

Exercise E of this module is a role play of a problem-solving session. A problem is described in these guidelines. Several roles are also described. You will need to photocopy the role descriptions and provide them to participants who will play those roles.

Optional: If the problem-solving role play in Exercise E is successful, and if time allows, you may lead an additional role play using a real problem observed in the hospital ward. So be alert during clinical sessions to identify any problems that might be discussed.

If time allows, during the clinical sessions on Day 6 and/or Day 7, participants will complete monitoring checklists like those given in **Annex B** of this module. Take copies of the monitoring checklists on Days 6 and 7.

You will need enlarged copies for the health facility tally sheet and health facility report for management of SAM.

1. Introduce the module.

Monitoring is important both for identifying progress and for identifying problems. This module focuses on monitoring and reporting (M&R) as a way to identify problems so that they can be solved.

First, the module describes a general process for identifying and solving problems. Next, the module shows how problems can be identified by monitoring **individual patient** progress, weight gain, and care. Then, the module shows how to identify problems by monitoring weight gain and patient outcomes of the **whole inpatient care.** Finally, the module discusses monitoring of **inpatient care procedures**.

Point out the learning objectives on page 2 of the module.

Stress that an important concept in this module is to look for the cause of a problem before deciding on a solution. The example on page 6 will show the importance of this concept.

2. Supervise reading and the short answer exercises.

Ask participants to read through page 1–11 of the module and complete the short answer exercises on pages 5 and 10. Then they can complete Exercise A.

As participants work individually, notice whether they are doing the short answer exercises easily. If they are having difficulty, assist as needed. The short answer exercise on page 10 is about calculating daily weight gain. A calculator will be very helpful.

Nurses' Groups (when appropriate): Divide the reading into shorter segments and check understanding after each segment as follows.

- Have participants pause on page 5. Complete the short answer exercise together as a group.
- Have participants pause at the end of page 7. Discuss the examples of causes and solutions on page 6. Be sure that participants understand the concept that the solution to a problem must be appropriate for its cause.
- Have participants pause at the end of page 9. Following the process described for calculating daily weight gain, use the flipchart to present the example on page 9 for the group. You may also wish to do the first problem of the short answer exercise as a demonstration for the group.
- Have participants complete the short answer exercise on page 10 independently. Individually check participants' answers to the short answer exercise.

3. Complete Exercise A, on identifying progress and problems with cases, through individual work followed by individual feedback.

Nurses' groups (when appropriate): Before this exercise, review with participants the criteria for failure to respond on page 11. Stress that these are listed merely as a guide to identifying problems. There may be other signs of problems as well.

Nurses groups should just do Case 1 (Ceri) in Exercise A. Omit Case 2 (Lennox) for nurses' groups.

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 or she got the information from the CCP.

For example, it is important to note that Ceri is not eating well. This is evident on her 24-Hour Food Intake Chart. It is also important to notice that Ceri has not started to lose her oedema even on Day 5. This is evident on the Daily Care page.

It is important to note that Lennox 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 Lennox's Weight Chart.

According to the possible criteria on page 11 of the module, both Ceri and Lennox are failing to respond. These criteria are simply a guide to help identify children that are having problems.

Give the participant a copy of the answer sheet.

4. Complete Exercise B, identifying causes and solutions of problems, through individual work followed by group discussion

Nurses' groups (when appropriate): Nurses groups should just do Case 1 (Ceri) in Exercise B. Omit Case 2 (Lennox) for nurses' groups.

Ask the participant to read pages 22–24, which discuss possible causes of failure to respond and possible solutions. 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 (pages 25–26) to structure the discussion. Use the answer sheet 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 – Lennox: *TB is often over-treated in children with SAM. Participants should not be too eager to jump to a diagnosis of TB 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: Benzylpenicillin 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, give participants a copy of the answer sheet.

5. Complete Exercise C, determining whether there is a problem with weight gain on the ward, through individual work followed by group discussion.

Ask participants to read pages 27–29 of the module and complete 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 RUTF or F-100 are expected to gain weight, participants will look at weight gain only among these children.

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 yet; wait until after the group discussion.)

Be sure that participants prepare for the discussion by writing answers to questions on page 32. 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?

