FACILIATOR GUIDE

Government of Sudan

Training Course on Inpatient Management of Severe Acute Malnutrition

Children 6–59 Months with SAM and Medical Complications

June 2011

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 2009 Government of Sudan (GOS) Federal Ministry of Health (FMOH) *Interim Manual Community-Based Management of Severe Acute Malnutrition (November 2009).* The training course is made possible by the generous support of the American people through the support of the Office of U.S. Foreign Disaster Assistance, Bureau for Democracy, Conflict and Humanitarian Assistance, 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. The contents are the responsibility of FHI 360 and do not necessarily reflect the views of USAID or the United States Government.

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Acronyms and Abbreviations

AIDS	acquired immune deficiency syndrome
ART	antiretroviral therapy
AWG	average daily weight gain
BMI	body mass index
cm	centimetre(s)
CMAM	Community-Based Management of Acute Malnutrition
CMV	combined mineral and vitamin mix
dl	decilitre(s)
ENA	Essential Nutrition Actions
FMOH	Federal Ministry of Health
g	gram(s)
GOS	Government of Sudan
Hb	haemoglobin
HFA	height-for-age
HIV	human immunodeficiency virus
IGF	insulin growth factor
IM	intramuscular
IMNCI	Integrated Management of Neonatal and Childhood Illness
IU	international unit(s)
IV	intravenous
IYCF	infant and young child feeding
kcal	kilocalorie(s)
kg	kilogram(s)
L	litre(s)
LOS	length of stay
M&R	monitoring and reporting
MAM	moderate acute malnutrition
ml	millilitre(s)
mm	millimetre(s)
MUAC	mid-upper arm circumference
µg	microgram(s)
NG	nasogastric
NGT	nasogastric tube
OPD	outpatient department
ORS	oral rehydration solution
PCV	packed cell volume
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission of HIV
QI	quality improvement
ReSoMal	Rehydration Solution for Malnutrition
RUTF	ready-to-use therapeutic food
SAM	severe acute malnutrition
SFP	supplementary feeding programme
TB	tuberculosis
UNSCN	United Nations Standing Committee on Nutrition
WFA	weight-for-age
WFH	weight-for-height
WFP	World Food Programme
WHO	World Health Organisation

Introduction

What methods of instruction are used in this Case Management Training?

This Case Management Training uses a variety of methods of instruction, including reading, written exercises, discussions, role-plays, video, demonstrations and practice in a real severe acute malnutrition (SAM) ward. Practice, whether in written exercises or on the ward, is considered a critical element of instruction.

How is the Case Management Training 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 learnt. Information is also provided through demonstrations, photographs and videotapes (to strengthen knowledge).
- The modules are designed to help each participant develop the specific skills necessary for case management of children with SAM. Participants develop these skills as they read the modules, observe live and videotaped demonstrations and practise skills in written exercises, group discussions, oral drills and role-plays (to develop and practise skills, with appropriate attitudes).
- 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 sessions in the SAM ward of the hospital.
- To a great extent, participants work at their own pace through the modules, although in some activities, such as role-plays and discussions, small groups 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/she has done the exercise and what improvements could be made.)

For whom is this Case Management Training intended?

This Case Management Training is intended for both physicians and nurses (and nutritionists) who manage children with SAM with poor appetite and/or medical complications in Inpatient Care in hospitals. Physicians and nurses (and nutritionists) 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 nutritionists) and physicians may find different parts of this Case Management Training more interesting and applicable to their work. Nurses (and nutritionists), in particular, may find that some parts of this Case Management Training are more detailed than they need, or that they would like more explanation or time to understand certain concepts. Dieticians and nutritionists working in hospital may also benefit from this Case Management Training, with a specific focus on feeding.

Because of their different backgrounds and interests, nurses (and nutritionists) and physicians are typically assigned to separate small groups. However, nurses (and nutritionists) and

physicians from the same hospital may meet together to work on planning exercises for their hospital.

Throughout the *Facilitator Guide* there are special sections for 'nurses (and nutritionists) groups (when appropriate)' printed in shaded boxes. These notes suggest how facilitators can adapt the course materials for nurses (and nutritionists) groups as needed. Some of the suggestions may also be used for groups of physicians 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 Case Management Training. The facilitator spends much of his/her time in discussions with participants, either individually or in small groups. For facilitators to give enough attention to each participant, a ratio of 1 facilitator to 3–6 participants is desired. In your assignment to teach this Case Management Training, **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 hospital and generally give participants any help they need to successfully complete the Case Management Training. You are not expected to teach the content of the Case Management Training 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/she is expected to do in each module and each exercise.
   - Answer the participant's questions when they are asked.
   - Explain any information that the participant finds confusing, and help him/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/she obtained his/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 understand how to use skills taught in the Case Management Training in his/her own hospital.
   - Assist the clinical instructor as needed during clinical sessions.

2. You **MOTIVATE**:
   - Compliment the participant on his/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 Case Management Training 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/her questions completely (that is, so that both you and the participant are satisfied).

What NOT to do.....

- During times scheduled for clinical training activities, do not work on other projects or discuss matters not related to the Case Management Training.
- 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 the potential for an awkward silence when a participant does not know the answer. Instead, ask participants to voluntarily respond, or do drills that require participants one by one to give quick answers to simple questions. If a participant can't answer the question quickly enough or gives the wrong answer, move on to the next participant.
- 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/she is conducting a clinical session. He/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 (and nutritionists) groups, if needed
- A place to write down points to make in addition to those listed in the guide

At the back of this *Facilitator Guide* is a section titled 'Facilitator Guidelines for All Modules'. This section describes training techniques to use when working with participants during the Case Management Training. 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 answers (provided at the end of each module).
- 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 Course Materials Needed in Each Small Group

Item needed	Number needed
Facilitator Guide	1 each for the Course Director, the clinical instructor, and all facilitators
Government of Sudan Interim Manual: Community-Based Management of Severe Acute Malnutrition, Version 1.0 (November 2009) (CMAM Manual)	1 for all
Set of seven training modules	1 set for all
Photographs booklet	1 for all
Set of Job Aids for Inpatient Care	1 set for all
Set of forms used in Inpatient Care	1 set for all, plus a few extras
Set of checklists used in Inpatient Care	1 set for all
Set of wall charts used in Inpatient Care	1 set for all (or 1 set for each small group)
Inpatient Management Record, all six pages, stapled	3 for all, plus a few extras
Inpatient Management Record, enlarged format, all six pages, stapled	1 set for each small group
Extra copies of Initial Management page of Inpatient Management Record, loose (for use in exercises)	4 for all, plus a few extras
Extra copies of Daily Care page of Inpatient Management Record, loose (for use in exercises)	3 for all, plus a few extras
Extra copies of Monitoring, Problem Solving and Reporting page of Inpatient Management Record, loose (for use in exercises)	2 for all, plus a few extras
Video films	1 set for all
Slide presentations	1 set for all
Support reading (Includes United Nations Joint Statements on SAM 2007 and 2009)	1 set of soft copies on CD Rom/flash drive for all
Laptop computer and digital projector	1 set for the group (or 1 set for each small group)
Schedule for the Facilitator Training	1 for all
Schedule for the Case Management Training	1 for all
Schedule for clinical sessions	1 for all
Pre- and post-course test for Case Management Training	2 for all
Facilitator Practice Assignment Grid	1 for all facilitators
End-of-course evaluation	1 for all in the Facilitator Training and Case Management Training
Registration form	1 for all
Flash drives for sharing soft copies of all course materials	1 for all

Checklist of Other Supplies Needed

Supplies Needed for Each Person

- ❑ Name tag and holder
- ❑ 2 pens
- ❑ 2 pencils with erasers
- ❑ Paper
- ❑ Highlighter
- ❑ Folder or large envelope to collect answer sheets
- ❑ Calculator (on personal mobile phones)

Supplies Needed for Each Small Group

- ❑ Paper clips
- ❑ Pencil sharpener
- ❑ Stapler and staples
- ❑ Scissors
- ❑ 1 roll masking tape
- ❑ Extra pencils and erasers
- ❑ Flipchart pad and markers *OR* blackboard and chalk
- ❑ Laptop computer and digital projector (if possible)

In addition, certain exercises require special supplies, such as ingredients for feeding formulas (see alternative recipes), commercial F-75 and F-100 therapeutic milk, combined mineral and vitamin mix (CMV), oral rehydration solution (ORS) and Rehydration Solution for Malnutrition (ReSoMal), mixing containers and spoons, a blender and 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.

Also, schedule the pre-course test at the start of the Case Management Training and a post-course test and an end-of-course evaluation at the end of the Case Management Training.

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. Give an orientation on the CMAM and discuss the strategy of integration and scale-up of CMAM implementation in your country and/or state.	---------
4. Conduct the pre-course test of the Case Management Training.	------
5. Distribute **Module 1, Introduction**, the CMAM Manual and the Job Aids. Introduce **Module 1, Introduction**. Have participants read **Module 1**, pages 1–8 and look at the contents of the job aids and the CMAM Manual.	------
6. Answer any questions about **Module 1, Introduction**.	------
7. Explain your role as facilitator.	------
8. Have the participants tell where they work and describe briefly their responsibility for care of children with SAM.	------
9. Continue immediately to the next module, **Module 2, Principles of Care**.	------

* Throughout this *Facilitator Guide*, further information for each of the numbered procedures in the tables is given on subsequent pages.

1. Introduce yourself and ask participants to introduce themselves

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

2. 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 lunches, transportation of participants or payment of per diem.

This is a good time to distribute the Case Management Training schedule and point out when your group will be visiting the hospital's Inpatient Care (SAM ward) for clinical practice.

3. Give an orientation on CMAM

Provide an overview on CMAM, and then lead a group discussion on the CMAM strategy of integration and scale-up in the country. Let the participants know that the CMAM overview presentation is available in **Module 1, Introduction**, for further reference. In the group discussion session, participants can ask question about CMAM.

4. Conduct a pre-course test

Explain that at the beginning and at the end of the Case Management Training a test will be conducted to evaluate the quality of the training, the learning process of the participants as well as their individual capacity levels.

Inform participants that the test will take no longer than half an hour. The questions will reflect clinical knowledge and skills that health care providers are expected to have when involved in CMAM. Inform participants that a similar test will be conducted at the end of the Case Management Training.

