Training Course on The Management of ACUTE MALNUTRITION

CLINICAL INSTRUCTOR GUIDE

3rd edition, 2019
Addis Ababa, Ethiopia

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HEALTHIER CITIZENS FOR PROSPEROUS NATION

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

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

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Federal Ministry of Health

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

State Minister of Health

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MANAGEMENT OF ACUTE MALNUTRITION: CLINICAL INSTRUCTOR GUIDE

1.Purpose of clinical practice

Clinical practice is an essential part of the Management of Acute Malnutrition course. Clinical sessions are led by the clinical instructor in the inpatient care ward, OTP and TSFP on each day of the course. The purpose of the clinical sessions is for participants to see and practice management of acutely malnourished children, following procedures described in the National Protocol for the management of Acute Management,

Participants learn about the procedures for management of severely malnourished children by reading information in the module or seeing demonstrations on videotape.

They then use the information by doing written exercises or case studies. Finally, and most importantly, in clinical sessions participants see the procedures carried out and practice some procedures in the ward with severely malnourished children.

General Objectives: During clinical practice sessions, participants will:

- see and practice identifying clinical signs of severe acute malnutrition and related illness in real children;
- observe and practice procedures for management of severely malnourished children;
- practice handling children gently and using a supportive and friendly manner with mothers;
- receive feedback about how well they have performed and guidance to help strengthen skills;
- Gain experience and confidence in the procedures taught in the training course.

Clinical sessions are organized to give participants an opportunity to observe and practice skills in the order they are being learned in the module. Each clinical session focuses on some new skills and reinforces the skills participants have learned about in previous modules. If any participant has difficulty with a particular skill, the clinical instructor gives the participant additional guidance. The purpose is to help every participant develop skill and confidence.

2. Objectives of clinical practice sessions

Each clinical session has specific objectives for observation and practice. These objectives are based on the expected progress of the participants working through the modules in their small groups, with the guidance of the group facilitators. It is important that participants have read about the procedures (and done some related exercises) before the clinical session which focuses on them. The course schedule was designed with this in mind.

Day 2: Tour of ward(s) and Clinical Signs

- Observe the admissions area
- Observe the emergency treatment area
- Observe how the stabilization center, or, in-patient care ward or area is organized
- Observe kitchen area
- Observe any special areas for play, health education, etc.
- Look for clinical signs of severe acute malnutrition
- Weigh, and measure height and MUAC of children
- Identify children who are severely malnourished

Day 3: Initial management

- Observe initial management of severely malnourished children
- Identify clinical signs of severe malnutrition, hypoglycemia, hypothermia, shock, and dehydration
- Practice filling the initial management section of the multi-chart during
- Assist in doing initial management, if feasible, such as:
    - Taking temperature,
    - Measure and give ReSoMal
    - Monitor a child on ReSoMal
    - Giving bolus of glucose for hypoglycemia
    - Warming child
    - Giving first feed
    - Determine antibiotics and dosages

Day 4: Feeding and Daily Care

- Observe nurses measuring and giving feeds
- Practice measuring, giving, and recording feeds
- Review Therapeutic diet section of the multi-chart and plan feeds for next day
- Determine if child is ready for transition and Rehabilitation phase
- Assist with feeding (continued practice)
- Participate in daily care tasks, as feasible: Measure respiratory rate, pulse rate and temperature, Administer eye drops, antibiotics, multivitamins; change eye bandages, etc.
- Weigh child and record (on the anthropometric chart section of the Multi-Chart)
- Provide feedback on the recording and reporting formats of the facility

Additional Objectives for In-Patient Clinical Practice

- Observe teaching session with mothers
- Observe play session

Day 5: Out-patient therapeutic program (OTP) and targeted supplementary feeding program (TSFP)

- Observe the organization of OTP and TSFP
- Assess and admit a child to OTP and TSFP
- Assess children with bilateral pitting edema
- Measure MUAC, weight, height
- Classify nutrition status
- Test appetite
- Decide on referral to in-patient or OTP or TSFP
- Treat a child for SAM
- Calculate the doses and give routine medicines
- Explain the medical treatment to mother/caregiver
- Calculate amount of RUTF, RUSF and FBF
- Discuss key messages with mothers and care givers
- Recording in the registration books
- Assess and treat a child during the OTP and TSFP follow up sessions

3. The role of the clinical instructor

There is one clinical instructor, who leads all the clinical sessions. The clinical instructor leads a session each day for each small group of participants (for example, 1 or 2 sessions each day with up to 10 participants each).

Teaching a small number of participants in the ward at a time allows each person to have hands-on practice. The clinical instructor is able to watch carefully and give feedback to help each participant improve.

Experience has shown that this clinical teaching can best be done by someone who is present in the ward through the day, rather than by different facilitators coming in for an hour or two. The clinical instructor becomes familiar with the children and staff procedures and is comfortable moving about the ward. As the clinical instructor repeats the same teaching for each group during the day, he or she usually becomes very smooth and effective. The mothers and staff are also more comfortable seeing the same instructor with different groups of participants.

Each morning, to prepare for the day, the clinical instructor reviews the teaching objectives for this day and plans how to accomplish them. For example, on the day when participants are to practice identifying clinical signs of severe acute malnutrition, he/she may locate several children in the ward who clearly demonstrate the signs. He/she plans how to show the signs on one or two children and then asks participants to point out signs on the other children. On a day when participants are learning about phase I or stabilization phase, he/she may select several children in the ward who are in that phase and prepare for the participants to see their multi-chart 'Therapeutic diet' section, assess progress, and plan feeding for the next day. He/she may prepare a list of questions to ask, or, prepare tasks for participants to do with these children.

The clinical instructor needs to be skilled at anticipating what will occur on the ward and planning how 2 groups of participants can accomplish their objectives. If the clinical instructor finds that the schedule planned for clinical sessions will not work that day, he/she must plan an alternative and adjust the schedule.

General procedures and specific guidelines for teaching each clinical session are provided later in this guide.

4. Qualifications and preparation of the clinical instructor

The clinical instructor should have as many of the following qualifications as possible.

1. The clinical instructor should be currently active in clinical care of children. If possible, he/she should have a current position on the severe malnutrition ward of the facility where the training is being conducted. (If the clinical instructor is not on the staff of the facility, a staff assistant will be needed to help with arrangements and perhaps with translation.)
2. The clinical instructor should have proven clinical teaching skills.
3. The clinical instructor should be very familiar with National Protocol for management of children with acute malnutrition and have experience using them. It is best, if he has participated in the course Management of Malnutrition previously as a participant or facilitator.
4. He/she should be clinically confident, in order to sort through a ward of children quickly, identify clinical signs that participants need to observe, and determine the progress of different children. He/she should understand the daily procedures in the ward and quickly see where participants may assist with care. He/she should understand each child's clinical diagnosis and prognosis, so as to not compromise the care of critically ill children. He/she should be comfortable handling severely malnourished children and convey a gentle, positive, hands-on approach.
5. He/she must have good organizational ability. It is necessary to be efficient to accomplish all of the tasks in each clinical session. The individual must be able to stay on the subject, avoiding any extraneous instruction or discussion. He/she must be able to keep a view of the ward and all the participants, and keep all participants involved and learning productively. Teaching two groups of participants requires 4 to 6 hours, and these are very active periods. He/she must be energetic.
6. The individual must be outgoing and able to communicate with ward staff, participants, and mothers. He/she should be a good role model in talking with mothers. (A translator may be provided if needed.)
7. If possible, in preparation for this role, the individual should work as an assistant to a clinical instructor at another course to see how to select cases, organize the clinical sessions and interact with participants. Or another skilled clinical instructor can join him during the first few days of the facilitator training or the course.
8. The clinical instructor must be available 1 - 2 days prior to facilitator training, during all of facilitator training, and during the entire course. He must be willing and motivated to get up early each morning to review cases in the severe malnutrition ward or in-patient care and prepare for the day's clinical sessions.