6. Complete Exercise D, determining common factors in death, through individual work followed by group discussion.

Ask participants to read pages 33–35 and complete Exercise D, which will also be followed by a group discussion.

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.

At the end of the discussion, give participants a copy of the answer sheet.

7. Supervise reading and the short answer exercise.

This section is about calculating case-fatality rates for a ward.

Ask participants to read page 45 and complete the short answer exercise on page 46 about calculating case-fatality rates for a ward.

Nurses' groups (when appropriate): Using the flipchart, do the first problem in the short answer exercise as an example for the group. As the group works individually on the rest of the short answer exercise, look to see if participants are having difficulty and help as needed.

Optional: You may wish to get the group's attention and hold a very brief discussion. Ask participants if they know the case-fatality rate for children with SAM at their hospitals. Ask how they could obtain the necessary information and calculate the rate. Could they do it on a regular basis?

8. Complete Exercise E, the problem solving session, through a role play.

Ask participants to read pages 47–56 and then see you about a role to play in the role play in Exercise E.

In this role play, participants will each take a role of someone who might be on the staff of a hospital. When participants come to you, assign them one of the roles below:

- Physician in charge (This person will lead the problem-solving session)
- Senior nurse on duty in the morning (In some hospitals, this person is called the 'Matron')
- Senior nurse on duty in the afternoon
- Night nurse
- Junior auxiliary nurse
- Hospital administrator

Nurses' groups (when appropriate): The role play may go more smoothly if one facilitator plays the role of the 'physician in charge' and the other facilitator records on the flipchart. Other roles should be assigned to participants.

Prior to this exercise, photocopy the role descriptions on the following pages and cut them out. Give each person a role description. In front of each person, place a card or folded piece of paper showing that person's role. These cards will help participants remember who is playing what role.

Tell the 'physician in charge' that he or she should take the lead in the discussion and should follow the process outlined on pages 55–56 of the module. Try not to interrupt. Assist only if the discussion becomes very much 'off track'.
Ask someone to help by recording on the flipchart. The format below will help provide structure.

Example of Flipchart Format

Problem:	
Causes:	Solutions:

After the role play, discuss what went well and what could have been improved. Ask if participants could conduct such a session in their hospitals. Ask if all of the solutions identified appear to be appropriate for the causes of the problem.

If there is time, you may do another role play using a real problem observed in ward visits.

Descriptions of Roles

Physician in charge

From December through February, there were no deaths in the SAM ward. In the past week, there have been two deaths.

Kari, a 15 month-old-girl, died during her second night in the hospital (last Monday). She was dead when you arrived in the morning.

Ramon, a 24-month-old boy, died during his third night in the hospital (last Wednesday). His NGT had been removed and it was his first night to feed orally.

Both children were supposed to be taking F-75 every 2 hours.

There is no monitoring data for the nights of the deaths, and the 24-Hour Food Intake Charts were not kept during the night.

You suspect that the children were not fed during the night and that they became hypoglycaemic and died.

You want to know more about what happened so that this will not happen again.

Senior nurse (morning), also known as the Matron

You are on duty from 7:00 until 15:30. You remember the deaths of Kari and Ramon last week, although you were not present at night when they occurred.

When you arrived in the morning after Kari had died, the night nurse and junior nurse (who had been on duty all night) were visibly upset. They had been trying to reach the physician in charge for more than 2 hours.

You are not sure what happened during the night, but you are very protective of the nursing staff, and you do not want to lose any more nurses. You feel that the ward is understaffed and overworked.

On the morning after Ramon's death, you found the junior nurse alone in the ward. The other night nurse had not reported for duty.

Senior nurse (afternoon/evening)

You are on duty from 15:00 until 22:30. You heard about the deaths of Kari and Ramon last week, although you were not present when they occurred.

When you left at 22:30 Monday night, Kari was fine and was taking F-75 well at 2-hourly feeds.

On Wednesday evening at about 18:00, you removed Ramon's NGT so that he could take F-75 orally. He had two successful oral feeds before you left for the night. When you left, the junior nurse had arrived, but the other night nurse had not arrived.

Night nurse

You were recently moved from the infectious disease ward to the SAM ward. You have been on the night shift for only 2 weeks, and you are not yet used to the schedule. You get very tired at night.

