

IMPROVING THE MANAGEMENT OF SEVERE MALNUTRITION

A GUIDE FOR TRAINERS

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CONTENTS

Introduction

Training Orientation

Advocacy meeting on management of malnourished children

Introduction to the 10 Steps

Step 1: Prevent and treat hypoglycaemia

Step 2: Prevent and treat hypothermia

Step 3: Prevent and treat dehydration

Step 4: Correct electrolyte imbalance

Step 5: Treat and prevent infection

Step 6: Correct micronutrient deficiencies

Step 7: Cautious feeding

Step 8: Catch-up growth

Step 9: Provide loving care, play and stimulation

Step 10: Preparation for discharge and follow up

Action plans

Appendix 1. Icebreakers, energisers and forming groups

Appendix 2. Protocol for the in-patient treatment of severely malnourished children for Eastern Cape

Annex 1. Induction course for trainers

Annex 2. Commonly-used terms

INTRODUCTION

Throughout the world, thousands of severely malnourished children die unnecessarily during hospital treatment. These training materials have been developed to improve treatment of severe malnutrition in South African hospitals. When the materials have been used to train staff, treatment practices have improved and hospital deaths reduced by 50% or more. The materials are relevant for training staff in other countries.

WHO WILL USE THIS TRAINING GUIDE

This Training Guide is for the team who will run Training Workshops to improve the hospital management of children with severe malnutrition. It contains all the course materials needed by the Trainers and Training Director, and information to assist the Co-ordinator to plan and organise the workshops. Handouts and transparencies used during the workshop can be used by participants to train their own staff when they return to their hospitals after the workshop.

WHY ARE TRAINING WORKSHOPS NEEDED

Too many malnourished children are dying during hospital treatment, and those who survive gain weight too slowly. The workshops are designed to provide paediatric staff with specific skills and knowledge to enable them to improve the quality of care of severely malnourished children, and thus speed recovery and reduce deaths.

WHO SHOULD COME TO THE WORKSHOPS

The workshops are for those who have responsibility for the daily care of children with severe malnutrition, especially paediatric sisters, matrons, nutritionists and dietitians. Although doctors benefit from this course, few can come for 5 days and a 1-day training is being developed for them.

STRUCTURE OF THE WORKSHOP

The workshop starts with an advocacy day to involve all the key stakeholders and motivate them to make a commitment to improve the quality of care of malnourished children.

The workshop is organised around 10 essential treatment steps. Trainers explain the importance of each step to participants, and each step has a key message. At the end of the workshop, participants will know what to do and why, and will have developed action plans for implementing the 10 steps in daily care in their hospitals.

The training is preceded by data gathering in which participants, assisted by the Workshop Co-ordinator, collect data about their own hospital. This helps identify practices that need improving and provides baseline information so that progress can be measured.

HOW THE WORKSHOP IS ORGANISED

The workshop can be organised as a 5-day course (Monday-Friday) with participants arriving for registration and orientation in the afternoon before the workshop (Sunday). The advocacy meeting with stakeholders is held on the first day (Monday). Alternatively, the workshop can be split into two 3-day periods. The workshop should be planned as a residential course. This enhances participation and effectiveness.

NUMBER OF PARTICIPANTS AND TRAINERS

A maximum of 25 participants should attend the training workshop, and a minimum of 4 trainers.

HOW THIS WORKSHOP DIFFERS FROM THE WHO TRAINING COURSE

The 6-day WHO Training Course (WHO, 2001) is based on small groups of doctors and nurses working through course modules assisted by facilitators in a ratio of 1:3 participants. Self-learning through reading features prominently, and practice in a malnutrition ward is an integral part. This workshop is an alternative to the WHO Training Course. It is less dependent on reading (an advantage where English is a second language), does not require a clinical facility, and gives more emphasis to understanding the physiological changes in malnutrition that underpin the 10 treatment steps. It is specifically nurse-oriented.

HOW THE TRAINING MATERIALS WERE DEVELOPED

The training materials are based on the WHO Manual for the Management of Severe Malnutrition (WHO, 1999) and the WHO Guidelines for Care at First-Referral Hospitals in Developing Countries (WHO, 2000), which form part of the initiative for Integrated Management of Childhood Illness. The materials have been developed for hospitals in Eastern Cape Province, South Africa, and some local adaptations are included to conform to the Management Protocol of the Eastern Cape Province (Eastern Cape Department of Health, 2000).

ADAPTING THE TRAINING MATERIALS

Two adaptations from the WHO guidelines were made in developing the training materials for South Africa. For rehydration, we have used South African oral rehydration solution (sodium 60mmol/l) instead of ReSoMal (sodium 45mmol/l), and potassium chloride solution is given separately instead of combined with the electrolyte/mineral solution. Both are given orally instead of being added to feeds. The materials can easily be re-adapted to make them wholly consistent with the WHO guidelines, or can be adapted further to suit local conditions.