Introduce and conduct the pre-course test.

5. Introduce Module 1 and the Job Aids

Explain that the short **Module 1, Introduction**, briefly describes the problem of SAM in children and the need for improved case management. It also describes the Case Management Training 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 Inpatient Care job aids. The CMAM Manual is also a useful reference. Participants will be instructed to refer to the job aids and the CMAM Manual. Point out the box on the page 1 of **Module 1, Introduction**, that refers them to the job aids.

Ask the participants to read **Module 1**, pages 1–8 now. When instructed to do so, they should also look at the contents of the job aids and browse through the CMAM Manual to familiarise themselves with the manual's chapters and annexes. They should continue reading to the end of the **Module 1**.

6. Answer questions

When everyone has finished reading, ask if there are any questions about **Module 1**. For example, participants may have questions about the equipment and supplies listed in Annex A. They might 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 guidelines. Explain that many hospitals lack some of these items and need to obtain them. There will be opportunities in the Case Management Training to discuss problems like lack of supplies.

7. 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 Case Management Training is to:

- Guide them through the Case Management Training 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 sessions held at the hospital.

8. Have participants discuss their responsibility for care of children with SAM

Explain to participants that you would like to learn more about their responsibilities for caring for children with SAM. 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 he/she works and what his/her job is. During the Case Management Training, 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 children with SAM?

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/her responsibilities, do **not** do that now. This should not be a long discussion.)

9. Continue to the next module

Proceed directly to **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 complete set of Job Aids for Inpatient Care. Introduce the module.	------
2. Ask the participants to read pages 1–7 of the module and complete Exercise A using the *Photographs* booklet.	Group discussion
3. Ask the participants to read pages 10–19 of the module. Nurses (and nutritionists) groups: Conduct a demonstration of how to measure mid-upper arm circumference (MUAC) and how to use the weight-for-height (WFH) look-up table.	------
4. Ask the participants to complete Exercise B (page 20) using their WFH look-up table.	Individual feedback
5. Ask the participants to read pages 21–22 of the module and complete Exercise C (page 23).	Group discussion
6. Lead a group oral drill on classification of SAM.	Drill
7. Ask the participants to read pages 24–25 of the module and complete the short answer exercise on page 26.	Group-checked
8. Ask the participants to read pages 27–29 of the module and complete the short answer exercise on page 30.	Group-checked
9. Ask the participants to read pages 31–32 and refer to the job aids and/or CMAM Manual as instructed. Ask them to complete the short answer exercise on page 33 and check their own answers. Then ask them to finish reading the module.	Self-checked
10. Show the video: Transformations. Discuss the video and Photos 21–29.	Group discussion
11. Summarise the module.	------

Preparation for the module

Prepare carefully by reviewing the exercises and discussing with your co-facilitator how to work together to lead the group discussions, role-plays, etc. This section of the *Facilitator Guidelines* describes special supplies or preparation needed for this module.

At the end of this module, you will show a video showing 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 following equipment and supplies are available. Learn how to operate the equipment and practise using it:

- Video
- Laptop computer
- Digital projector
- Electrical outlets, cables

1. Introduce Module 2

Explain that **Module 2** describes how to recognise a child with SAM and how to measure the child's MUAC, weight and height/length, and how to classify SAM. The module gives an overview of correct case management for children with SAM and provides a rationale for the essential components of case management. The module also describes how the 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 hospital.

Ask participants to read pages 1–7 of **Module 2** and complete Exercise A on page 8 using the *Photographs* booklet. Encourage participants to ask you questions while they are reading or completing the exercise.

Nurses (and nutritionists) groups (when appropriate): Ask the group to read **Module 2**, pages 1–19 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. Exercise A: Individual work followed by group discussion – Identifying signs of severe acute malnutrition in photographs

Possible answers for this exercise are provided in the back of the **Module 2**. The answers are also repeated in this guide for your convenience. Refer to the answers as you lead this discussion. Remember that the answers given are possible answers. There is room for discussion of almost all of the photos.

In many cases, the degree of a problem cannot accurately be judged without examining the child.

First point out the signs in Photo 1 (answered as an example in the exercise).

Next, for each photo in turn, ask a different participant what signs are visible. Ask the more confident participants first. If a participant does not mention all of the signs, ask 'Does anyone see another sign'?

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

Possible Answers to Exercise A:

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

Photo 2: Severe dermatosis (+++). Note fissure on lower thigh.
Moderate 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: These show the front and back of the same child. The child has severe wasting. From the front, the ribs show, and there is loose skin on the arms and thighs. The bones of the face clearly show. From the back, the ribs and spine show; folds of skin on the buttocks and thighs look like 'baggy pants'.

Photo 5: 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. The child's upper arms are extremely thin with loose skin. *(Also note the sunken eyes, a possible sign of dehydration, which will be discussed later.)* There is some discolouration on the abdomen, which may be mild dermatosis (+); it is difficult to tell from the photo.

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

Photo 8: Pus, a sign of eye infection.

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

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

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

Photo 12: Corneal ulcer (indicated by arrow), emergency sign of vitamin A deficiency. If not treated immediately with vitamin A and atropine, the lens of the eye may push out and cause blindness.
This photo also shows inflammation, a sign of infection.

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

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

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

Point out the following additional photos and discuss them in relation to eye signs.

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

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

At the end of the discussion, ask participants to review the answers to the exercise in the back of the module. The answers will explain how to carefully weigh and measure a child. Participants will then learn how to use the information on MUAC, weight and height and presence of oedema to determine whether a child has SAM and medical complications. Hold up the WFH look-up table and the admission and discharge criteria job aid, and explain that participants will need to refer to this. Explain when to use MUAC, when to use weight-for-length and when to use WFH.

3. Reading, demonstration

Some groups will easily understand the reading and how to use the WFH look-up table. These groups should complete the reading through page 19 and go on to Exercise B independently.

Nurses (and nutritionists) groups, as well as some other groups, may need a demonstration of how to use the WFH look-up table.

Demonstration for nurses (and nutritionists) groups (when appropriate): Before Exercise B, review the content of Section 4.3 of **Module 2** on pages 18–19 and demonstrate how to use the WFH look-up table. Hold up the card and point to the appropriate columns as you speak. Talk through the examples on page 19 of **Module 2**. 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. Explain when to use weight-for-length and when to use WFH.

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

Girl, < 2 years, 73.0 cm, 7.4 kg	= –2 z-score
Boy, > 2 years, 94.0 cm, 11.0 kg	= –3 z-score
Girl, < 2 years, 67.2 cm, 5.8 kg	= –3 z-score
*Boy, > 2 years, 75.0 cm, 7.4 kg	< –2 z-score
*Girl, > 2 years, 81.0 cm, 7.9 kg	< –3 z-score

Participants may be confused by negative numbers, so use an example of a boy who is under 2 years and 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 8.6 kg is median, 7.9 kg is –1 z-score, 7.3 kg is –2 z-score, 6.8 kg is –3 z-score, etc. Verify if they used the WFH table of length instead of the height. Use this example to show that a child who is –3 z-score has a lower WFH 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. Ask what the nutrition status of the child will be if the child's weight is as indicated in the column of +2 or +3 z-score.

*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-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 73 cm, suppose that his weight is 7.6 kg, which is between 7.3 kg (–3 z-score) and 7.9 kg (–2 z-score). The weight 7.6 kg is obviously not < 7.2 kg, but < 7.7 kg, so the score is written < –2 z-score.

4. Exercise B: Individual work followed by individual feedback – Determining z-scores

Since this is the first time that you will give individual feedback to the participants, be sure to make each participant feel comfortable. Some techniques to use while giving individual feedback are described in the 'When providing individual feedback' subsection under 'Facilitator Guidelines for All Modules' at the end of this guide.

Participants may not be familiar with z-scores. If a participant is interested in the concept of z-scores, encourage him/her to read Annex A of **Module 2**. If a participant is uncomfortable with statistics, reassure him/her that a complete understanding of z-scores is not necessary. The important thing is to know how to use the WFH look-up table to determine how the

child's weight compares to other children's weight of the same length or height. Children whose z-score is less than –3 are considered to have SAM.

Compare the participant's 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 long and weighs ___ kg, what is her z-score?'

Point out the instructions at the top of each page of the WFH look-up table. These instructions state that if a child is under 2 years old, or less than 87 cm tall and his/her age is unknown, measure length while the child is lying down. The instructions also state that if a child is 2 years old or older, or at least 87 cm tall and his/her age is unknown, measure height while standing up. If a child 2 years old or older, or 87 cm tall or taller, cannot stand up, e.g., if the child is too weak to stand, measure length while the child is lying down and subtract 0.7 cm from the length to arrive at a comparable height.

Ask the participant to look at the answers of Exercise B and ask him/her to read pages 21–22 of **Module 2** and complete Exercise C on page 23.

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

Participants look at photos and use the following criteria to decide whether a child should be classified as having SAM. They should decide to classify a child as SAM if they have:

- Oedema of both feet (+ oedema or worse ++ or +++), *and/or*
- MUAC less than 115 mm, *or*
- WFH < –3 z-score

Further explain that children with SAM and medical complications (anorexia or poor appetite, intractable vomiting, convulsions, lethargy or not alert, unconsciousness, hypoglycaemia, high fever, hypothermia, severe dehydration, lower respiratory tract infection, severe anaemia, eye signs of vitamin A deficiency, skin lesion –see Table 2 on page 3 of the CMAM Manual, Case Definitions of Medical Complications with SAM) should be treated for the management of SAM in Inpatient Care. As soon as children 6–59 months are stabilised and their medical complications are resolving, oedema decreasing, appetite regained, consistent weight gain and clinically well and alert, they are referred to Outpatient Care to continue treatment. Children 6–59 months classified as SAM without medical complications or severe oedema (+++) who are clinically well and alert should be treated for SAM in Outpatient Care.

For each photo in turn, ask a different participant what the child's z-score or MUAC is, whether or not there is oedema of both feet and what decisions should be made regarding how the child should be classified as having SAM, and whether he or she should be admitted to Outpatient Care or Inpatient Care. Add to the discussion as needed based on the comments below. (These comments are in the answer sheet provided.)