5. Before the facilitator training and course begin

1. With the Course Director, meet with the director of the SC/ severe malnutrition ward. Explain to the ward director, how clinical sessions work. Describe what the clinical instructor and the participants would do. Ask permission to conduct sessions in the ward.

   If there are separate areas or wards where some severely malnourished children are kept, first meet with the hospital director to obtain permission, and then meet with the director responsible for each of these wards.

   Meet with staff in the ward (or in each ward) to inform them about the course and to ask for their help. Make sure your arrangements include the senior responsible nurse, not just the doctor in charge.

   If necessary, ask the ward director for a clinical assistant, preferably someone who works on the ward full time. Ask the director to assign the clinical assistant to come at the time of the early morning preparations (usually at 6:00 or 7:00 am depending on the schedule). Ask for a translator to

help, if needed. (It will often be necessary to provide a stipend to this individual.)

2. If you are not familiar with the ward, visit it. See how the ward is laid out, the schedule of admissions, bathing and weighing, feeds, nursing rounds, teaching sessions for mothers, etc. Find out times patients are available or not available.

3. Meet with the Course Director and ward director to set the schedule for clinical sessions, so each group will have a clinical session each day. Plan for 3 groups of up to 6 participants each. A one to two-hour session is required for each group each day. (If there are more participants attending the course, you will need to schedule accordingly.) See the next section, "Scheduling clinical sessions," for more guidance on scheduling. When the schedule is written, ensure that copies are made for each facilitator and participant.

4. Study this guide to learn what you should do to prepare for and conduct clinical sessions. Visit the ward to plan how and where you can carry out your tasks.

5. Obtain necessary supplies for instruction. All participants, facilitators, clinical instructor and assistant should have a copy of the following which are provided to participants and facilitators with the course materials:
   - Objectives for Clinical Sessions (listed in the Introduction module)
     - Weight-for-Height Reference Card,
     - F-75 Reference Card
     - Pens and pencils
     - F-100 Reference Card
     - Antibiotics Reference Card

     - or teaching, you will need a supply of:
       - Therapeutic in-patient multi-charts (160 copies for a course with 15-20 participants)
       - Copy from Annex 9 and 10 of the Feeding module.

And: 6 - 8 clipboards and string or tape to fasten clipboards to foot or head of bed

- Thermometers
- A few watches (or participants may all have their own)
- Scales and length board, stadiometer for measuring infants and children (Several scales and length boards will be needed if possible, since each participant will weigh and measure a number of children.)

And for Day 3:

- Dextrostix, blood samples, gloves for every participant

To ensure good hand washing, participants need access to: Running water, Paper or cloth towels, Soap for hand washing

Check that all clinical supplies for care of children in the SC or severe malnutrition ward are available (e.g., equipment/supplies for the ward, pharmacy, and kitchen; drugs). Supplement supplies of the ward if necessary. You should ensure that participants will observe management of children according to national protocol. See Annex A for a complete list.

Meet with the Course Director to review your responsibilities and your plans for conducting the clinical sessions.

With the Course Director, plan how you will teach a session during the facilitator training. This will give you practice and will familiarize the facilitators with how clinical sessions will work.

Select one session to practice during in facilitator training, just as written. Alternatively, you could select and practice some key activities from different sessions, such as:

a) identifying clinical signs of severe malnutrition (as done on Day 2);
b) observing and helping with initial management (as done on Days 3);
c) Practice measuring and giving feeds (as done on Days 3 and 4).

Brief any staff that will be in the ward about what you will be doing, and the training sessions that will take place there.

During the facilitator training, give each facilitator a copy of the schedule for clinical sessions and explain how the clinical sessions will work. (See suggested explanation in Day 2, Notes, page 24.) Practice this explanation first as if you are speaking to a group of participants. Then discuss the sessions from the facilitator's point of view.

Practice conducting a clinical session with facilitators in the role of participants. When the session is over, ask for feedback from the facilitators. This practice should help you to obtain experience and work out any problems before the actual course begins.

Before the course begins, study the Tally Sheets for Clinical Sessions in Annex C and plan how you will use them. Make a copy to write on.

6. Scheduling Clinical Sessions

It can be a challenge to schedule clinical sessions in a way that allows all groups to accomplish each day's objectives. Study the objectives for each day and think about when the ward's routine will accommodate them. Plan to rotate the two groups through the schedule, so that each group experiences the ward at different times in the daily schedule, and no group sees the ward at the same time every day.

Though it would be easiest for the participants and facilitators if the schedule is the same, or nearly the same, each day, it is necessary to vary it somewhat. It is critical to provide everyone with a copy of the schedule to avoid confusion and tardy groups.

Day 2 objectives (Tour of ward and Clinical Signs) can be achieved at any time after the first four hours of the opening day when participants can observe the ward, children and their clinical signs in the ward, and when there are children waiting to be seen in the outpatient or inpatient queue. Participants should have finished the Introduction and principle care sessions.

Day 3 objectives (Initial Management) can be achieved when the staff is carrying out initial management procedures for new patients. The clinical sessions on this day should be scheduled at times when there are usually new admissions.

Day 4 objectives (Feeding and Daily Care) in this session, participants may observe and help with feeding and also practice more measuring and giving feeds. Thus, this session should include a scheduled feeding time. In addition, participants should observe and help daily care of children such as weighing children, measuring respiratory rate, pulse and temperature, and giving antibiotics. Determine at what times the regular staff usually perform these tasks and whether the three clinical sessions can be scheduled to correspond to these times. It is possible that some groups will not be able to practice all of the daily care tasks.

Day 5 objectives (OTP and TSFP) can be achieved if the staffs observe and participate in assessing, admitting and treating a child to OTP; and review and record OTP cards and register books. They also observe the organization of OTP

Additional objectives:

- Observing a teaching session with mothers;
- Observing a play session

These teaching and play sessions may be observed during already-scheduled clinical sessions or may need to be scheduled in addition. Determine when staff will conduct these sessions and schedule each small group to observe at one of those times. If necessary, you may just call each small group out of the classroom to observe a brief teaching session. Although participants do not read the sessions about these activities until later in the course, it is acceptable to have them observe at any time. In the example schedule that follows, all two groups will observe a play session at the same time on Day 4 or 5.

Scheduling may need to be creative in order to meet all objectives. A clinical session may need to be scheduled quite early or late on some days in order for each group to participate in a feeding time. You may use a grid similar to the one below to plan clinical sessions. The times shown are just an example. A blank grid is in Annex A.

Dates	Clinical session	Group A	Group B
Day 2	Tour of ward and Clinical signs (2 hours)	1.30 pm - 3:30 pm	3.30 pm - 5.30 pm
Day 3	Initial management (2 hours)	1.30 pm - 3.30 pm	3.30 pm - 5.30 pm
Day 4	Feeding and Daily Care (2 hours) Observe teaching session for mothers and play session	10.30 am - 12.30 am	8.30 am - 10.30 am
Day 5	OTP and TSFP (2 hours)	1:30 pm - 3:00 pm	9:00 am - 10:30 am

7.0 General procedures for planning and conducting clinical sessions

1. Each day, review the objectives for the next day and plan how to accomplish them with the groups in the time allowed.

   Participants will practice some tasks (such as feeding children) by assisting the staff doing patient care on their regular schedule. Some tasks will need to be organized specially, by assigning participants to work with selected children who have certain characteristics.

   If the schedule requires adjustment in order to accomplish the session objectives, inform the Course Director and/or the group facilitators. If any special supplies are needed, be sure they will be available. Prepare or make copies of any forms needed.

2. Each morning, review the children in the ward and select appropriate children to be managed by participants during the day's sessions. This must be done in the morning as the clinical condition of hospitalized children can change overnight.