You do not understand why children should be awakened every 2 hours to eat when they are sleeping soundly. When you wake the children, they often refuse to eat anyway.

You received no special training when you were moved to the severe malnutrition ward. You were simply told to feed the children according to their charts throughout the night.

On Monday night, when Kari died, the junior auxiliary nurse woke you at 4:30 in a panic. You were not surprised when you couldn't reach the doctor.

On Wednesday night, when Ramon died, you did not come to work because your husband did not come home, and there was no one to stay with your own children. It was too late to find a substitute.

Junior auxiliary nurse

You work in the ward at night and were on duty when both Kari and Ramon died. You try very hard to stay awake all night and feed the children, but sometimes you fall asleep.

You are very conscientious, and you were extremely upset when the children died. In Kari's case, you went to feed her at about 4:00 and she was dead. She was uncovered when you found her. Her mother had gone home for the night and was to return in the morning. You woke the other nurse and called the physician, but he could not be reached.

In Ramon's case, you were alone because the other nurse did not show up. You realised that he was not taking his feeds well at 24:00 and 2:00, but you could not spend a lot of time with him because you had other children to feed. Ramon's mother was very ill and was not with him in the hospital. You do not know how to insert an NGT.

At 4:00, you had trouble rousing Ramon and tried to call the physician, but he could not be reached. Ramon never woke up.

Hospital administrator

The hospital has recently lost some funding from the government, and you have had to decrease staff. You have decreased the number of night staff in particular, since the patients are sleeping then anyway.

You are not happy with the SAM ward because patients stay there so long. You wish they could be released after a week, or at most 2 weeks, and fed at home.

Recently, the senior nurses approached you about providing better accommodations for mothers at night, so that mothers would be more likely to stay with their children. You said there was simply no money for this. However, you realise during the problem-solving discussion that additional cots for mothers would be less expensive than hiring more night staff.

9. Lead the group discussion on the results of monitoring food preparation and ward procedures.

Go through the Monitoring Checklists in **Annex B** of this module on how to monitor food preparation and ward procedures.

If a monitoring session is conducted using the monitoring checklist during the clinical session, discuss information with the group. It would be inappropriate to discuss problems in front of the ward staff, so the discussion should take place back in the classroom.

Note: *If there was no time to use the checklists while in the ward, participants may be able to complete them from memory back in the classroom based on what they observed during the visits. Or they may complete them from memories of their own hospitals.*

Ask participants what problems they observed ('No' answers on the checklist). Select one or two important problems and discuss possible causes and possible solutions. You may use the problems in another role play as in Exercise E.

10. Give the demonstration and lead group discussion on reporting for SAM.

Ask the participants to read pages 59–64. Answer any questions.

Using the enlarged **Health Facility Tally Sheet**, conduct a demonstration on how to use the tally sheet. Use the information provided below to complete the **Health Facility Tally Sheet**.

- *City Hospital, in Greater Accra Region, started providing Inpatient Care services in February 2010. Indicate on the enlarged tally sheet the dates for each week 1 to 4 for the month of February 2010.*

- ***Week 1 (February 1–7):*** *The total at the start of week 1 was 0. Three SAM cases were new admissions. Two of the three cases had bilateral pitting oedema and the other had a MUAC < 11.5 cm. All three children were male. There were no exits for week 1. There was no RUTF issued during Week 1.*

- ***Week 2 (February 8–14):*** *The total at the start of week 2 was 3 (updated with the information from three cases admitted in week 1). A new case—a child under 6 months of age—was admitted, which should be indicated in the 'New cases SAM other age groups' box. One child was referred from Inpatient Care to Outpatient Care after the child's condition stabilised. The child entered and exited the Inpatient Care site and is now being treated in Outpatient Care. A total of 20 packets of RUTF were issued during week 2.*

- ***Week 3 (February 15–21):*** *The total number of children in Inpatient Care at the start of week 3 was 3 (the total at the start of week 3 is equal to the total at the end of week 2). There was one girl admitted in week 3, who was referred from Outpatient Care, and one child died. A total of 15 packets of RUTF were issued in Week 3.*

  Note that the sex of the child referred from Outpatient Care will not be recorded in the age category sections because she was an old case. Sex is only recorded for new admissions.