Photo 18: This child should be classified as having SAM. Her MUAC is > 115 mm and her weight-for-length is> –3 z-score, but she has oedema of both feet, as well as the lower legs (at least moderate [++] oedema). If the child has appetite and

no medical complications, she is admitted to Outpatient Care. If the child has no appetite or medical complications, then she is admitted to Inpatient Care.

Photo 19: This child should be classified as having SAM. Her weight-for-length is < −3 z-score and MUAC is < 115 mm. The child has no apparent oedema. After testing the appetite and checking for signs of medical complications, it will be decided if the child will be admitted to Inpatient Care or Outpatient Care.

Photo 20: This child should be classified as having SAM. He has a MUAC < 115 mm and WFH < –3 z-score. The child has no apparent oedema. Point out that if the child has a good appetite and no medical complications, he should be treated in Outpatient Care. If there is poor appetite or if there are medical complications, he should be treated in Inpatient Care.

It would 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 the participants' own health 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 health facility? If so, would they be admitted for treatment of SAM in Outpatient Care or Inpatient 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. Then do the following oral drill.

6. Oral drill: Admissions criteria and z-scores

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. Each participant will need his or her WFH look-up table. Tell participants that you will call on them one by one to participate. You will usually call on them in order, going around the table. If a participant cannot answer, 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 first and second column on the left, and ask the first participant if, based on MUAC, the child is classified as having SAM. Ask if, based on the child's z-score, the child is classified as having SAM. 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.

Sex, length or height, weight	MUAC	*Classify as SAM?*	*Z-score*	Additional information	*Classify as SAM?*
Girl, 82.0 cm, 7.8 kg	110 mm	*Yes*	*< –3*	no oedema	*Yes*
Boy, 74.0 cm, 7.9 kg	114 mm	*Yes*	*= –2*	no oedema	*Yes*
Girl, 73.8 cm, 6.2 kg	108 mm	*Yes*	*< –3*	no oedema	*Yes*
Boy, 67.0 cm, 6.1 kg	106 mm	*Yes*	*< –3*	++ oedema	*Yes*
Girl, 55.5 cm, 3.9 kg	114 mm	*Yes*	*< –2*	++ oedema	*Yes*
Girl, 67.1 cm, 4.9 kg	104 mm	*Yes*	*< –3*	no oedema	*Yes*
Boy, 90.0 cm, 10.8 kg	116 mm	*No*	*< –2*	+ oedema (both feet)	*Yes*
Girl, 70.5 cm, 6.1 kg	111 mm	*Yes*	*< –3*	no oedema	*Yes*
Girl, 87.0 cm, 9.8 kg	114 mm	*Yes*	*< –2*	one swollen foot	*Yes*
Boy, 79.3 cm, 9.4 kg	121 mm	*No*	*< –1*	no oedema	*No*
Girl, 69.5 cm, 6.8 kg	117 mm	*No*	*< –2*	+ oedema (both feet)	*Yes*
Boy, 99.0 cm, 11.2 kg	111 mm	*Yes*	*< –3*	no oedema	*Yes*

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

Pages 24–25 of **Module 2** provide the rationale for some of the case management procedures taught in the rest of the Case Management Training. Ask the group to read these pages and do the short answer exercise on page 26 as a review. The group will discuss the answers together.

At the end of the reading, use the questions on page 26 as a review. Brief answers are given below. Keep the discussion simple and brief. The point is to break up the reading and check participants' understanding.

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

Possible answers to exercise on page 26

1. When a child has SAM, why is it important to begin feeding slowly and cautiously?

   The systems of the body slow down with SAM (reductive adaptation). Rapid changes (such as rapid feeding or fluids) would overwhelm the systems, so feeding must be started slowly and cautiously.

2. Why should all children with SAM be given antibiotics?

   Nearly all children with SAM have bacterial infections, even if the usual signs of infection (such as inflammation or fever) are not apparent.

3. Why is it dangerous to give iron early in treatment?

   Because the child with SAM makes less haemoglobin (Hb) than usual, he/she already has extra iron stored in the body. If iron is given at this point, it may lead to free iron in the body, which can cause problems (see pages 24–25 of **Module 2**).

4. Why is ReSoMal preferable to regular or low-osmolarity ORS for children with SAM who have severe and/or persistent diarrhoea and/or dehydration?

   In SAM, the 'pump' that controls the balance of potassium and sodium in the cells runs slower. As a result, children with SAM have excess sodium in their cells and have lost potassium. ReSoMal has **more potassium** and **less sodium** than regular ORS and is thus better for children with SAM.

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

Ask participants to continue reading pages 27–29 of **Module 2** and do the short answer exercise on page 30. The group will discuss the answers together.

At the end of the reading, use the questions on page 30 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. Details of how to prepare the feeds are covered in **Module 4, Feeding**.

Possible answers to short answer exercise on page 30

1. What are two important differences between F-75 and F-100 (and RUTF)?

   F-75 contains fewer calories than F-100 (and RUTF): 75 kcal per 100 ml as opposed to 100 kcal per 100 ml.

   F-75 contains less protein than F-100 (and RUTF): 0.9 g per 100 ml as opposed to 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/she can tolerate more protein and fat. F-100 and RUTF are 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?

   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. What is the difference between F-100 and RUTF?

   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. Reading and short answer exercise (self-checked)

Ask participants to read pages 31–32 of **Module 2** and refer to the job aids and the CMAM Manual when instructed to do so. Point out the short answer exercise on page 33 of **Module 2**. Explain that participants should complete this exercise on their own and check their own answers on **Module 2**, page 49. They should then finish **Module 2** by reading the last section about referral and discharge procedures (pages 34–36).

10. Video and photos: Transformations

In a short Case Management Training, 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 SAM as well as two ‘success stories’: children named Babu and Kenroy. After the video, ask participants what signs of recovery they noticed in the children. They may mention such signs as smiling, standing up or moving around and having 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.

11. Summary of 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 children and measuring their MUAC and height/length and determining z-scores (and discharge weights) in clinical sessions.

2. Remind the participants of the classifications of SAM and the recommended criteria for triage for treating children with SAM in Inpatient Care and Outpatient Care.

3. Briefly review the process of successful management of a child with SAM with medical complications described in Section 6.4 (page 31) of **Module 2**. Also review the important things NOT to do in Section 6.5 (page 32).

4. Stress the importance of Emergency Room personnel knowing correct case management procedures for children with SAM. Also, new health facility or hospital staff must be informed and trained.

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

Facilitator Guidelines for Module 3: Initial Management

Procedures	Feedback
1. Distribute **Module 3, Initial Management**, and make sure all participants have a set of job aids. Introduce the module.	------
2. Ask the participants to read through page 8 of the module. Demonstration: Use of the Inpatient Management Record, Initial Management page.	------
3. Ask participants to read pages 10–12 of the module and complete Exercise A.	Individual feedback
4. Ask participants to read pages 18–24 of the module and complete the short answer exercise on page 25.	Self-checked
5. Exercise B: Group and individual work – Preparing and measuring ReSoMal.	Group discussion
6. Ask participants to read pages 27–28 and complete Exercise C: Individual work on two cases, group work on one case.	Individual and group feedback
7. Ask participants to read pages 35–36 and complete Exercise D.	Individual feedback
8. Video: Emergency Treatment.	------
9. Ask participants to read pages 40–41 and allow time to discuss. Ask participants to read page 42 and prepare for the role-play in Exercise E. Conduct the role-play.	Individual feedback on Inpatient Management Record Group discussion of role-play
10. Summarise the module.	------

Preparation for the module

If an overhead projector is available, you will use it to introduce the Inpatient Management Record and demonstrate how to use the Initial Management page. Practise using the overhead projector and the transparencies of the Inpatient Management Record pages provided. Alternatively, make sure that you have an enlarged copy of the Inpatient Management Record 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 1 litre for a 1-litre packet)	Mixing spoon Container to hold 1or 2 litres Measuring cup or medicine cup with ml markings, or 50 ml syringe Small cups or spoons for tasting
ReSoMal made from standard ORS	1-litre standard ORS packet Sugar (at least 50 g) CMV (1 level scoop) Cooled boiled water (at least 2 litres)	Same as above, plus: Container to hold > 2 litres Dietary scale that weighs to 5 g
ReSoMal made from low-osmolarity ORS	1-litre low-osmolarity ORS packet Sugar (at least 40 g) CMV (1 level scoop) Cooled boiled water (at least 1.7 litres)	Same as for standard ORS

The second segment of the video (Emergency Treatment) will be shown during this module.

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

1. Introduce Module 3

Explain that this module describes measures that should be taken immediately to prevent death while stabilising a 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 SAM ward. The child with SAM with medical complications is referred to and treated in the SAM ward, as is recommended in the Admission and Discharge Criteria for the Management of SAM in Children under 5 Job Aid and the CMAM Manual. If the child with SAM has no medical complications, the child is not admitted to Inpatient Care, but is instead referred to and treated in Outpatient Care. If it is decided to start treatment of SAM with medical complications in the Emergency Room, then personnel must be taught to recognise children with SAM and treat them correctly. They must understand why children with SAM must be treated differently than other children.

Point out the learning objectives of this module on pages 1–2. 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.

Ask participants to read through page 8 of **Module 3**. When everyone has reached that point, you will look together at the Inpatient Management Record, a recording form that will be used as an aid in this Case Management Training.

Nurses (and nutritionists) groups (when appropriate): Ask the group to pause when they get to the box on page 4 of the module. Ask questions to check their understanding, such as:

- What is hypoglycaemia?
- How do you know if a child has hypoglycaemia?
- How can hypoglycaemia be prevented?

All of these questions are answered in Sections 1.1–1.2 (pages 3–8) of the module.

Hold up the F-75 look-up table. Be sure that everyone is looking at the front of the card (not the side for children with severe [+++] oedema). Point to the columns to show how to read the card. For now, focus only on how to use the 2-hourly feed column. 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 1.1 of the module, which explains how to treat hypoglycaemia. Briefly cover the main points:

- The hypoglycaemic child needs glucose quickly.
- How to give glucose:
  - 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 intravenously, 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 one-quarter of the 2-hourly amount shown on the F-75 job aid.
- 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 5 orally, showing how to use the F-75 job aid, dividing the amount shown for a 2-hourly feed by 4.