   Identify children appropriate for the objectives for that day. For example, on some days you will need children who exhibit certain clinical signs. On other days, you will need a number of new admissions. Try to select at least one patient per participant. It is desirable to have a separate patient for each participant to work with during the session.

   Always be alert for additional children with infrequently seen signs. Because some signs may be rarely seen in the hospital, show them to participants whenever there is an opportunity. These signs may include:

- severe dermatosis (+++)
- severe edema (+++)
- signs of dehydration
- signs of shock (cold hand with slow capillary refill > 3 seconds, weak/fast pulse)
- corneal ulceration, Bitot's spots

3. Keep a list with brief notes on each of the selected cases for your own reference during the day. Note the child's name, age, (location in the ward if necessary), and relevant signs. However, keep in mind that clinical signs can change rapidly in very ill children from one session to the next. Mark the beds of the children that you plan to show to participants, for example, by posting a colored card at the foot of the bed. This will help you locate these children easily.

4. Brief the ward staff on what the participants will do today. If participants will assist the regular staff with certain procedures, be sure that the staff know this and are willing. Remind the staff that they are setting the example, and that they should be ready to explain what they are doing and answer participants' questions, if possible.

5. Before each session, remind participants to wash their hands carefully. Ask them to be sure to wash again between patients and at the end of the session. This is for their own protection as well as the children's.

6. At the beginning of each session, tell the participants the objectives for the session today. Demonstrate any new clinical procedure that they have not seen (such as giving ReSoMal, measuring height) before you ask them to do it.

7. Depending on the objectives for the session, assign each participant to a child to assess or care for, or to a staff member to work with. In some instances, you may assign a pair of participants to work together with a child. Be sure that participants have any forms or supplies needed.

8. Observe while participants carry out the assigned tasks. Watch for any participant who does not understand what to do. No participant should be standing around, chatting with other participants or staff. All the time during clinical sessions should be used productively. If a participant has completed a task and does not have another assignment, he/she can move to observe another participant or staff member at work.

9. Make sure that course work is not interfering too much with the ward routine, especially provision of treatment. Inform families about the course. For potentially disturbing tasks such as weighing, avoid handling the same children repeatedly during the day.

10. Give feedback to participants individually and in "rounds," in which participants gather by a child's bed for a report on what another participant has seen or done. Ask questions to encourage the participant to elaborate as needed. Refer to the child's clinical signs, or chart, or feeding record, etc.

    Keep these discussions brief and avoid making participants feel uncomfortable or intimidated. When you ask a participant about what he has done for a child and why, keep the tone positive. If a participant has overlooked something, you or another participant can suggest what could have been done better. Emphasize that the participants are all here to learn.

11. At the end of the session, gather the participants all together and summarize the session. Mention the important signs and procedures covered in the session and refer to common problems that participant encountered (for example, difficulties counting respiratory rate, errors recording initial treatment or intake). Reinforce participants for doing tasks correctly, and give them suggestions and encouragement to help them improve.

12. Record (tick) on the Tally Sheet (Annex C) the objectives accomplished by the group during the clinical session. Make notes on any problems.

13. Repeat steps 5 - 12 with each small group.

    Participate in the daily facilitators' meeting. Report to the facilitators and the Course Director on the performance of each group at the clinical session that day and whether the objectives were achieved. Discuss whether participants are able to perform procedures correctly with patients. If certain tasks or concepts were difficult for participants, ask facilitators to review them in the classroom the next day. Identify any procedures that you were unable to demonstrate or the participants could not practice. Discuss plans to try again in the next day's session.

    Inform the facilitators about the next day's clinical sessions. Review any important points about the schedule, the objectives, help that you need, etc. Remind facilitators of anything that participants should bring to the sessions, such as their laminated reference cards.

8. Specific instructions for each day's clinical session

On the following pages are specific instructions for each day's clinical session. Guidelines for each day include how to prepare, the participants' objectives, the instructor's procedures, and what to do to conclude the session.

For some days, there are additional notes about preparing for or conducting that particular session.

When preparing for the first day or two, you may also find it helpful to refer to the general procedures just described. After you are familiar with the general procedures, simply refer to the appropriate summary for each day.

Day 2: Tour of Ward and Clinical signs

To Prepare Review the "General Procedures" (pages 9 - 11 of this guide) and these guidelines for Day 2.

Tour of Ward

Prepare to take each group for a tour of the ward and all areas where severely malnourished children are seen and treated. Identify areas that you will show and prepare your comments.

If possible, obtain data on the number of severely malnourished children seen each month or each year, and how long these children typically stay in the hospital.

Plan to tour the ward, the emergency treatment area, admissions area, kitchen area, and any special areas used for play, health education, etc.

Clinical signs

Arrange for participants to weigh and measure children. Ensure that scales are working and stadiometer or measuring boards are set up correctly.

Select one or two children with a variety of clinical signs to show to participants. Try to find clear examples of signs. See Note "A" that follows for a list of the signs to show today.

Ask facilitators to have their participants bring their Weight-for-Height Reference Cards and a pen or pencil to the clinical session.

Look for children in the admissions area and/or ward who could be assessed for clinical signs of severe malnutrition, weighed, and measured. For each group, you will need 1-2 children per participant. It is best if the same children are not used repeatedly during the day. For the sake of comparison, include a few children who are not severely malnourished

Note: Finally, If possible, find one child on the ward who has made a good recovery (a "success story") and prepare to describe the child's condition on admission and how he has improved, emphasizing the successes.

Participants

- Observe the admissions area
- Observe the emergency treatment area
- Observe how the SC or TFU or severe malnutrition ward is organized
- Observe the kitchen area
- Observe any special areas for play, health education, etc.
- Look for signs of severe acute malnutrition
- Weigh, and measure height and MUAC of children
- Look up weight-for-height percentage of median
- Do appetite test
- Identify children who are severely malnourished

Instructor Procedure

- Introduce yourself.
- Objectives

1. Explain to participants how clinical sessions will generally work. Review the objectives for today's clinical session. See Note "A, B and C" that follows. Explain that today the group will tour the ward and other areas where severely malnourished children are treated and practice to assess clinical signs of severe acute malnutrition to identify children with severe acute malnutrition.

Tour of ward

1. Explain hygiene procedures to be followed. Participants should wash hands with soap before and after each session and between patients. Explain where hand washing facilities are located. (Even though participants will not be asked to handle patients today, they should wash anyway in case they touch the children.)
2. Take participants to the admissions area and explain how children are admitted for severe malnutrition.
3. Visit the emergency treatment area and explain what treatments are given here.
4. Take participants for a tour of the ward, pointing out areas that participants will learn about at the course: beds, areas for weighing and bathing, play area, education area, etc.
5. If possible, while touring the ward, show a "success story," a child who was admitted in serious condition but is now gaining weight, cheerful, etc.
6. Visit the kitchen or area where food is prepared. Point out food scales, ingredients used, etc.

At end of the session: - Answer any questions that participants may have.

Clinical signs

1. Show one or two children with various clinical signs, which may include: wasting, edema, dermatosis, eye signs. See Note "B" that follows. Point out these signs to participants.
2. Using these same children (unless they are too sick), demonstrate how to measure weight, height/length and MUAC. Follow guidelines in the session Principles of Care, pages 25-31. Demonstrate measuring both standing height and supine length.
3. Ask participants to look up the weight-for-height Z-Score of these children and determine if they meet criteria for severe acute malnutrition (given on page 32-34, Principles of Care). Using these same children (unless they are too sick), demonstrate how to do appetite test. Follow guidelines in the session Principles of Care, page 37 and page 8 of the Chart Booklet. Ask participants whether the child passes of fail the test
4. Using these same children (unless they are too sick), demonstrate how to check for medical complication. Follow guidelines in the session Principles of Care, page 36 Ask participants whether the child fulfills the admission criteria for in-patient care using the guideline and then assess and classification table in the session Principles of Care page 39-40. Tell the participants that they will

learn more about medical complication identification on Day 2 clinical session.