- ***Week 4 (February 22–28):*** *One new case, a boy 6–59 months, was admitted with a MUAC < 11.5 cm. Two children were absent for 3 days, and one child was referred to Outpatient Care. A total of 28 packets of RUTF were issued in week 4.*

Now ask participants to complete the totals on the tally sheet. Demonstrate transferring data from tally sheets to monthly reports. When you have completed the demonstration, let the participants know that they will practice completing the **Health Facility Tally Sheet** in Exercise F.

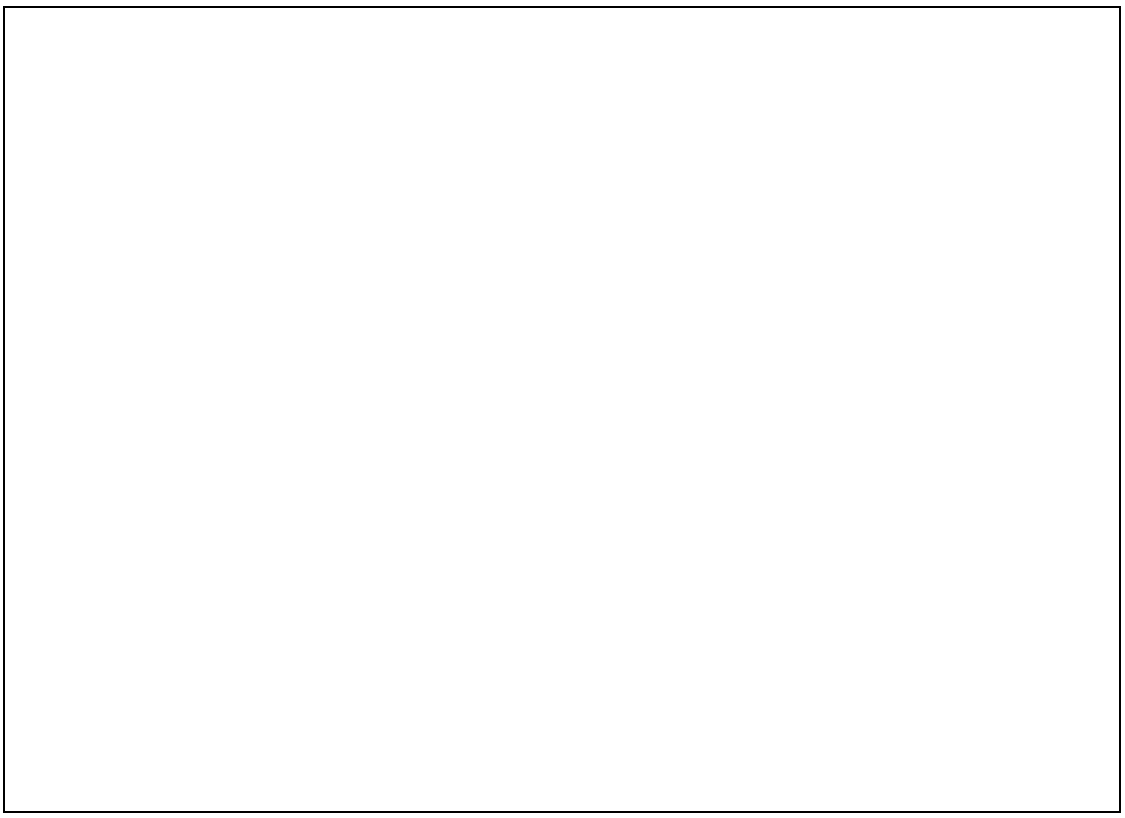
When participants have completed the exercise, have them continue reading pages 66–67 and complete Exercise F on page 68.

Exercise F will be done in groups; participants from the same hospital will be grouped together. Completed copies of CCP forms of children managed in Princess Marie Louse (PML) Hospital in January 2010 are provided on pages 69–78. Each group will review the CCPs, complete the **Health Facility Tally Sheet** for the month of January 2010, and summarise information from the tally sheet into a monthly report for Inpatient Care.

When the groups have finished the exercise, lead a group discussion.