Ask participants to read Section 1.1 of the module (to review the concepts that you have just presented) and then continue reading pages 5–8 of the module.

2. Demonstration: Use of the Inpatient Management Record, Initial Management Page

Tell participants that the Inpatient Management Record (see the Inpatient Management Record Job Aid) will be used in this Case Management Training 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 Inpatient Management Record 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 a digital projector, use it to show the pages of the Inpatient Management Record. Otherwise, have the group gather closely around the table where they can see enlarged copies of the Inpatient Management Record pages or make sure they have their own hard copies. 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 focuses on this first page of the Inpatient Management Record. It has space to record the signs of SAM and 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 Inpatient Management Record in front of participants:

> *Dikki is a 20-month-old boy. He was admitted on 16 December 2000 at 9:00. His hospital number is 502.*
>
> *Dikki appears severely wasted. He has oedema of both feet and lower legs (++). He has mild dermatosis (+).*
>
> *Dikki's MUAC is 109 mm.*
>
> *He weighs 7.0 kg and is 70 cm long. Ask a participant to look up Dikki's z-score. (Answer: It is WFH < −2 z-score.) Record it. Ask if Dikki should be admitted to Inpatient Care. (Answer: Dikki should be admitted because he has oedema with severe wasting [MUAC is < 115 mm], the reason for Inpatient Care; he also has dermatosis, a medical complication, another reason for Inpatient Care.)*
>
> *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 90 g/L. 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 information 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**, focus on this page of the Inpatient Management Record. 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 page. 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 be easily 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. Also the discharge weight (end of treatment of SAM) will be indicated on the weight chart. Explain how to determine the discharge weight by the use of the target weight for discharge look-up table in the job aids).

Comments/Outcome page

This page is used as needed to record comments on any special instructions or training given to mothers[1]. It is also where immunisations and vaccinations are recorded. When a child is referred to Outpatient Care to continue treatment as discharged cured (full recovery), departs early (defaults), dies or does not recover in given time period (2 months in treatment but non-response despite further medical investigations), that 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 Inpatient Management Record that participants will use in this module. They should not be concerned about the other pages at this point.

Ask participants to continue reading Module 3, pages 10–12, and then complete Exercise A, in which they will use parts of the Initial Management page of the Inpatient Management Record.

[1] The term 'mother' is used throughout the modules and guides. However, it is understood that the person who is responsible for the care of the child might not always be that child's mother, but rather some other caregiver. However, for the sake of readability, 'mother' means 'mother/caregiver' throughout the modules and guides, 'she' means 'she or he' and 'her' means 'her or his'.

Nurses (and nutritionists) 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 1.3 and then stop. Ask the group questions to check understanding with such questions as:

- What signs of shock must be present for a child with SAM 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 such questions as:

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

3. Exercise A: Individual work followed by individual feedback – Identifying initial treatments needed and recording on the Inpatient Management Record

Participants should ask you for individual feedback after doing the first case, **Tina**. Giving feedback at this point will allow you to ensure that participants are 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 (and nutritionists) 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 Inpatient Management Record 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/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.

Special note re 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 re 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 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 need the 50 ml bolus NGT.

At the end of feedback, give participants the answer sheet. Rounding (or lack of rounding) may cause some discrepancies between participant's answers and those on the answer sheet. Do not be overly concerned about these discrepancies. Explain to participants that they may need to round answers 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. Reading and short answer exercise

Ask participants to read pages 18–24 and complete the short answer exercise on page 25. 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 the *Photographs* booklet, Photo 12 (corneal ulceration); Photos 6, 30 and 31 (sunken eyes); and Photo 32 (skin pinch).

5. Exercise B: Group and individual work – Preparing and measuring ReSoMal

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

Prepare ReSoMal according to package directions, or according to instructions on page 24 of the module. Let a different participant do each step. For example, ask one person to add the packet, another to measure the sugar, another to 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 participant to taste it.

Next ask each participant to answer the questions on page 25 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.

Ask participants to read pages 27–28 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 Inpatient Management Record on page 29.

Nurses (and nutritionists) groups (when appropriate): Before Exercise C, conduct this demonstration/role-play to help participants understand how **recording** on the Inpatient Management Record 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 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 about the child, 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 Inpatient Management Record.

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:

- All 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.

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

- Babu weighs 5.2 kg and is 68 cm in length.
- He appears severely wasted.
- He has no oedema.
- He has a MUAC of 112 mm.
- 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.

- His blood glucose is 4 mmol/L.
- There are no eye problems.

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

At suitable points, interject questions such as, 'What is Babu's z-score? Does Babu need to be admitted? Does Babu have hypoglycaemia? Hypothermia?' *(Answers: MUAC is < 115 mm, WFH is < −3 z-score and he has dermatosis, so needs to be admitted. 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 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. Exercise C: Individual and group work – Identifying more initial treatments needed and recording on the Inpatient Management Record

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 (and nutritionists) 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/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 overhead of a blank Initial Management page. Ask participants to complete a blank Initial Management page as you write on the overhead. Have participants take turns reading

aloud the background information given on page 32 in the module. As they read, record the information on the overhead.

Next, ask participants in turn to answer questions 3b–3d of the exercise. Discuss or correct misunderstandings as needed. (Refer to the answer sheet given in the packet as needed.) When question 3d has been answered, record information about amounts of IV glucose 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 the overhead of the Initial Management page 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. Emphasise 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 quickly notice 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 that includes all three cases.

Ask the group to read pages 35–36 and complete Exercise D. The Routine and Other Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care Job Aids 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 Case Management Training are inconsistent with those in the local area due to resistance.

Nurses (and nutritionists) groups (when appropriate): Most nurses (and nutritionists) 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 3.0 of **Module 3**).

Before completing 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 for the local area).
- The dose should be based on the child's weight, not age.

Demonstrate how to use the Routine and Other Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care Job Aids using the example about Khalil on page 36 of the module.

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

7. Exercise D: Individual work followed by individual feedback – Selecting antibiotics and determining dosages

When several drug formulations are listed on the Routine and Other Medicine Protocols and Vaccines for Children under 5 with SAM in Inpatient Care Job Aids, 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 Routine and Other Medicine Protocols and Vaccines Job Aids. The tables tell what antibiotic drug to use, depending on the presence or absence of medical complications, and in case of resistance, with daily dosages expressed per kg body weight. Other routine medicines for presumptive treatment and/or prevention, and supplemental medicines for other common infections and infestations with indication and dosage are summarized, or refer to national treatment protocols.

The dosage of the antibiotic drug calculated per body weight gives a more precise dosing than one based on age.

Remind the participants where antibiotics prescriptions should be recorded on the Initial Management page of the Inpatient Management Record.

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

Give each participant 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 pages 40–41 and allow time to discuss. Then participants will read Section 5.0 (page 42)and complete the written part of Exercise E.

8. 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.*
>
> *The 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, such as the following:

- What did you see the emergency team check for and why? What did you not see them check for? *Note:* Checking eyes is not shown. Use of dextrostix is not shown, but this is not required in this case; when the child is in shock and lethargic, he should get the IV glucose.
- This child has chest in-drawing and appears to have fast breathing. What are these signs of? *(Answer: Severe pneumonia.)* What antibiotic should be given? *(Answer: Amoxicillin-clavulanic acid and gentamicin. If the child responds, complete the*

treatment; if the child does not respond add chloramphenicol (or ceftriaxone) until the child improves.)

- What was different from the guidance given in 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. Give IV fluids only when a child is in shock. (Ask: 'What are signs of shock?' *Answer: Cold hands with slow capillary refill or weak or 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 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 palmer pallor. Hospital staff 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.

After the discussion, ask participants to continue work on the module by reading Section 5.0 on page 42 and completing the written part of Exercise E.

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

9. Exercise E: Individual work followed by individual feedback, then role-play and discussion – Briefing staff on a child's conditions and needs

This exercise should show how an Inpatient Management Record 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 Inpatient Management Record for this exercise.

Since this is the first role-play in the Case Management Training, review the general facilitator guidelines about role-plays at the end of this guide on page 79.

When a participant has finished the Initial Management page for Rayna, he/she should show it to you. Check it quickly and give each participant the Inpatient Management Record page

provided in the answer sheets. Then ask the participant to list points that the admitting physician should make, and questions that a nurse might ask, as instructed on page 42.

Select a participant to play the role of the physician 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 physician and nurse might behave. The physician should refer to the Initial Management page for Rayna as an aid. The physician 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.

10. Summary of the module

1. Remind participants of the learning objectives for this module, listed on pages 1–2 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 have these skills, along with the knowledge of what to do and what not to do.

2. Remind participants that all children with 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 Inpatient Management Record is meant to be an aid, to help remember emergency steps. When used as a record, it also is a valuable communication tool.

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

Facilitator Guidelines for Module 4: Feeding

Procedures	Feedback
1. Distribute **Module 4, Feeding**, and the job aids that contain the F-100 and RUTF look-up tables. Introduce the module.	------
2. Ask participants to read through page 5 of the module. Ask the group to complete Exercise A.	Group discussion
3. Ask the participants to read pages 7–8 and complete the short answer exercise on page 9.	Self-checked
4. Lead the group oral drill on determining amounts of F-75 to give.	Drill
5. Ask participants to read pages 10–13. Demonstration: 24-Hour Food Intake Chart	
6. Ask participants to complete the short answer exercise on page 14.	Self-checked
7. Ask participants to read page 15 and complete Exercise B.	Individual feedback
8. Ask participants to read pages 22–25 and complete Exercise C.	Individual feedback
9. Ask participants to read pages 29–30 and complete Exercise D.	Individual feedback
10. Ask participants to read pages 36–38 and complete Exercise E. They may work with others from their own hospital on this exercise.*	Group discussion
11. Ask participants to read pages 41–42 and complete Exercise F.	Individual feedback
12. Ask participants to read pages 45–46 and prepare for the group discussion in Exercise G.	Group discussion
13. Ask participants to read pages 48–57, followed by summary presentation and group discussion.	Presentation and Group Discussion
14. Summarise the module.	------

* If desired, this activity may be done on the half-day in the middle of the Case Management Training (day 4), to enable groups from the same hospital to work together.