5. Assign each participant to assess one or two children in the admissions area and/or ward. Include some children who are not severely malnourished. Ask participants to assess each child for clinical signs of severe malnutrition, weigh, and measure height and MUAC of the child, appetite test, and medical complications. Ask them then to determine if the child is severely malnourished and should be admitted.
6. Watch as participants examine each child for clinical signs such as wasting, edema and dermatosis. Ask the facilitators to assist participants as they weigh and a measure child since a partner is needed for these tasks.
7. When a participant has finished assessing a child, ask the participant what he has found. Look at the child again with him, agreeing with the findings or asking him to look again if he missed a sign.
8. Towards the end of the session, conduct rounds. See Note C that follows. Ask each participant to present one of the cases assessed for the benefit of the other participants. Select cases that are most interesting and have a variety of clinical signs among them. The participant should point out the clinical signs; state the child's weight, height, and Z score percentage of median; result of appetite test and presence of medical complications; and explain whether the child should be admitted. Ask the participant questions as needed to draw out a complete explanation.

At end of the session Summarize the session with participants.

Answer any questions

Notes:

A. Explanation to participants of how clinical sessions will work

You may wish to use the following explanation:

The purpose of clinical sessions is to give you opportunities to see and practice procedures for management of severe malnutrition. The SC or TFU or severe malnutrition ward may not be like the setting where you usually work. However, seeing and working in the ward will help you understand the procedures and what is needed to carry them out. Then you will have ideas on putting the recommended procedures into practice at your hospital.

You will learn from both what you see and what you do in the clinical sessions. You will observe while the staff performs some procedures, for example, giving initial treatment to a critically ill child. You may assist the staff and participate in some procedures, such as monitoring a child on ReSoMal. You will be assigned some tasks to perform on your own, such as feeding children and recording amounts taken. Sometimes you will work in pairs, particularly if there are not many patients. I (the clinical instructor) will assign you to tasks and patients, and will watch and give guidance and feedback on your work. I may ask you to show the other participants your case. You should not feel shy. We are all learning.

Your interactions with a child and his or her mother should always be gentle and patient. Severely malnourished children must be handled very gently and kindly. Interactions with the mothers of the patients should be encouraging and supportive. When you speak to a mother here, you should be kind to her and listen carefully.

If a child suddenly becomes much sicker, be sure to alert me and/or the ward staff.

B. Clinical signs

Try to locate and show as many clear examples of the signs as possible. Avoid discussion of additional clinical signs so that the participants can focus primarily on the signs taught in the course and become skilled at recognizing them. Not all signs will be present in the ward every day. Whenever a child is admitted with an infrequently-seen sign, be sure to show it to the participants, even if it is not listed in the objectives for that day.

Signs to teach:

- Severe wasting
- Edema
  - Mild: (+) - edema of both feet
  - Moderate (++) - edema of both feet, plus lower legs, hands, or lower arms
  - Severe (+++)- Generalized edema including both feet, legs, hands, arms and face
- **Dermatosis**
  - Mild (+) - Discoloration or a few rough patches of skin
  - Moderate (++) - Multiple patches on arms and/or legs
  - Severe (+++) - Flaking skin, raw skin, fissures(openings in the skin)
- **Eye signs**
  - Bitot's spots
  - Pus and inflammation (redness)
  - Corneal clouding
  - Corneal ulceration

All of the above signs are explained in the session Principles of Care, and photographs are provided in the Photographs booklet.

It is helpful to show children with different degrees of severity of edema and dermatosis. Look for as many children as possible with these signs and with different degrees of severity. Showing several children side by side who have, for example: - no edema, mild (+), moderate (++) and severe (+++) edema can be very helpful.

It is important that participants avoid overcalling signs. Participants need to become confident in saying a sign is NOT there, not just in recognizing the abnormal signs.

C. Individual practice identifying clinical signs, followed by rounds to give feedback

The technique of "rounds" will be used frequently in clinical sessions. On different days, participants may be asked to assess patients for certain signs, record information on various forms, or decide on appropriate feeding plans or treatments. The general process is to have each participant do some individual (but supervised) practice with a patient and then present the case or decisions to the group.

On Day 2, participants will be assigned to assess patients for certain clinical signs (wasting, edema, dermatosis, and eye signs), to weigh and measure the patients and also to do appetite test and check for medical complications to determine whether they should be admitted. Assign each participant to a different patient (or if necessary, participants may pair up). Select patients with signs that should be learned or reinforced in the session. Also select a few patients without these signs. Thus, by the end of the session, participants see children with and without the signs, so the distinction is clear.

Ask participants to go to the patient, check that patient, and record findings. The participants should all check their patients and then signal to you when they are finished. Then conduct rounds as follows:

Gather the participants and take the group to the bed of the first case. Ask the assigned participant to describe the signs found, the weight and height, and the z score , whether the child pass or fail appetite test, and the medical complications found.

Ask questions to encourage the participant to elaborate as needed. For example, if edema is present, you may need to ask, "What degree of edema?" If necessary, give participants a chance to examine for the sign, for example, to stand near the child to check for edema by pressing the foot.

Ask whether the child should be admitted. If necessary, ask participants to write their individual decisions on slips of paper and hand or show them to you, so you are sure they are giving their own

decisions, not influenced by others or fear of embarrassment. These problems will vary by group. Be aware that some people are quite shy and do not like to have a joke made if they have made an error. With slips of paper, it is possible to talk about agreement of the group without singling out the wrong answer of any one participant. You will know which participants are assessing correctly and which need more practice.

- If some participants did not identify a sign correctly, demonstrate or let participants try again. Find out why they decided differently; where they were looking, the definition they are using, or other relevant factors. Treat their opinions with respect. "Let's look again".
- Make sure the atmosphere is supportive, so participants do not feel bad if they miss a sign. You may say, "It takes a while to learn these signs. Do not feel bad if you make a mistake; we all will". Give encouragement and thank the participant who presented the case.

The above procedures should be adapted for rounds on other days to be suitable for the tasks being practiced.

Day 3: Initial Management

To Prepare

Arrange a place for participants to practice testing blood samples using dextrostix.

Plan how the blood will be obtained. Gather a supply of gloves, dextrostix, and supplies for obtaining blood samples.

Obtain a supply of Multi-charts (2 - 3 copies per participant) and shock follow up charts (1 per participant).

In the morning and throughout the day, look for newly admitted patients who are severely malnourished.

Brief the staffs who do initial management of severely malnourished children about the objectives and plans for the clinical session. Get their ideas and cooperation for participants to observe and, if feasible, participate in giving care.

Observe and participate, in the initial management of many cases as possible. In addition, tell staff that you are especially interested in seeing new patients and severely malnourished patients who have diarrhea. Select new or recent admissions to be seen by participants.

Obtain a supply of the multi-charts (2 per participant) to fill the initial management section.

Participant Objectives

- Observe initial management of severely malnourished children.
- Identify clinical signs of severe malnutrition, hypoglycemia, hypothermia, shock, dehydration.
- Practice using dextrostix.
- Practice filling the multi chart during initial management.
- Assist in doing initial management, if feasible, such as:
    - taking axillary temperature
    - Giving bolus of glucose for hypoglycemia
    - Warming child
    - Giving first feed
- Observe and assist in doing initial management, if feasible, including:
    - Identify signs of possible dehydration in a severely malnourished child
    - Measure and give ReSoMal
    - Monitor a child on ReSoMal
- Determine antibiotics and dosages

Review with the participants the objectives of this session.

Instructor Procedures

1. As severely malnourished patients are admitted, place participants so that they may closely observe initial management without getting in the way. Describe to them what is being done. Brief them on any emergency care that has already occurred. If there are several patients, spread out the participants so that they can be more involved.

2. Ask participants to complete the multi-chart as the case is managed. Provide any needed information about the child that participants cannot directly observe.