11. Summarise the module.

1. Review the problem-solving process outlined in the introduction on page 6 of the module. Stress the importance of investigating causes before deciding on solutions.
2. Stress the importance of reporting for SAM using the tally sheets at the end of each week and facility report at the end of the month.
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.)



Facilitator Guidelines for Module 7, Involving Mothers in Care

Procedures	Feedback
1. Distribute **Module 7, Involving Mothers in Care**. Introduce the module.	—
2. Ask participants to read through pages 1–3 of the module and prepare for the discussion in Exercise A.	Group discussion
3. Ask participants to read page 5 of the module and prepare for the role plays in Exercise B. Conduct the role plays.	Group discussion
4. Ask participants to read pages 7–11. Show the video **Teaching mothers about home feeding**.* Conduct a group discussion of the video and complete Exercise C.	Group discussion
5. Ask participants to read page 13 and **Annex E** of the module. Show the video **Malnutrition and mental development**.*	Group discussion
6. Ask participants to read pages 14–15 of the module, study the sample **Referral Form** and **discharge information in the Child Health Record**, and prepare for the role play in Exercise D. Conduct the role play.	Group discussion
7. Ask participants to finish reading the module. Complete the optional Exercise E, a group discussion about early discharge.	Group discussion (optional)
8. Summarise the module.	—

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

Preparations for the Module

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, and 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 Exercises B and D.

Blank sample **Referral Forms** and discharge information in the **Child Health Record** are provided with this course. Before the role plays 1 and 2 in Exercise D, complete the discharge information with the information provided below. The 'nurse' will use this card in the role play to give instructions to a mother. All of the information should be appropriate for the local area.

Role Play 1

- Child was referred to Ussher Polyclinic Outpatient Care from PML Hospital, record the date for planned follow-up as 1 week in Outpatient Care
- Date and time of discharge from Inpatient Care (PML Hospital)
- Name of a boy who is 15 months old
- Discharge weight of 5.6 kg, MUAC of 11.6 cm, and temperature at discharge of 36.5° C
- Reason for referral: The child's condition had stabilised and appetite regained at the time of referral, the length of stay in Inpatient Care upon discharge was 7 days
- Other classifications: The child was admitted with severe bilateral pitting oedema (+++) and now has mild bilateral pitting oedema (+)
- Treatment given before referral:
    - Medications and supplements to be continued in Outpatient Care: fill in blanks with appropriate information for local formulations, amoxicillin was provided to the child at the time of discharge
    - 18 packets of RUTF were given to the child, also indicate how many the child should consume per day
    - RUTF key messages were provided to the mother and understood (observations should be made during the mother's stay in the hospital)
- Enter if vitamin A dose is provided or when the dose should be provided: The child had bilateral pitting oedema, therefore vitamin A should be provided on the fourth week in Outpatient Care or upon discharge from Outpatient Care when the child has no bilateral pitting oedema
- Document vaccinations provided and those that should be followed up, document also as appropriate in the Child Health Record: No vaccinations were provided in Inpatient Care
- The health worker discharging the child should write his or her name and sign

Role Play 2

- Name, date of birth, and address for a 2-year-old boy
- Admission and discharge dates showing child has been in the hospital 18 days
- Admission weight of 7.6 kg, no bilateral pitting oedema, MUAC of 12.7 cm, discharge weight of 9.0 kg (attained 15% target weight and more)
  (***Note:*** *The* **Guidance Table to Identify 15% Target Weight for SAM in Children 6–59 Months** *is used on the discharge card because it will be more easily understood in clinics that the mother may visit for follow-up*)
- What to feed: Local cereal staple, local vegetables and fruits, local sources of protein, local snacks
- How much/how often to feed: Describe serving size in local terms; give family foods at meals three times each day, plus two nutritious snacks between meals
- Medications and supplements: Fill in blanks with appropriate information for local formulations
- Enter a place and date for planned follow-up 1 week from discharge date
- Enter a place and date to come for vitamin A supplementation, 6 months from discharge date
- Tick to show that the child has received all immunisations

Decide whether your group will have the optional discussion in Exercise E. Your decision may be affected by the time available, the number of participants who work in hospitals where early discharge **(Default)** is common, typical hospital policies in the area, etc.