Preparation for the module

Early in this module the group will prepare F-75 and F-100 and discuss the use of RUTF. Obtain from the Course Director copies of recipes for F-75 and F-100 and RUTF specifications used in the hospital where clinical practice occurs. (If the recipes for F-75 and F-100 are not suitable, use generic recipes from page 4 of the module.) 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 copies of the 24-Hour Food Intake Chart and Daily Ward Feeds Chart (or enlarged copies of these forms that can be used for demonstrations to the whole group on how to complete the forms).

1. Introduce Module 4

Explain that this module describes a critical part of managing SAM, 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/or F-100 and, for the few cases remaining in Inpatient Care, to continue feeding on RUTF or free-feeding on F-100. This module focuses on preparing the feeds, planning feeding and giving the feeds according to plan.

Point out the learning objectives of this module on page 1.

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

Ask participants to read through page 5 of the module. When everyone has reached that point, the group will prepare F-75 and F-100 and discuss the use of RUTF. *(If necessary, preparation of F-75 and F-100 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.)*

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

Make F-75 first 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 of water, which would make the formula too diluted.

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

Discuss with the group such questions as:

- What aspects of preparing these recipes would be difficult in your health facility or hospital?
- 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 the composition of RUTF and how it is used. Discuss with the participants how to conduct the RUTF appetite test and provide the RUTF key messages.

3. Reading and short answer exercise

Participants will use the F-75 look-up tables from the set of job aids in this section. Be aware that one F-75 look-up table is for children with severe wasting and mild (+) or moderate (++) oedema, and the other F-75 look-up table is for children with severe (+++) oedema. While participants are working, prepare for the drill below.

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

Ask participants to gather around for the drill. They will need their F-75 look-up tables. The purpose of this drill is to practise using the look-up table 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 job aid 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.

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	145 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 with 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, half-hourly feeds	20 ml per ½ hour (80 ml ÷ 4)
7.4 kg, hypoglycaemia, severe (+++) oedema, half-hourly feeds	15 ml per ½ hour (60 ml ÷ 4)
9.0 kg with 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 Inpatient Management Record. 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.

5. Reading, demonstration using 24-Hour Food Intake Chart

Have participants read pages 10–13 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/she needs the F-75, but he/she should be encouraged to breastfeed between feeds. F-75 is a low-sodium, low-solute milk and is safe for young babies. Breastfeeding counselling may be needed.

Low-birth-weight babies are not likely to meet the definition for SAM used in this Case Management Training. They are not usually severely wasted or oedematous. Low-birth-weight babies should be breastfed. Their management is not taught in this Case Management Training.

The (medical and) dietary management of infants under 6 months (or infants over 6 months but less than 4 kg) is provided in Section 6.0.

Nurses (and nutritionists) groups (when appropriate): After participants read pages 10–13, ask how they will know if a child needs an NGT. *(Answer: The child needs an NGT if he/she does not take 80% of the F-75 orally [i.e., he/she leaves more than 20%] for 2 or 3 consecutive feeds.)*

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

- Put 100 ml of 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 80 ml. 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 of water in a glass and show the amount to the group. This time, have a participant mark where half would be and drink half. 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 his/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 (Likewise, if more than 12 ml is left, the child has not taken enough [60 ml – 48 ml = 12 ml].)

Give one more example. A child is offered 75 ml of F-75 orally. Show this amount in a glass. He/she 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/she 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 nasogastric (NG) feeding, leftovers may be measured in the syringe, and then dripped through the NGT.

Demonstration of 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 overhead transparency or 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 named Marina weighs 5.4 kg on admission. It is her second day in hospital, and she still weighs 5.4 kg. 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 physician or using an NGT to finish feeds. They should not wait 24 hours between noticing a problem and taking action.

6. Short answer exercise

Have participants read and complete a short answer exercise about feeding and recording feeds on the 24-Hour Food Intake Chart on page 14. They can check their own answers.

Nurses (and nutritionists) 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. Exercise B: Individual work followed by individual feedback – Determining F-75 feeding plans for the next day

In this exercise, participants will need to refer to the criteria on page 15 of the module. These criteria could be repeated as footnotes at the bottom of the F-75 look-up 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 (and nutritionists) groups (when appropriate): Have the nurses (and nutritionists) 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 hospital (page 20 of the module). Put up a blank overhead of the 24-Hour Food Intake Chart and use the information on page 21 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 (and nutritionists), who let her go for the rest of the night without food. Discuss Suraiya's feed plan for day 4.

8. Exercise C: Individual work followed by individual feedback – Feeding RUTF and/or F-100 during transition

Ask participants to continue doing individual work by reading pages 22–25 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 Case Management Training (day 4). The Course Director will inform you of any other work to be done on day 4. For example, participants from the same health facility or hospital 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 and/or F-100 slowly and gradually during transition. Be sure that they understand the schedule for feeding during transition given on pages 22–25 of the module. Monitoring is very important during transition.

Possible question. Participants may ask if it is permissible to give a child more RUTF and/or F-100 if he/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 each participant a copy of the answer sheet.

9. Exercise D: Individual work followed by individual feedback – Feeding on RUTF and free-feeding on F-100 in rehabilitation

Ask the participant to continue doing individual work by reading pages 29–30 and completing Exercise D. Explain that the RUTF and F-100 look-up tables will be used in Exercise D.

Nurses (and nutritionists) groups (when appropriate): Instead of having the nurses (and nutritionists) read Section 4.0 (pages 29–30) individually, you may talk through this section.

Hold up the RUTF and F-100 look-up table for rehabilitation. Explain that, after transition, the look-up table for F-100 in rehabilitation 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 29–30 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 was used, 8.2 kg.)

In Exercise D, do Cases 1 and 2 (Delroy and Pedro) orally as a group. Ask participants to do 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 look-up tables. 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 each participant a copy of the answer sheet for Exercise D.

10. Exercise E: Preparing a schedule for activities on the ward followed by group discussion

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.

Ask the participants to read pages 36–38 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.

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 has 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 mothers about feeding their children?

11. Exercise F: Individual work followed by individual feedback – Planning feeding for the ward

Ask participants to continue reading pages 41–42 and complete Exercise F. In this exercise, participants complete a Daily Ward Feeds Chart by adding three children to the chart and doing the calculations at the bottom of the form.

Nurses (and nutritionists) groups (when appropriate): If you anticipate that participants will have difficulty with this form, use an overhead transparency or an enlarged copy of the form to demonstrate to the group how to complete the form. Follow the instructions on page 41 as you demonstrate completion of the form. You may use the information in the example on page 42.

After the exercise, conduct individual feedback as usual. Give each participant a copy of the answer sheet. *Note*: On the answer sheet, at the bottom, the blank line should be filled in 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.

12. Exercise G: Group discussion – Preparing staff to do tasks related to feeding

Ask the participants to read pages 45–46 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 47) 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
- Define daily and feed amounts of RUTF
- 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 47 of the module, focusing on one task.

Examples

1. Nurses (and nutritionists) do not know how to prepare F-75 and F-100.

2. Nurses (and/or nutritionists) on duty at 7:00 and 19:00 will be responsible for this task. Two nurses (and nutritionists) 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 (and nutritionists) 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.

13. Additional materials – Managing infants 0–6 months old

Ask participants to read the additional information on pages 48–53**.** When the group finishes reading, the facilitator will discuss and answer questions in Section 6.1.

Ask participants to continue reading pages 53–57. When the group has finished, the facilitator will lead the group discussion on Section 6.2.

14. Summary of the module

1. Point out that participants have learnt 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 Ward 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 and/or F-100 over 3 days
   - Adjusting the feeding plan on RUTF and/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 under 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 page 2 of the module and complete the short answer exercise. Demonstration: Daily Care page of Inpatient Management Record.	Self-checked
3. Ask participants to read pages 6–9 and complete the short answer exercise on page 10.	Self-checked
4. Ask participants to read pages 11–12 and complete Exercise A.	Individual feedback
5. Ask participants to complete Exercise B as a group.	Group feedback
6. Demonstration: Monitoring Record of Inpatient Management Record. Ask participants to read pages 17–21 and complete the short answer exercise.	Self-checked
7. Ask participants to complete Exercise C.	Individual feedback
8. Ask participants to complete Exercise D.	Individual feedback
9. Ask participants to read page 32.	Individual feedback
10. Optional demonstration: Weight Chart. Ask participants to read pages 31–33 and complete the short answer exercise on page 34.	Self-checked
11. Ask participants to complete Exercise E.	Individual feedback
12. Summarise the module.	------

Preparation 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 Module 5

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 and giving eye drops and antibiotics, are very important for a child's recovery.

This module also focuses on monitoring the child with SAM, specifically monitoring pulse, respiration 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 1 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 Inpatient Management Record: the Daily Care page, the Monitoring Record and the weight chart. (Hold up the enlarged copies.)

2. Reading, short answer exercise, demonstration

Ask participants to read through page 2 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 Inpatient Management Record.

Demonstration of 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 overhead (or 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 a nurse gives an antibiotic, he/she should sign the form.

Write on the overhead or 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 5 in the module by entering appropriate times and doses. You will also record information for Bianca's first day in hospital. Talk as you write, for example:

- Bianca's first day in hospital is 8 January, so I record the date as 8 Jan for day 1.
- Bianca's weight is 8.80 kg.
- She has no oedema, so I record 0.
- Bianca has diarrhoea, but no vomiting, so I record only 'D'. (If she had vomiting only, I would record 'V'. If she had diarrhoea and vomiting, I would record both 'D' and 'V'.)
- She will be taking F-75.
- She will be fed on a 2-hourly basis, so I record that she will receive 12 feeds daily.
- At the end of the day, or the next morning, I will record the total volume that she took during day 1. *(Question: Where can I find the total volume? Answer: On the 24-Hour Food Intake Chart.)*
- Bianca has a medical complication (severe dermatosis) so she will be taking amoxicillin-clavulanic acid 150 mg (5 ml syrup) three times a day for 5–10 days, so I record the name of the drug, the dosage and times for three doses, 8 hours apart. These are times when medications are normally given in hospital. I draw a box to show that amoxicillin should be given at these times for 5 days. The box will show the nurses (and nutritionists) 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.
- I give Bianca her first dose of amoxicillin-clavulanic acid and sign the form to show that it has been given. Someone else will give the next dose and sign at 16:00 and 24:00.