3. Keep the focus on initial management, but point out certain things whenever they are observed (e.g., a child with dermatosis, edema of both feet, corneal ulceration).

4. Teach the additional clinical signs listed (see Note "A" that follows) by pointing them out, asking participants questions about the signs, and asking participants to identify the signs in new patients.

5. During a slow moment or when there is no new case, ask participants to examine Dextrostix (or brand used at the hospital) and read the package directions. Using available blood samples, (and wearing gloves), have participants test a few samples to watch the colors change and read the results.

6. Without interfering with care, if feasible, assign participants to patients. (See Note B that follows.) As feasible, with supervision, participants should practice the following:
   - Checking for signs of shock: lethargic/unconscious, plus cold hand, plus either slow capillary refill or weak/fast pulse
   - Giving bolus of glucose
   - Taking temperature
   - Warming a child
   - Giving first feed

7. Watch participants carefully and give feedback. Let other participants observe the practice.

8. Assign each participant to identify the clinical signs of a particular child on the ward and record information on the patient on the multi-chart. Even if the child is not a new patient, participants should assess the child as though he is a new patient. Participants should complete as much of the multi-chart as possible except the feeding and medicine section which they will do on the third day. Unless the child is too ill, this will involve weighing and measuring the child. (If the child is too ill, use a weight/height from the hospital record.)
9. Continue having participants observe and participate in initial care. Assign participants to patients as feasible. See Note B on page 22. Supervise closely. Have participants complete the multi-chart of the on each case observed or managed. Without interfering with care, if feasible, ask different participants to practice the following:
   - Checking for signs of shock: cold hand with slow capillary refill or weak/fast pulse
   - Giving bolus of glucose
   - Taking temperature
   - Warming a child
   - Giving first feed

10. For patients with diarrhea, also ask participants to practice:
    - Looking for signs of possible dehydration
    - Measuring an appropriate amount of ReSoMal for child
    - Giving ReSoMal orally or through NG tube
    - Monitoring child on ReSoMal and recording results

11. Ask participants to determine the appropriate antibiotics and dosages for the patient and record them on the multi-chart. They should refer to the Antibiotics Reference Card as needed. Discuss their answers.

    After all participants have finished, conduct rounds of the children assessed

At end of the session: Summarize the session with participants. Answer any questions

Notes:

A. Clinical signs to teach on Day 3

Show these signs/problems when present. Also ask participants questions to review the definitions

of these signs and how to check for them:

- Hypothermia: rectal temperature <35.5^{0}C Hypoglycemia: blood glucose <3 mmol/l
- Shock: lethargic/unconscious, plus cold hand, plus either slow capillary refill (>3seconds) or weak/fast pulse
- Signs of dehydration:
    - Restless/irritable
    - Lethargic
    - Thirsty

Also review the clinical signs from Day 3 (e.g. severe wasting, edema, dermatosis, eye signs and other medical complications).

B. Assigning cases for initial management

There may not be enough new admissions for each participant to be assigned to a new patient. There are several alternatives, which can be used in combination:

- Participants may group together to watch an especially interesting case being examined by hospital staff. Explain what is happening, what the staffs are doing, and what results are found. Participants should record on the multi-chart while they observe. They should participate in the examination, if it will not interfere with care of the child. For example, one participant could be asked to check for signs of shock, another to take the rectal temperature, another to give the initial bolus of glucose (if needed), etc.
- Two or three participants may work together to examine a patient. Each participant records on a multi-chart.
- Each participant may examine a child already on the ward "as if" the patient were a new admission. Participants should ask the questions and do the tasks that would be necessary for initial management (weigh, measure, check for signs of shock, ask about diarrhoea, check for signs of dehydration, etc.). If blood work has already been done on the child, participants should look at the child's record for the results. If blood work has not yet been done and is needed, with permission and supervision of hospital staff, participants may take a blood sample and use Dextrostix to test for blood glucose level. Participants should record on the multi-chart.

It is important that participants actually do as many tasks as possible, not just observe. You will have to work out the best way for participants to practice the tasks given the patients available.

It is possible that participants may discover that a child is being treated inappropriately. For example, they may find a child who is unnecessarily receiving IV fluids. If a participant discovers inappropriate treatment, discuss the correct treatment with participants. As soon as possible, discuss the situation privately with the appropriate hospital staff.

Note to Clinical Instructor for day 3:

On Day 4, you will need correctly completed Therapeutic Diet Section of multi-charts for number of children for one or more days. So that you will have these available, ensure that staff are keeping the multi-charts. You may need to help or provide some instruction. If the staff keep different records of feeding, you may be able to transcribe these records onto the multi-charts. Otherwise, you may need to "make up" realistic charts based on the staff's description of how the child is feeding.

On Day 4, you will also need detailed information on a child who has been in the hospital for at least 3 days. Preferably, staff are keeping multi-charts routinely on children in the ward. If they are not, request that, staffs keep some type of careful records on daily care, daily weight, monitoring data, etc. for several children over the next few days. Select children who are likely to still be in the hospital on Day 4 of the course. You may then transcribe this information onto a multi-chart.

Day 4: Feeding and Daily Care

Feeding

To Prepare

- For a day or two before this session, ensure that 24-Hour Feeding of the multi-charts are correctly kept on children in the ward. (See note on page 27.)
- Brief staff in the ward that participants will assist with measuring and giving feeds. Confirm the feeding schedule so that you will know how to schedule the activities during the session.
- Identify several children at different stages of feeding: feeding with an NG tube, ready to decrease frequency of feeds of F-75, not ready to decrease frequency, ready for F-100. Get a copy of yesterday's 24-Hour Food Intake Chart, or fill in a 24-Hour Food Intake chart for each. Make copies of them to show participants (3-6 copies).
- Obtain a supply of blank 24-Hour Food Intake Charts (3-4 per participant).
- Ask facilitators to remind participants to bring their Weight-for-Height Reference Card, F-75 Reference Card and a pen or pencil to the session.

Participant Objectives: -

- Observe nurses measuring and giving feeds Practice measuring, giving, and recording feeds
- Review 24-Hour Food Intake from the multi-charts and plan feeds for the next day
- Determine if child is ready for transition phase or F-100 and continue to practice measuring, giving, and recording feeds

Instructor Procedures

1. Review the objectives for the clinical session. Explain that the focus today will be about how to prepare feeding, measuring and giving feeds. And also making decisions on the feeding plan for a child. Participants will also continue to practice feeding tasks.
2. Move to the kitchen area and then the ward so that participants can observe nurses measuring and giving feeds to children at all stages of treatment. Explain (or have the nurse show and explain) how the correct amount of feed is measured for each child.
3. When it is feeding time, find a mother or nurse who is feeding a child correctly with a cup, and have participants observe how the child is held, how the cup is held, and how long to pause between sips. Find a child who is being fed by NG tube and show how the feed slowly drips in. (It should not be plunged.)
4. Without interfering with usual feeding procedures, give each participant an opportunity to measure the correct amount of feed for a particular child, feed that child, and record intake on the multi-Chart.
5. Watch and give feedback to participants on how they feed the child (holding the child closely and gently, encouraging the child to eat). See Note "A" below
6. Be sure that participants correctly measure and record leftovers.
7. With the group, go to the bedside of one of the children whose feeding you will discuss. Give a brief history of the child (how many days he has been in the hospital, admission weight, his clinical signs on admission, etc.). Distribute copies of the multi-chart for the child. (Participants can share copies of the intake charts and then return them to you.) Ask participants a question about the child's feeding, for example: What was he fed yesterday? How often was he fed? Did the amount increase during the day? Were there any problems?
8. Tell the participants the child's weight today. (Weigh the child if necessary.) Ask participants what phase the child should be, what the child should be fed today (F-75 or F-100), how many feeds, how much, and by what means (NG or cup). Ask the participants to use their reference cards and then write down their answers in the therapeutic diet section of the multi-chart. Discuss what participants decided and why. Go to the bed of the next child selected and repeat this process.