1. Introduce the module.

Explain that emotional, mental, and physical stimulation are critical for children that had SAM. This module 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 2 of the module.

2. Complete Exercise A, ways to involve mothers and other family members, through group discussion.

Ask participants to read through page 3 of the module and prepare for the group discussion in Exercise A.

From personal experience and from ward visits, participants are sure to have many ideas about 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 module as they are all discussions or role plays for which there are no definite 'right' answers.*

3. Complete Exercise B, teaching a mother to bathe or feed a child, through a role play.

Ask participants to read page 5 of the module and then come to you for instructions for the role play.

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 create appropriate substitutions.

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 5 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 such checking questions 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 have SAM.

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.

Role Play 1 – Mother

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

Your 15-month-old daughter has been on the ward for 2 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 criticise you.

Role Play 2 – Nurse

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.

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.

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 NGT 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. Show the video: Teaching mothers about home feeding, then complete Exercise C, teaching mothers to feed children at home, through group discussion.

Explain that this video segment will show a teaching session in which *khichuri* is prepared (a home food described in the module). 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. Explain that some things have been done before the video begins; for example, the rice and *dal* have been thoroughly washed, and the mother has washed her hands.

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 practise?

Participants may wish to view the video again. This is fine as long as other groups are not waiting.

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.

5. Supervise reading and show the video: Malnutrition and mental development.

Ask participants to read page 13 and **Annex E** 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 the 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 the Video

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

- Use everyday activities?
- Involve mothers?

Third Discussion Point in the Video

Talk about:

- Toys
- How to start a programme 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. Complete Exercise D, giving discharge instructions, through a role play.

Ask participants to read pages 14–15 of the module, study the sample **Referral Form** and discharge information in the **Child Health Record**, and then come to you for instructions about the role play in Exercise D.

Assign one person to be the nurse and one person to be the mother. Give the nurse the discharge information in the **Child Health Record** that you prepared earlier. Give the nurse and the mother the role descriptions that follow and orient them to the purpose of the role play.

Role Descriptions

Mother

You are very eager to go home after 18 days in the hospital with your 2-year-old son, but you are concerned if you should give other family foods to your child to keep him healthy. The nurse has given you RUTF, but you still want clarification on whether to give RUTF or not to your child.

You understand most of what the nurse says, but you miss a few points when she asks you checking questions. (This will allow the nurse to correct you in a nice way.)

Nurse

Follow the order of the **Referral Form** carefully, covering all of the information on the card. Ask the mother checking questions to ensure that she understands. Specific information that this mother needs includes:

- Give medications that should be continued at home; ensure that the mother is clear on how much to give to the child.
- Ask the mother where the closest Outpatient Care facility to her home is located; refer her to the facility.
- Provide the RUTF key messages:
    1. RUTF is a food and medicine for very thin children only. It should not be shared.
    2. Sick children often do not like to eat. Give small, regular meals of RUTF and encourage the child to eat often (if possible, eight meals per day). Your child should have ___ packets per day.
    3. RUTF is the only food sick/thin children need to recover during their time in Outpatient Care (however, breastfeeding should continue).
    4. For young children, continue to breastfeed regularly.
    5. Always offer the child plenty of clean water to drink or breast milk while he or she is eating RUTF.
    6. Wash the child's hands and face with soap before feeding if possible.
    7. Keep food clean and covered.
    8. Sick children get cold quickly. Always keep the child covered and warm.
    9. When a child has diarrhoea, never stop feeding. Continue to feed RUTF and (if applicable) breast milk
- This child is up-to-date on immunisations.
- The child needs a follow-up visit in 1 week at the Outpatient Care facility.
- Provide a 1-week ration of RUTF or until the clinic day for the facility to which she is referred.

Also give information on danger signs, how to play with the child, etc.

You are consistently courteous and helpful to the mother, correcting her nicely if she misunderstands.

During the role play observers should refer to their **Referral Form** and discharge information in the **Child Health Record** and make notes in order to answer the questions in the module. After the role play, use these questions to structure a brief discussion.

Also ask whether this type of **Referral Form** and discharge information would be useful in the participants' own facility/hospital. How would they need to modify it?