- Bianca will receive a single dose of folic acid of 5 mg. I give her 5 mg of folic acid and sign the form.
- Bianca has not had a dose of vitamin A in the past month, but she has no eye signs and no measles. She is 2 years old, so I record that she will need a dose of 200,000 IU on week 4 or upon discharge from treatment. *(Explain that participants will learn more about when to give vitamin A later in this module. Do not discuss vitamin A now.)*
- She has no worms, so I write 'NONE' by 'drug for worms', but she will receive presumptive treatment after 1 week in treatment. So I write mebendazole 300 mg on day 8.
- Bianca's dose of iron will be 0.75 ml, given twice daily at 8:00 and 20:00, starting from being on F-100 for 2 days. Notice that spaces are shaded out to show that iron should not be given early in treatment. Note that if she had been on RUTF, iron supplementation would not have been necessary.
- Bianca needs tetracycline ointment, so I circle that and write that drops should be given at 8:00, 14:00, 20:00 and 2:00. I indicate that the drops are needed in her left eye. Bianca does not need atropine, so I write 'NONE'. *(Explain that participants will learn about treatment for eye problems later in this module. Do not discuss treatment of eye problems now.)*
- I give Bianca a drop of tetracycline in her left eye and sign the form. Other nurses will give the later doses and sign.
- I record +++ to show that Bianca has severe dermatosis.
- I circle that she will need bathing with 1% permanganate. Bianca is too sick to be bathed today, but I sponge 1% permanganate solution on the oozing spots and dress them with gauze. Then I sign the form.

Participants can see how Bianca's Daily Care page was filled for 9 days by looking at the example on page 5 of Module 5.

3. Reading and short answer exercise

Ask participants to read pages 6–9 of the module and complete the short answer exercise.

Note: 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 (and nutritionists) groups (when appropriate): Before participants complete the short answer exercise on page 10, review the guidelines for giving vitamin A on pages 8–9 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. Reading and Exercise A: Individual work followed by individual feedback – Deciding on treatment for eye signs

Ask participants to read pages 11–12 of the module and complete Exercise A on treatment of eye problems.

Nurses (and nutritionists) groups: (when appropriate): Before the exercise, review the table on page 12 of the module with the group and answer any questions. Explain that in Exercise A they will need to refer to the tables about vitamin A on pages 8–9 and to the table about eye drops on page 12.

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

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

5. Exercise B: Group work followed by group feedback – Using the Daily Care page of the Inpatient Management Record

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 16 of the module. **Most of the information needed about Lani is on her Initial Management page.** Lani has SAM and has been admitted to the SAM ward. 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: amoxicillin-clavulanic acid for 5–10 days.
- Notice the times that medications are given on the ward. These are listed on page 15 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 amoxicillin-clavulanic acid, the route of administration and the time it will be given, and draw a box to show when it

should be given. *(Do not sign the form yet. You are simply setting up the form, not giving the drugs.)*
- Record the provision of the single dose of folic acid that will be given.
- Record the dose of vitamin A that Lani needs.
- Lani does not have worms, so write 'NONE' by 'drug for worms'. Lani will receive presumptive treatment after 1 week in treatment. So I write mebendazole 300 mg on day 8.
- Look at the information on Lani's eye signs given on the Initial Management page. Decide what type of eye ointment or eye drops, if any, Lani needs. Record the type(s) of eye ointment or 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 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.

Distribute copies of the answer sheet for this exercise. Let each participant compare his/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. Demonstration, reading and short answer exercise

Participants will learn about use of the Monitoring Record in this section. Have participants read the first three paragraphs on page 17 of the module (or orally cover the points in these paragraphs).

Demonstration of Monitoring Record

Put up a blank overhead of the Monitoring Record (or use an enlarged copy).

Point out that a 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 axillary temperature at 9:00 on day 1 is 36.0° 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 recorded on the horizontal line midway between the vertical lines that separate the dates.

- *Dikki's axillary 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 axillary 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 21 of the module.

Ask participants to continue reading pages 17–21 and then complete the short answer exercise on page 22.

Nurses (and nutritionists) groups (when appropriate): Review the **Summary of Danger Signs** on page 19 of the module with the group, as well as the other danger signs listed on the same page.

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

7. Exercise C: Individual work followed by individual feedback – Use of the Daily Care page and Monitoring Record

In this exercise, participants will make entries on the Daily Care page that they set up for Lani in Exercise B. 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 B 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 that the set of job aids includes one on danger signs.

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

Nurses (and nutritionists) 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. Exercise D: Individual work followed by individual feedback – Reviewing Monitoring Records to identify danger signs

Ask the participants to complete Exercise D. 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 participants:

- 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 the participant whether he/she thinks that monitoring can be done every 4 hours in his/her hospital. If not, how often does the participant think that monitoring can be done?

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

Nurses (and nutritionists) 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. Testing the appetite with RUTF

Participants will be reminded that an improving appetite is a result of a general improving medical condition: The child's medical complication is resolving, the child is alert.

Monitoring the improvement of the appetite guides the decision for the transfer to the transition phase, where the child's appetite will be tested with RUTF at every feed, until the child eats the amount of RUTF at every meal prescribed for his/her weight.

10. Optional demonstration, reading and short answer exercise

Section 8.0 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 might want to conduct a demonstration of how to complete it. When appropriate, nurses (and nutritionists) groups would have a demonstration.

Optional demonstration of weight chart

Use an overhead transparency or an enlarged copy of the weight chart. Point out that the vertical axis shows the possible range of weights for the child, and the horizontal axis shows the days that the child is in hospital. Each point plotted on the graph shows 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 is 6.1 kg, his length is 67.0 cm and his MUAC is 112 mm. He has moderate (++) oedema on admission. Opu has oedema with severe wasting and is admitted to Inpatient Care. Record this information in the spaces to the left of the weight chart.
- What is the desired discharge weight for Opu? Look it up on the discharge weight look-up table. Participants should find that Opu's desired discharge weight (15% target weight) is 7.0 kg. Record this to the left of the weight chart.
- Now we need to set up the vertical axis of the graph. Point to the vertical axis. Each heavy line going across represents a whole number weight, such as 5.0 kg, 6.0 kg, etc. Each lighter line represents 0.1 kg. Point to the heavy lines and lighter lines.
- Since Opu has some oedema, he will lose some weight before he gains any weight. 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 kg or 3 kg loss (depending on his age). His starting weight is 6.1 kg, so we will write 6.0 kg by the first heavy line up from the bottom of the chart. 6.1 kg will be on the first light line above this. Label the heavy line '6.0 kg'.
- We can now label the other heavy lines that intersect the vertical axis. There is no need to label the lighter lines. We will just remember that each one represents 0.1 kg. Label the remaining heavy lines 5.0 (bottom line), 7.0 kg, 8.0 kg and 9.0 kg (top line).
- Now we can indicate the desired discharge weight on the graph. Draw a heavy line across the graph at 7.0 kg and label it 'desired discharge weight'.
- Now the graph is set up. We can plot the admission weight of 6.1 kg. To do this, we follow the line up from day 1, and across from the weight 6.1 kg, 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 kg. Make a mark, such as an 'X', to plot the point.
- On the next day, we would plot a point for the weight on day 2. The weight on day 2 is the same, 6.1 kg. We then connect the points with a line. Plot a point for this weight and connect the points.
- On day 3, 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. He weighs 5.5 kg. He starts F-100 on day 4. Plot the weight for day 4 and connect the points. Underneath the point for day 4 write 'F-100'.
- On day 5, Opu has gained some weight. He weighs 5.6 kg. Plot the weight for day 5 and connect the points.
- On day 6, Opu has gained some more weight. He weighs 5.7 kg. Plot the weight for day 6 and connect the points.
- Over the next days, Opu continues to gain weight. Plot points for day 7 (5.8 kg), day 8 (5.9 kg), day 9 (5.9 kg) and day 10 (6.1 kg). Connect the points.
- You can easily see from looking at the graph that Opu first lost some weight due to reduced oedema fluid and then gained weight once he started on F-100. Point to show the line going down and then up again.

Participants should read pages 31–33 and complete the short answer exercise on page 34. They should check their own answers and continue to Exercise E.

Nurses (and nutritionists) groups (when appropriate): Facilitators may want to check answers to the short answer exercise individually to be sure that nurses (and nutritionists) understand how to read the weight chart.

11. Exercise E: Individual work followed by individual feedback – Preparing a weight chart

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 and/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.

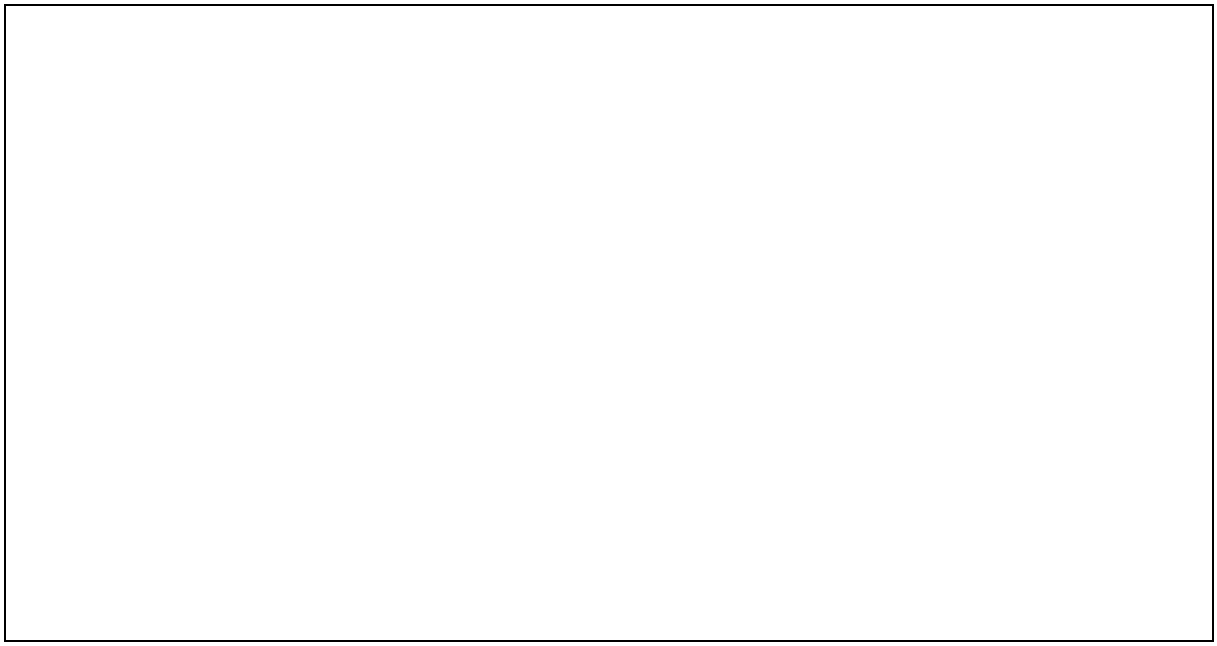
Give each participant a copy of the answer sheets (two pages).