9. At relevant points in the discussions, review concepts from the Feeding session by asking questions such as: How long should a child stay on 4-hourly feeds of F-75? What are the signs that NG tube feeding is needed? When is a child ready for transition? What happens each day during transition?

10. When it is feeding time, assign a participant to each child discussed. You may assign participants to other children as well. Without interfering with usual procedures, give participants an opportunity to measure the correct amount of feed for a particular child and feed the child. Watch and give feedback to participants on how they feed the child (holding the child closely and gently, encouraging the child to eat). See Note A on page 27. Be sure that participants correctly measure leftovers and record intake on the multi-chart.

At the end of the session: - Summarize the session with participants. Answer any questions.

Daily Care

To prepare

- Brief the staff on the objectives for the day. Get their ideas and cooperation for participants to work alongside them to carry out daily care tasks (listed below) for several children.
- Select children for whom participants will help carry out daily care tasks during the day. Do not select children who are so critically ill that their care will be compromised by interactions with participants. For continuity, include some of the children fed yesterday if possible. Include at least one child who has been in the hospital for at least 3 days and has complete records of care, daily weights, etc. Preferably, this information has been kept on a multi-chart. If not, you may transcribe the information onto a multi-chart.
- If you think that participants will have time to complete a monitoring checklist during the session, brief the staff. Explain that participants will be observing the ward and may ask some questions, all for the purpose of completing a monitoring checklist and becoming familiar with the ward procedures. Ask facilitators to be sure that participants bring their module to the session.
- Obtain a supply of multi-charts, and monitoring record charts (3 sets or more per participant).

Participant Objectives

- Keep multi-charts and monitoring records on children observed andcared for. (The focus in this session will be on multi-chart sections that are relevant for the Daily Care, the Monitoring Record, and the Weight Chart.)
- Participate in daily care tasks, as feasible:
    - Measure respiratory rate, pulse rate and temperature
    - Administer eye drops, antibiotics, change eye bandages, etc.
    - Weigh child and record weight (on the multi-chart weight chart section)
- If possible, observe and assist with bathing children and assist with feeding (continued practice)
- Monitor ward using checklist (if time allows)

Instructor Procedures

1. Review the objectives for the clinical session.
2. Go to the bedside of a child for whom you have fairly complete information for at least 3 days. Give each participant a copy of a multi-chart. Present information on the child and demonstrate monitoring the child while participants record on the multi-chart. (For details, see Note B that follows.)Discuss whether participants see any progress or problems with the child's care. Be sure that they look at the child (his appearance, attitude) as well as information that they have recorded. Discuss the child's feeding plan and any changes that may be needed in his care.
3. Go together to the beds of children fed by participants yesterday. Describe the feedings that occurred since the participants last saw the child. Discuss what the feeding plan for the child should be today.
4. Assign each participant two children to monitor, care for, and feed when it is time today. Some of the children may be those who were fed by participants yesterday, and others may be new. Give the participant a multi chart and monitoring record for each child.
5. Nurses will be caring for these children too. Participants should observe the nurses and assist with care as much as possible. They should complete (or add to) a Multi chart on each child. Watch to see that each participant is assisting with care and completing multi charts correctly. Step in to give guidance and feedback whenever needed.
6. Each participant should take respiratory and pulse rates and temperatures for his assigned children. Observe carefully. Compare with your own measurements, or have another participant take rates on the same child and compare the results. If the results differ significantly, more practice is needed.
7. If any child is identified with danger signs (increases in pulse and respiratory rate, increase/decrease in temperature), show the entire group. Ensure that the physician responsible for the child is alerted.
8. If children are being bathed, participants should observe and possibly assist. Emphasize that bathing is done gently and the child is quickly dried, re-covered, and warmed.
9. If practical, attach the multi charts completed by the first group to the beds of the children. The later groups can then continue with the same multi chart for each child. (This may not be practical if the forms are illegible. If not practical, later groups may start with new multi-charts.)
10. If time allows, have participants monitor the ward using checklists from the Monitoring and Problem-Solving module. Assign portions of the checklists to pairs of participants. The participants may already know how to mark some items, based on their observations during the week, or they may need to observe or ask the staff some questions now. Ask them to be quiet when observing and non-offensive when asking questions of staff. Participants will discuss the results of monitoring when they return to the classroom.

At end of the session

Summarize the session with participants. Since this is the last day, review any points that need to be stressed with this group.

Answer any questions.

Commend participants for their hard work during the course

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Notes:

A. Holding and feeding children

Participants can help with NG feeding while a child is lying down or held by the mother. However, to feed a child properly with a cup, the participant must hold the child. Children may be distressed if taken from the mother. Participants should not cause the child distress. If the child clings to the mother, the participant may sit with the mother, observe and offer assistance or guidance as the mother feeds the child. For example, if a mother tries to pour the feed quickly into a child who is lying flat, the participant might show the mother how to prop the child more upright in her arms and feed more slowly.

When holding children, participants must be careful of hygiene. They should wear a lab coat or place a towel in the lap if possible. They should wash their hands carefully before the clinical session, between children, and after the clinical session.

B. Recording on multi-chart and Monitoring Record

Participants need not complete the entire multi-chart, but you should tell the child's length and weight and briefly describe clinical signs and initial management of the child. Also state what antibiotics were prescribed. (If any care given was contrary to course guidelines, discuss this.)

Ask participants to record on the multi chart sections that are relevant for Daily Care as you describe what has happened each day of the child's treatment. For example, state the date, the child's weight, the extent of edema, whether there was diarrhea or vomiting, the type of feed given, the number of feeds etc. Participants may record their own initials to show when antibiotics and other treatments were given. (You do not have to start with Day 1; if you have information for Days 1 through 3, for example, participants may record in those columns.)

Complete recording for one day before going to the next. When you have completed the columns for 3 days, ask participants to graph the weights on the weight chart. Include the admission weight as well as the weights for the days just recorded. (If you know weights from any intervening days, you may ask participants to record those as well.)

Staying by this same child, have participants to record on the Monitoring Record. Note: If there is previous monitoring data on the child, dictate several recent pulse rates, respiratory rates, and temperatures to participants, so that they will be able to record and observe any trend.

Demonstrate how to monitor the child's pulse and respirations. If the child remains calm, have a participant try and see if he obtains the same rates. Ask another participant to take the child's axillary temperature. Have all participants record these on the Monitoring record. Ask participants what danger signs they should look for related to pulse, respirations, and temperature.

Additional Objectives - Observation of a teaching session and a play session

To Prepare

Check the schedule to determine when each group will observe the teaching and play sessions. You will bring the group to the site of the teaching session or play session and introduce it to them. You or the small group's facilitator could lead discussions of the sessions afterward.

If the small group facilitators will lead the discussions afterwards, give them copies of the discussion questions in the notes below.

Brief the staff that participants will observe some teaching sessions and play sessions and provide the schedule for this.

Participant Objectives

- Observe a teaching session with mothers
- Observe a play session

Instructor Procedures

1. Review with the participants the objectives for the teaching or play session. Ask them to observe closely and make notes on what is done well and any ideas for improvement.

2. Watch the teaching session or play session with participants, if possible.

3. After the session, lead a discussion of what was accomplished in the session and how. (See Notes "A" and "B" below.)

At end of the session: Summarize the session with participants. Answer any questions.

Notes:

A. Discussion of teaching session for mothers

Below are questions to discuss with participants:

1. What were the main points that were being taught?
2. What teaching methods were used?
3. How did they give demonstrations/examples?
4. What materials were used?
5. Did the session hold the mothers' attention?
6. Were mothers asked to contribute ideas?
7. Were they encouraged to ask questions?
8. Were there opportunities for mothers to practice?
9. Do you think they learned and will remember what was taught?
10. Describe the manner/attitude of the staff toward the mothers.
11. What was done well in this teaching session?
12. What could be improved?