7. Complete the optional Exercise E, issues related to early discharge, through group discussion.

Ask participants to finish reading the module. If you will do the optional discussion in Exercise E, ask participants to prepare for the discussion.

Use the questions given in the module to structure the discussion.

8. Summarise the module.

1. Emphasise 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.

2. Perhaps ask each participant to say one thing he or she will do in her/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 colourful pictures on the walls. Or it may be a large task, such as changing a hospital policy.

3. 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.

Note: *There may be an end-of-course evaluation questionnaire. If so, the Course Director should provide the questionnaire for participants to complete.*

Guidelines for All Modules

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 overcome their shyness, realise that you want to talk with them, and 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.

4. 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'.

   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 break the tension of silence. But do not do this repeatedly. Some silence is productive.

5. 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 or she may withdraw from the discussion entirely or not speak voluntarily again.

6. Answer participants' questions willingly, and encourage participants to ask questions when they have them rather than to hold the questions until a later time.

7. 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'.

8. 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.

9. 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.

10. Keep your presentations lively.

    - Present information conversationally rather than reading 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.

11. Write key ideas on a flipchart as they are offered. (This is a good way to acknowledge responses. The speaker will know his or her suggestion has been heard and will appreciate having it recorded for the entire group to see.)

    When recording ideas on a flipchart, use the participant's own words if possible. If you must be more brief, paraphrase the idea and check it with the participant before writing it. You want to be sure that the participant feels you understood and recorded his or her idea accurately.

    Do not turn your back to the group for long periods as you write.

12. 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.

    Paraphrase and summarise 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.

    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.
    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.

Thank participants whose comments are brief and to the point.

13. 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 or her and make him or her feel he or she is being asked to talk.

Manage any problems.

14. 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 or she 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 or she 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?')

15. Try to identify participants who have difficulty understanding or speaking the course language. Speak slowly and distinctly so that you can be more easily understood and encourage the participant in his or her 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.

16. As a facilitator, you will have your own style of interacting with participants. However, a few techniques for reinforcing participants' efforts include the following.

    - Avoid use of facial expressions or comments that could cause participants to feel embarrassed.
    - Sit or bend down to be on the same level as the participant when talking to him or her.
    - Answer questions thoughtfully, rather than hurriedly.
    - Encourage participants to speak to you by allowing them time.
    - Appear interested, saying 'That's a good question/suggestion'.

17. 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.

   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

1. Look available, interested, and ready to help.

2. 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.

3. Encourage participants to ask you questions whenever they would like some help.

4. If important issues or questions arise when you are talking with an individual, make note of them to discuss later with the entire group.

5. If a question arises that you feel you cannot answer adequately, obtain assistance as soon as possible from another facilitator or the Course Director.

6. Review the points in this **Facilitator Guide** so that you will be prepared to discuss the next exercise with the participants.

Providing Individual Feedback

1. Before giving individual feedback, refer to the appropriate notes in this guide to remind yourself of the major points to make.

2. Compare the participant's answers to the answer sheet provided.

3. 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 or her hospital, may have overlooked some information about a case, or may not understand a basic process being taught.

4. 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 example to explain. After explaining, ask the participant questions to be sure he or she understands.

5. Give the participant a copy of the answer sheet, if one is provided.

6. Always reinforce the participant for good work by (for example):
    - Commenting on his or her understanding
    - Showing enthusiasm for ideas for application of the skill in his or her work
    - Telling the participant that you enjoy discussing exercises with him or her
    - Letting the participant know that his or her hard work is appreciated

Leading a Group Discussion

1. 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.

2. 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.

3. Always begin the group discussion by telling the participants the purpose of the discussion.

4. 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.

5. 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.

6. Always summarise, or ask a participant to summarise, what was discussed in the exercise. Give participants a copy of the answer sheet, if one is provided.

7. 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

Coordinating a Role Play

1. 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 afterward.

2. 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 or a Discharge Card.
    - Give role play participants any background information needed. (There is usually some information for the ‘mother’ or ‘nurse’ that can be photocopied or clipped from this guide.)
    - Suggest that role play participants speak loudly.
    - Allow preparation time for role play participants.

3. 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.

4. 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.

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

6. 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.

7. 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.

8. Ask participants to summarise what they learned from the role play.