12. Summary of 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 1 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, Problem Solving and Reporting**. Introduce the module.	------
2. Ask participants to read through page 8 of the module and complete two short answer exercises (on pages 3 and 9).	Self-checked
3. Ask participants to complete Exercise A.	Individual feedback
4. Ask participants to read pages 22–23 and prepare for group discussion in Exercise B.	Group discussion
5. Ask participants to read pages 26–27 and complete the Weight Gain Tally Sheet in Exercise C. Then ask them to prepare for group discussion by answering questions on page 30 of the module.	Group discussion
6. Ask participants to read pages 31–32 and complete Exercise D.	Group discussion
7. Ask participants to read page 42 and complete the short answer exercise on page 43.	Self-checked
8. Ask participants to read pages 44–51 and prepare for the role-play in Exercise E on page 52. Conduct the role-play.	Group discussion
9. Lead a discussion following the use of Monitoring Checklists in the ward. *(Timing of this activity will vary.)*	Group discussion
10. Ask participants to read pages 53–56 and complete Exercise F1, then read pages 58–60 and then complete Exercises G and then F2. This will be followed by group discussion.	Group Discussion
11. Summarise the module.	------

Preparation 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 this guide. 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 the Supervisor's Checklist for Inpatient Care Job Aid. Take copies of the monitoring checklists on days 6 and 7.

1. Introduce Module 6

Monitoring is important both for identifying progress and for identifying problems. This module focuses on monitoring 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 on the **whole ward.** Finally, the module discusses monitoring of **ward procedures**.

Point out the learning objectives on page 1 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 pages 4–5 shows the importance of this concept.

2. Reading and short answer exercises

Ask participants to read through page 8 of the module and complete the short answer exercises on pages 3 and 9.

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 9 is about calculating daily weight gain. A calculator will be very helpful.

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

- Have participants pause on page 3. Do the short answer exercise together as a group.
- Have participants pause at the end of page 6. Discuss the examples of causes and solutions on page 5. Be sure that participants understand the concept that the solution to a problem must be appropriate for its cause.
- Have participants pause after the example of page 8. Following the process described for calculating daily weight gain, use the flipchart to present the example on page 8 for the group. You may also wish to do the first problem of the short answer exercise on page 9 as a demonstration for the group.
- Have participants complete the short answer exercise on page 9 independently. Individually check participants' answers to the short answer exercise.

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

Nurses (and nutritionists) groups (when appropriate): Before this exercise, review with participants the criteria for failure to respond on page 10. Stress that these are listed merely as a guide to identifying problems. There may be other signs of problems as well.

Nurses (and nutritionists) groups should just do Case 1 (Ceri) in Exercise A. Omit Case 2 (Lennox) for nurses (and nutritionists) 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/she got the information from the Inpatient Management Record.

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 10 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 each participant a copy of the answer sheet. Ask the participant to read pages 22–23, which discuss possible causes of failure to respond and possible solutions. They may also read the CMAM Manual, Annex 18 (pages 126–128) if they are interested and there is time.

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

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

Be sure that participants prepare individually for Exercise B by writing answers to the questions listed.

Use the questions in the module (pages 24–25) 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). Tuberculosis (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 weight on RUTF and/or 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. Exercise C: Individual work followed by group discussion – Determining whether there is a problem with weight gain on the ward

Ask participants to read pages 26–27 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 and/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 needs to be done only 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 a participant yet; wait until after the group discussion.)

Be sure that participants prepare for the discussion by writing answers to questions on page 30. 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. Exercise D: Individual work followed by group discussion – Determining common factors in deaths

Ask participants to read pages 31–32 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, let participants check the answers on pages 80–81 of the module.

7. Reading and short answer exercise

This section is about calculating case-fatality rates for a ward. Ask participants to read page 42 and complete the short answer exercise on page 43 about calculating case-fatality rates for a ward.

Nurses (and nutritionists) 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. Exercise E: Role-play – Problem-solving session

Ask participants to read pages 44–51 and then see you about a role 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 (and nutritionists) 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/she should take the lead in the discussion and should follow the process outlined on pages 50–51 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 hospital (last Monday). She was dead when you arrived in the morning.
- Ramon, a 24-month-old boy, died during his third night in 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 over 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 (and nutritionists). 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 SAM 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 physician.

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/she 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 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/she could not be reached. Ramon never woke up.

Hospital administrator

The hospital recently lost some funding from the government, and you had to decrease staff. You 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, and children with SAM are best sleeping with their mothers, which also will affect faster healing.

9. Group discussion – Results of monitoring food preparation and ward procedures

If there is time during a clinical session (day 6 and/or 7), participants will use Monitoring Checklists (like those in the Supervisor's Checklist for Inpatient Care Job Aid) to monitor food preparation and ward procedures.

After the monitoring session, lead a group discussion. 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 back in the classroom from memory of what they have 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. Group discussion – Reporting for SAM

Ask participants to read through pages 53–56 (Section 7.1). When the participants finish reading Section 7.1, demonstrate how to use the tally sheet based on the Inpatient Management Records of children in treatment and discharged during the given time period of reporting, using the Entry and Exit Categories for Monitoring the Management of SAM in Children 6–59 Months Job Aid.

Exercise F1 will be done in groups. When the groups have finished doing Exercise F1, lead a group discussion of the exercise.

Ask participants to continue reading pages 58–60 (Section 7.2). When the participants finish reading Section 7.2, demonstrate how to use the monthly site report based on the site tally sheet. Explain how one could calculate the performance indicators for children who remain in Inpatient Care until full recovery. As this is rarely the case, remind them that these boxes can remain empty, but also that the absolute numbers can be used to interpret performance. Performance indicators in Outpatient Care can also be calculated.

Exercise G will be completed in groups (use the same groups for completing Exercises F1, G and F2). Copies of Inpatient Management Record forms (pages 1 and 6 only) of five children are distributed, and participants will review the Inpatient Management Records, complete the tally sheet and discuss the findings.

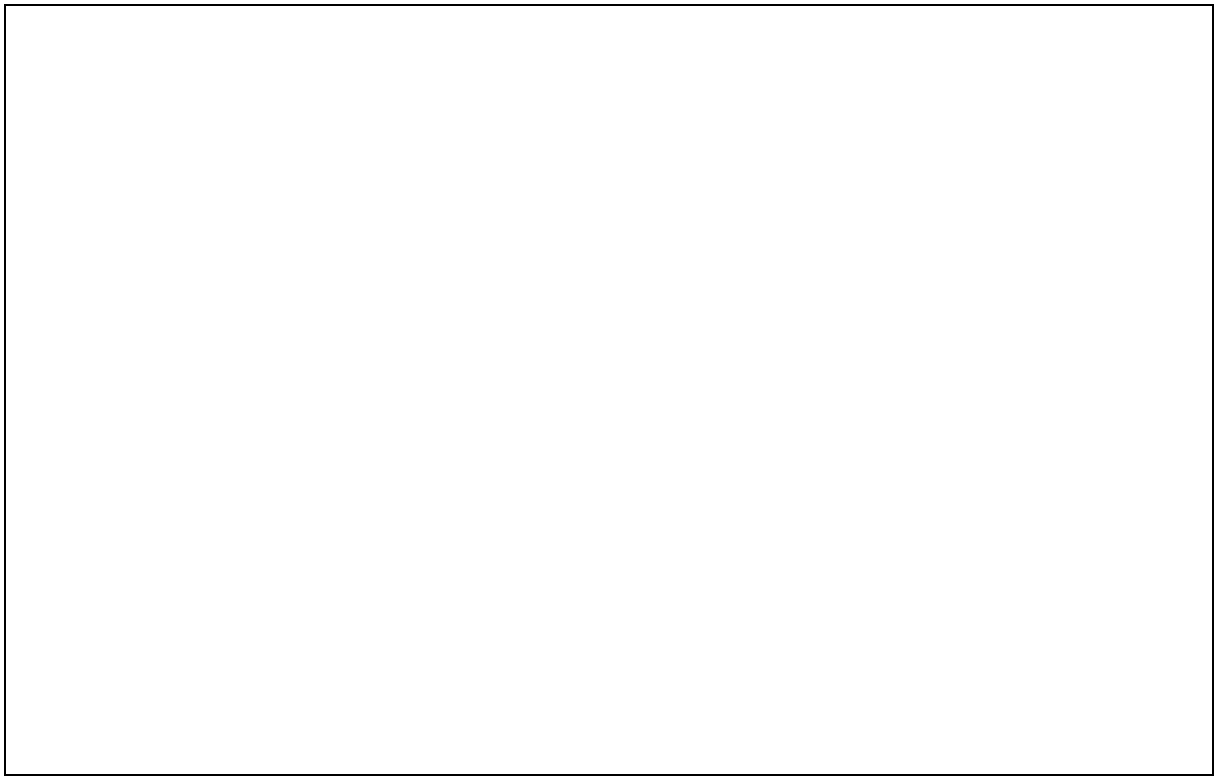
Complete Exercise F2 by filling in the monthly site report based on the Exercise F1 site tally sheet. When the groups have finished doing Exercise F2, discuss the findings. Discuss when indicators of performance are calculated and how they are calculated, and when absolute numbers only will be used, for interpreting performance of Inpatient Care. Briefly explain how, per the different levels of catchment area (i.e., administrative unit and/or locality, state and national levels), monthly reporting sheets from the Inpatient Care and Outpatient Care sites are combined in a monthly locality or state report providing information on the overall management of SAM. The monthly locality, state or national reports will be used to investigate trends in SAM caseload and quality of care over time.