B. Discussion of play session

Discuss the following questions:

1. What were the main purposes of the session?
2. What activities were carried out?
3. What materials/toys were used?
4. Were they appropriate for age/development of children?
5. Could they be made in homes?
6. Describe the manner of the staff toward the children.
7. Describe the manner of the staff toward the mothers.
8. Did the mothers learn and practice how to play with their children?
9. Do you think the mothers will play with their children in this way at home? Why or why not?
10. What was done well during the session?
11. What could be improved in the play session?
12. What could be improved in the ward related to stimulation and play?

Day 5: Out-Patient Treatment Program (OTP) and Targeted supplementary feeding program (TSFP)

To Prepare Review the "General Procedures" (pages 9 - 20 of this guide) and these guidelines for Day 5.

Tour of the OTP and TSFP site

Prepare to take each group for a tour of the OTP and TSFP site and all areas where acutely malnourished children are seen and treated. Identify areas that you will show and prepare your comments.

If possible, obtain data on the number of severely malnourished children seen each month or each year, and how long these children typically stay in the OTP site.

Plan to tour the OTP and TSFP site, and any special areas used for play, health education, etc.

Assess, Admit and treat a Child at Outpatient Care and TSFP

Arrange for participants to weigh and measure children. Ensure that scales are working and stadiometer or measuring boards are set up correctly.

Select one or two children who need out-patient care and TSFP for demonstration.

Ask facilitators to have their participants bring their Weight-for-Height Reference and OTP, TSFP cards and a pen or pencil to the clinical session.

Look for children in the OTP and TSFP site who were on follow up who could be assessed for clinical signs of severe malnutrition, weighed, and measured. For each group, you will need 1-2 children per participant.

Prepare filled OTP and TSFP cards and registration books from the health facility for the participants to review.

Note: Finally If possible, find one child on who is on follow up and has made a good recovery (a "success story") and prepare to describe the child's condition on admission to the OTP and how he has improved, emphasizing the successes.

Participant Objectives

- Observe the organization of OTP and TSFP
- Assess and Admit a Child to Outpatient Care or TSFP
  - Assess children for bilateral pitting edema
  - Measure MUAC, weight, height
  - Classify nutritional status
  - Test appetite (wash hands before handling the RUTF)
  - Decide: referral to inpatient care or admission to outpatient care
  - Treat a child with SAM
    - Calculate doses and give routine medicines to child
    - Explain medical treatment to mother/caregiver
    - Calculate amount of RUTF for child, record it and give to the mother
    - Discuss key messages with mothers/caregivers
- Record on outpatient care treatment cards and registration book
- Review registration book and the Previous Monthly and Discuss With Staff How to Use and Interpret Data
  - Assess and Treat a Child During an Outpatient Care Follow-On Session

Procedure

❖ Tour of the OTP and TSFP site

1. Review the objectives for today's clinical session. Explain that today the group will tour the OTP and TSFP site and other areas where acutely malnourished children are treated. They will assess and admit a Child to OTP or TSFP and treat. They will also review the OTP and TSFP cards and Registration books
2. Take participants to the OTP and the TSFP admissions area and explain how it is organized and how children with SAM and MAM are admitted for OTP and TSFP respectively. Point out areas that participants will learn about at the course: registration area, areas for weighing, play area, education area,
3. If possible, while touring the OTP and TSFP site, show a "success story," a child who was admitted with SAM without medical complications but is now gaining weight, cheerful, etc.

At end of the session

Answer any questions that participants may have.

❖ Assess, Admit and treat a Child at Outpatient Care

1. Show one or two children with various clinical signs, which may include: edema, and mild or moderate dermatosis. Fill all the information in the OTP and TSFP card as you examine the child.
2. Using these same children, let participants practice how to measure Weight, height/length and MUAC. Follow the procedure in the session 8: OTP, pages 260 of the module or TSFP on page 294
3. Ask participants to look up the weight-for-height Z-Score of these children and determine if they meet criteria for severe or moderate acute malnutrition (given on page 36, session:2 Principles of Care.
4. Using these same children (unless they are too sick), demonstrate how to do appetite test if they didn't have enough practice in the in-patient training. Follow guidelines in the session Principles of Care, page 37 and page 8 of the Chart Booklet. Ask participants whether the child passes or fail the test.
5. Explain how to identify the treatment for OTP and TSFP.
6. Assign each participant two children to assess, admit and treat in OTP and TSFP. Give the participant OTP and TSFP cards for each child. Participants should practice how to check for medical complications. Follow guidelines in the session Principles of Care, page 36. Ask participants whether the child fulfills the admission criteria for in-patient or out patient care using the assess and classify table in the session 2: Principles of Care page 39-40 or
7. They need to practice how to fill the OTP and TSFP cards, register the admission details and see how children with SAM are registered in the TFP and TSFP registration books. Ask them to review children OTP card and TFP registration book and discuss with staff how to use and interpret data
8. Watch as participants examine each child for clinical signs such as wasting, edema and dermatosis. Ask the facilitators to assist participants as they weigh and a measure child since a partner is needed for these tasks.
9. When a participant has finished assessing a child, ask the participant what he has found.

Look at the child again with him, agreeing with the findings or asking him to look again if he missed a sign. Discuss how to treat the child.

At end of the session

Summarize the session with participants. Answer any questions.

ANNEX A: Chart for Scheduling Clinical Sessions

Dates	Clinical session	Group A	Group B
Day 2	Tour of ward and Clinical signs 2 hours	1.30 - 3:30	3.30 - 5.30
Day 3	Initial management 2 hours	1.30 - 3.30	3.30 - 5.30
Day 4	Feeding and Daily Care and 2 hours Observe teaching session for mothers and play session	10.30 - 12.30	8.30 - 10.30
Day 5	OTP and TSFP (2 hours) Observe organization of OTP and SFP; Assess , Admit and treat a Child to OTP and TSFP; and recording of OTP and TSFP	1:30 - 3:00	9:00 - 10:30

ANNEX B: Equipment and Supplies for management of SAM

1. Inpatient care

Ward Equipment/Supplies

1. Dextrostix
2. Running water
3. Thermometers (preferably rectal and low-reading)
4. Child weighing scales (must be functioning correctly)
    - Items of known weight for checking scales
5. Board for measuring length
    Pole of known length for checking accuracy Stadiometer (to measure standing height)
6. Haemoglobinometer
7. Supplies for IV:
    a. Scalp vein (butterfly) needles, gauge 21 or 23
    b. Heparin solution, 10-100 units/ml
    c. Poles or means of hanging bottles of IV fluid
    d. Tubing
    e. Bottles or bags
8. Paediatric nasogastric tubes
9. Sticky tape Syringes (50 ml for feeds)
10. Syringes (2 ml for drugs, 5 ml for drawing blood, 10 ml)
11. Sterile needles
12. Eye pads
13. Bandages Gauze
14. Supplies for blood transfusion:
    a. Blood packs
    b. Bottles
    c. Syringes and needles
    d. Other blood collecting materials
15. Blankets or wraps for warming
16. children Incandescent lamp or heater
17. Wash basin for bathing children
18. Safe, homemade toys
19. Clock
20. Calculator

For hygiene of mothers and staff:

1. Toilet and hand washing facilities
2. Soap for hand washing
3. Place for washing bedding and clothes
4. Method for trash disposal

For reference and record keeping:

1. National Guide for Management of Acute Malnutrition, 2019.
2. Relevant tables or laminated cards such as:
    a. Weight-for-height Reference Card
    b. F-75 Reference Card
    c. F-100 and RUTF Reference Card for transition phase and phase 2
    d. Antibiotics Reference Card
    e. Therapeutic Treatment Multi-chart
    a. Monitoring record chart