11. Summary of the module

1. Review the problem-solving process outlined in the introduction on page 1 of the module. Stress the importance of investigating causes before deciding on solutions.

2. Stress the importance of reporting for the management of SAM.

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 page 2 and prepare for the discussion in Exercise A on page 3.	Group discussion
3. Ask participants to read page 4 and prepare for the role-plays in Exercise B on page 5. Conduct the role-plays.	Group discussion
4. Ask participants to read pages 6–9 and page 11. Show video: Teaching mothers about home feeding.* Conduct a group discussion of the video and Exercise C on page 10.	Group discussion
5. Ask participants to read page 12. They may also read Annex 17 of the CMAM Manual (pages 124–125). Show video: Malnutrition and mental development.*	Group discussion
6. Ask participants to read pages 12–13, study the Referral Form Job Aid and Discharge Card (Annex C of the module) and prepare for the role-play in Exercise D on page 14. Conduct the role-play.	Group discussion
7. Ask participants to finish reading the module, pages 15–17. Optional: Exercise E on page 18.	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.*

Preparation for the module

Two video segments are shown in this module. Be sure that you have the video 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 the role-plays in Exercises B and D.

Blank sample Discharge Cards are provided with this Case Management Training. Before role-plays 1 and 2 in Exercise D, complete a Referral Form and a Discharge Card with the following information. 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

- Name, date of birth, address for a 15-month-old boy
- Admission and discharge dates showing child has been in hospital 7 days

- Admission weight: 4.9 kg, MUAC 111 mm, oedema: mild (+)
- Discharge weight: 5.6 kg
- Referral from hospital
- Amount of RUTF given to the child and how many to consume per day
- Referred to Outpatient Care
- RUTF key messages provided to the mother and understood (observations should be made during the mother's stay in hospital)
- Medications and supplements to be continued in Outpatient Care: Fill in blanks with appropriate information for local formulations
- Enter a place and date for planned follow-up once a week in Outpatient Care
- Check to show that the child has received all immunisations

Role-play 2

- Name, date of birth, address for a 2-year-old boy
- Admission and discharge dates showing child has been in hospital 18 days
- Admission weight: 7.6 kg, MUAC 111 mm, length 78 cm
- Discharge weight: 8.9 kg (15% target weight)
- Note: The target weight for discharge is added on the Discharge Card so that it will be easily understood in Outpatient Care 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: Describe serving size in local terms; give family foods at meals 3 times each day, plus 2 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 6 months from discharge date
- Check to show that the child has received all immunisations

Decide whether your group will conduct 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 is common, typical hospital policies in the area, etc.

1. Introduce Module 7

Explain that emotional, mental and physical stimulation are critical for children that have SAM. This module describes ways that hospitals can involve mothers to ensure that children receive such stimulation, both in 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 1 of the module.

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

Ask participants to read through page 2 of the module and prepare for the group discussion in Exercise A on page 3.

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

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

Note: No answer sheets are given for the exercises in this module as they are all discussions or role-plays for which there are no 'right' answers.

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

Ask participants to read page 4 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 a mother. For Role-play 2, assign someone else to be a 'nice nurse' and someone else to be a mother. Others will observe and take notes.

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

Give role descriptions to those who will play roles. Role descriptions are below.

After each role-play, lead a brief discussion using the questions given in the module. Review the teaching process outlined on page 4 of the module. You may need to explain about the questions, which are asked to ensure that the learner understands. They should not be answered simply '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 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 – Bossy nurse

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

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

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 – Nice 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 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. Video: Teaching mothers about home feeding, Exercise C: Group discussion – Teaching mothers to feed children at home

Explain that this video segment will show a teaching session in which *khichuri* (a home food described in the module) is prepared. 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 lentils 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. Reading and video: Malnutrition and mental development

Have participants read page 12 of the module and Annex 17 of the CMAM Manual (pages 124–125).

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 video and take a moment to discuss these questions.

First discussion point in video

How can you:
- Make mothers feel welcome?
- Show your respect?
- Encourage play and interaction?
- Make the ward friendly?

What should mothers be allowed to do?

Second discussion point in video

Can you use any of these ideas (from the video)?
How will you:
- Use everyday activities?
- Involve mothers?

Third discussion point in 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. Exercise D: Role-play – Giving discharge instructions

Ask participants to read pages 12–13 of the module, study the sample Discharge Card 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 Card that you prepared earlier. Give the nurse and the mother the role descriptions that follow, and orient them on the purpose of the role-play.

Role descriptions

Role-play: Nurse

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

- Give medications that should be continued at home, and ensure that the mother is clear on how much to give to the child.
- Ask the mother where the closest health facility with Outpatient Care to her home is located, and refer her to the health facility.
- Provide the RUTF key messages:
  a. RUTF is a food and medicine for very thin children only. It should not be shared.
  b. 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.
  c. RUTF is the only food sick/thin children need to recover during their time in Outpatient Care (however, breastfeeding should continue).
  d. For young children, continue to breastfeed regularly.
  e. Always offer the child plenty of clean water to drink or breast milk while he/she is eating RUTF.
  f. Wash the child's hands and face with soap before feeding if possible.
  g. Keep food clean and covered.
  h. Sick children get cold quickly. Always keep the child covered and warm.
  i. Do not stop feeding even if a child has diarrhoea. Continue to feed RUTF and (if applicable) breast milk.
  j. Return to the health facility whenever the child's condition deteriorates or if the child is not eating sufficiently.
- 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 mother can visit the health facility to which she is referred.

Also given 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.

Mother

You are very eager to go home after 18 days in hospital with your 2-year-old son who has recovered, but you are concerned that you may not have all the necessary foods at home to keep him healthy. For example, you may not have *(meat or local source of protein).* You wonder if you can feed him something else.

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

During the role-play, observers should refer to their Discharge Cards and make notes so that they can answer the questions in the module. After the role-play, use these questions to structure a brief discussion.

Also ask whether this type of Discharge Card would be useful in the participants' own hospitals. How would they need to modify it?

7. Optional Exercise E: Group discussion – Issues related to early discharge

Ask participants to finish reading the module. If you plan on having the optional discussion in Exercise E, ask participants to prepare for the discussion.

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

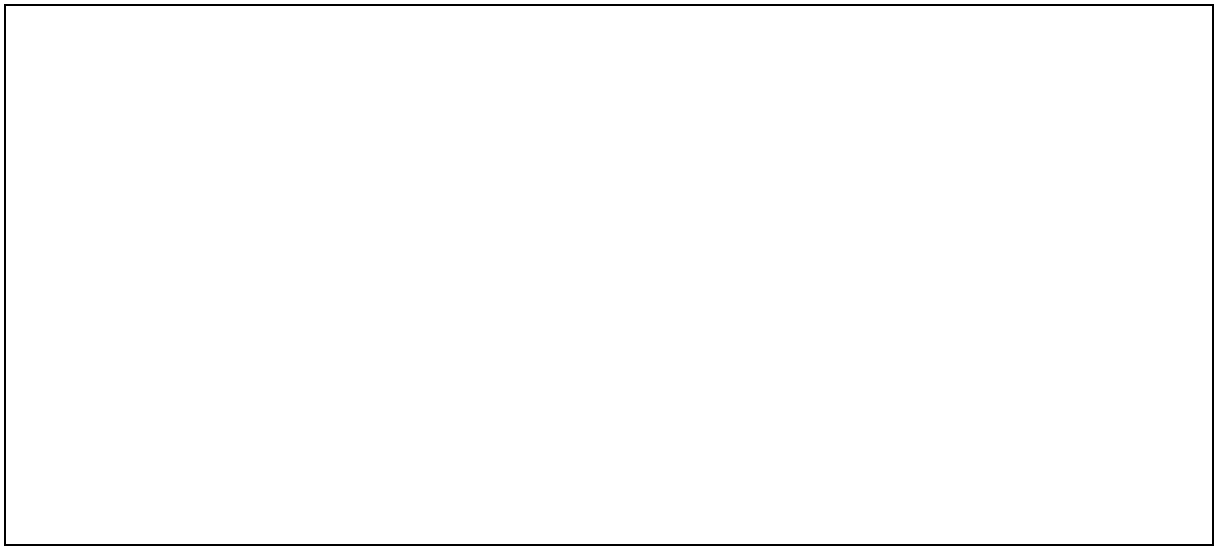
8. Summary of the module

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/she will do in his/her 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 mothers 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 will be an End-of-Course Evaluation and a post-course test to organise. The Course Director will provide the questionnaires for participants to complete in the small groups.



Facilitator Guidelines for All Modules

1. 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 Case Management Training.

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/her comment is ridiculed or ignored, he/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 read it.
    - Speak clearly. Vary the pitch and speed of your voice.
    - Use examples from your own experience, and ask participants for examples from their experience.

11. Write key ideas on a flipchart as they are offered. (This is a good way to acknowledge responses. The speaker will know his/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 that you understood and recorded his/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/her 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/her and make him/her feel that he/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/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/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/her efforts to communicate.

    Discuss with the Course Director any language problems that might 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:
    - Avoiding use of facial expressions or comments that could cause participants to feel embarrassed
    - Sitting or bending down to be on the same level as the participant when talking to him/her
    - Answering questions thoughtfully, rather than hurriedly
    - Encouraging participants to speak to you by allowing them time
    - Appearing interested, saying 'That's a good question/suggestion'

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)

2. 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 participants' 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.

3. Techniques for adapting materials for nurses (and nutritionists)

1. Use the suggestions for adapting materials for nurses (and nutritionists) 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.

4. 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.

5. 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.

6. When 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 a 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/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 case example to explain. After explaining, ask the participant questions to be sure he/she understands.

5. Give each 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/her understanding
   - Showing enthusiasm for ideas for application of the skill in his/her work
   - Telling the participant that you enjoy discussing exercises with him
   - Letting the participant know that his/her hard work is appreciated

7. When 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 that 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

8. When 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 afterwards.

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’, which 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 learnt from the role-play.