Kitchen Equipment/Supplies

1. Dietary scales able to weigh to 5 g
2. Electric blender or manual whisks
3. Large containers and spoons for mixing/cooking feed for the ward
4. Method of cooking
5. Feeding cups, saucers, spoons
6. Measuring cylinders (or suitable utensils for measuring ingredients and leftovers)
7. Jugs (1-litre and 2-litre)
8. Refrigeration
9. For making F-75 and F-100 from locally available resources (if commercial not available):
    a. Dried skimmed milk,
    b. whole dried milk,
    c. fresh whole milk
    d. Sugar
    e. Cereal flour
    f. Vegetable oil
    g. Clean water supply
10. Foods similar to those used in homes (for teaching/use in transition to home foods)

Pharmacy Equipment/Supplies

1. Pharmaceutical scales
2. Commercial ReSoMal (orWHO ORS for use in making ReSoMal)
3. Iron syrup (e.g., ferrous fumarate)
4. Multivitamin without iron
5. Folic acid
6. Vitamin A (100 000 / 200 000 IU capsules)
7. Atropine
8. Glucose (or sucrose) IV fluids - one of the following, listed in order of preference:
    - Ringer's lactate solution with 5% glucose*
    - 0.45% (half-normal) saline with 5% glucose*

    *If either of these is used, sterile potassium chloride (20 mmol/l) should be added if possible. 0.9% saline (for soaking eye pads)
9. Sterile water for diluting
10. Vaccines (BCG, OPV, Pentavalent, and Measles)

Drugs (See formulations listed on Antibiotics Reference Card)

1. Amoxicillin
2. Ampicillin
3. Chloramphenicol
4. Gentamicin

5. Metronidazole
6. Ceftriaxone
7. Mebendazole or albendazole
8. Tetracycline or chloramphenicol eye drops atropine eye drops

For skin

1. Gentian violet
2. Potassium permanganate
3. Zinc-boric ointment
4. Petroleum jelly ointment
5. Nystatin ointment or cream (for Candidiasis)
6. Paraffin gauze (tulle gras)

Laboratory resources accessible if needed

1. TB tests (x-ray, Gene Xpert, Mantoux)
2. Urinalysis
3. Stool culture
4. Blood culture
5. Cerebrospinal fluid culture

2. Materials needed for OTP Estimation per facility:

Equipment

Item Quantity

File for admission cards	**1 per clinically**
-Soap for hand washing	1 bar
-Water jug (with lid)	2
-Plastic cups	10
-Thermometer	3
-Uni-Scale / Salter scale (25 kg) plus pants	1
-Height board	1
-MUAC tape	5
-Weight-for-height reference card	1
-SAM classification wall chart	1
-Target weight	1
`-SAM management reference card	1
-RUTF reference card	2

Minimum stock to keep

- -Outpatient care cards for new admissions 100

Outpatient care ration cards for new admissions 100

- Registration books
- Formats for reporting
- -Drinking water 1 jerry can
- Sugar to make 10 % sugar solution 500 g
- RUTF 2 month stock
- Routine Medicines (per 500 children)
  - -Amoxicillin à 500 bottles
  - -Vitamin A à1 Tin
  - -Albendazole or Mebendazole à 4 Tin
  - -Folic acid
  - - ReSoMal à2 Packet

ANNEX C: Tally Sheets for Clinical Sessions

The tally sheet for each clinical session can help you to keep track of the objectives accomplished with each group. It will also help you to report to the Course Director and facilitators at the end of each day about what were accomplished in the clinical sessions.

Complete the tally during or immediately after your work with each group in the ward. To use the

tally:

1. Record any identifying information about the group at the top of the column. You may want to record the time of the session, the number of participants in the group, or other identifying information.
2. Mark on the tally sheet for each objective accomplished by the group. Make notes to indicate how many participants practiced the task (perhaps by putting a tally mark or initial for each). Also note if the participants had problems accomplishing the task.
3. You can use letters or numbers to annotate the problems and write notes on the bottom or back of the sheet. The problems noted will help you when you discuss participants' performance at the facilitator meeting. (Problems in understanding could be addressed by the facilitator the next day in the classroom.) These notes will also help you keep track of the skills that need further practice.
4. Some objectives may not be feasible because of lack of patients, or time, or for whatever reason. Discuss these with the Course Director. Perhaps they can be accomplished on another day, or if you have assistance. Some may just not be practical to achieve.

Tally Sheets for Clinical Sessions

Day 2: Tour of Ward

	Group A	Group B
Observe the admissions area		
Observe emergency treatment area		
Observe how severe malnutrition ward or area is organized		
Observe kitchen area		
Observe any special areas for play, health education, etc.		

Day 2: Clinical Signs

	Group A	Group B
Observe children with clinical signs of severe malnutrition		
Look for signs of severe malnutrition		
Weigh and measure children		
Look up weight-for-height Z-Score		
Practice Appetite test		
Identify children who are severely malnourished		
Practice filling a multi-chart during initial management		

Day 2: Initial Management

	Group A	Group B
Observe initial management of severely malnourished children		
Identify clinical signs of: • severe malnutrition #		
• hypoglycemia		
• hypothermia		
• shock		
• dehydration		
Practice using dextrostix		
Practice filling a multi-chart during initial management		
Assist in initial management, such as: • Taking axillary temperature		
Giving bolus of glucose for hypoglycemia		
Warming child		
Giving first feed		

Day 3: Initial Management and Feeding

	Group A	Group B
Observe and assist in doing initial management, including: • Identify signs of possible dehydration		
• Measure and give ReSoMal		
• Monitor a child on ReSoMal		
• Determine antibiotics and dosages		
Observe nurses measuring and giving feeds		
Practice measuring, giving, and recording feeds		

Day 3: Feeding

	Group A	Group B
Review therapeutic diet section of the multi-charts and plan feeds for next day		
Determine if child is ready for transition or phase 2 (F-100)		
Continue to practice measuring, giving, and recording feeds		

Day 4: Feeding

	Group A	Group B
Review 24-Hour Food Intake on therapeutic diet section of the multi-charts and plan feeds for next day		
Continue to practice measuring, giving, and recording feeds		

Day 4: Daily Care

	Group A	Group B
Keep multi-charts on children observed and cared for		
Participate in daily care tasks, as feasible: • Measure respiratory rate, pulse rate and temperature		
• Administer eye drops, antibiotics, multivitamins; change eye bandages, etc.		
• Weigh child and record weight		
• Observe/assist with bathing		
Assist with feeding (continued practice)		
Monitor ward using checklist (if time allows)		

Additional objectives

	Group A	Group B
Observe teaching session for mothers		
Observe play session		

Day 5: OTP and TSFP

	Group A	Group B
Observe the organization of OTP and TSFP		
Participate and practice to assess and Admit a Child to Outpatient Care: • Assess children for bilateral pitting oedema • Measure MUAC, weight, height • Classify nutritional status • Test appetite • Decide: referral to inpatient care or admission to outpatient care		
Treat a child with AM at OTP and TSFP • Calculate doses and give routine medicines • Explain medical treatment to mother/caregiver • Calculate amount of RUTF for child, record it and give to the mother • Discuss key messages on RUTF with mothers/caregivers		
Record on outpatient care treatment cards		

Day 5: Monitoring, and Reporting of TFP and TSFP

	Group A	Group B
Record new Admission if possible discharge on TFP and TSFP Registration book		
Review TFP and TSFP (inpatient or OTP Registration book and the Previous Month TFP Statistics report		
Discuss With Staff How to they use and Interpret TFP and TSFP Data		

Tally sheet for clinical signs

Lethargic or unconscious	unable to feed or vomits convulsion everything	
Fast breathing	chest in drawing stridor	
Sunken eyes	skin pinch goes back slowly	skin pinch goes back very slowly
Leg edema	MUAC <11.5 cm	dermatosis
Hypothermia hypoglycemia Bitot's spots		
Corneal xerosis	some palmar pallor	severe palmar pallor