ADMINISTRATIVE STRUCTURE

Training is likely to be undertaken through the Department/Ministry of Health and it is helpful if a senior administrator is designated as **Workshop Co-ordinator** to arrange finances, liaise with hospital managers, arrange workshop venues, follow-up implementation of improved treatment, and identify progress or problems.

A **Training Director** is also required who will oversee the trainers and run the workshops. Later we suggest how the responsibilities of the Training Director and

Workshop Co-ordinator might be shared. Their actual responsibilities, however, will vary depending on the local situation and individual preferences. The Training Director should be someone who is knowledgeable about correct management of severe malnutrition and experienced in implementing the treatment guidelines. Once participants have been trained and gained experience, they too can become Workshop trainers. In this way, local or regional teams of trainers can be established.

HOW THESE MATERIALS CAN HELP YOU

If you are the **Workshop Co-ordinator**, the materials tell you what preparations need to be made in advance, how to collect the baseline data and how to plan the advocacy day.

If you are the **Training Director**, you will find a pre-prepared training course that provides the course content, overhead transparencies, handout summaries of the teaching sessions, and practical guidance about how to run the workshop. Also included are 'job aids' that participants can take away, ideas for icebreakers and games and a list of supplies you will need for the workshop,

If you are to be a **Trainer**, you will find detailed instructions for each session, answers to questions, and additional technical information. Included for each topic are the teaching objectives and what to prepare in advance. There are copies of the overheads that you will use, and summaries for you to give to each participant at the end of the session as a reminder of the main points. These will help participants train their own staff when they return to their hospitals.

WHAT METHODS OF INSTRUCTION ARE USED?

The course uses a variety of methods and is highly interactive and participatory.

- **Group work** is used to get participants actively involved and alert, instead of sitting passively. It gives an opportunity for shy participants (who might be inhibited about speaking to a large group) to share ideas and knowledge in a less formal setting, and is useful in starting discussions. Group work provides an opportunity for self-learning through logical reasoning and resolving problems, and promotes 'deep' learning that will not be easily forgotten.
- **Role-plays** are used as a springboard for discussions about what actions are needed to improve care and how barriers to implementation might be overcome. They are used for raising, in an unthreatening way, sensitive issues about wrong practices. They are also used for illustrating physiological mechanisms and difficult concepts in a memorable and light-hearted way.
- **Questions and answers** are used to draw out information that participants already know but may not have previously used in managing malnourished children. They are also used to check understanding.
- **Practical exercises** enable participants to test their knowledge and practise new skills.
- **Making action plans** enables participants to think about specific actions they will take to improve practices when they return to their hospitals.

- **Discussions** are used to develop action plans and address problems that participants might face during implementation.
- **Demonstrations** help develop practical skills.
- **Videos** give ideas by showing what others are doing and motivate participants into action.

FORMAT OF THE TRAINING MATERIALS

The course is divided into 14 **topics**. Each has training objectives and a key message. The topics are subdivided into **sessions** and then into **activities**. The activity includes specific trainer actions, questions, input, and instructions to participants.

The **Activity** informs the trainer what is to be done and what it is intended to achieve (e.g. 'Use a role-play to practise treating a malnourished child for dehydration').

Trainer action instructs the trainer what to do in order to perform the activity (e.g. 'Write hypo + glycaemia on the flipchart. Ask participants what each word means').

Trainer questions are set out 'ready-to-ask'. (e.g. 'Can anyone suggest a way of checking if a child has hypoglycaemia?').

Trainer input indicates other things for trainers to include during the activity. An input always comes after participants have thought and talked about the issue, even if just for a few minutes. In this way it should build on the existing knowledge and experience of participants.

Instruction to participants is also 'ready-to-give' (e.g. 'With your neighbour, make a list of all the situations you can think of when children are not fed for long periods. Be ready to share your ideas with the rest of the group. You have 3 minutes to make your list').

Key Messages are provided that summarise essential aspects of treatment.

PREPARING FOR THE TRAINING WORKSHOP

For the workshop to be a success, preparations must start well in advance, and there should be close liaison between the Co-ordinator, Training Director and Trainers. A Facilitator is helpful for new teams. Below are suggestions for their respective roles and a time-frame of activities.

a) Workshop Co-ordinator

The Co-ordinator has overall responsibility for the workshop, including negotiating and liaising with the Training Director and hospital management teams about dates, organising collection of the baseline data and collating the information, arranging a suitable venue, and informing participants about the workshop and arranging their transport. The Co-ordinator is jointly responsible with the Training Director for the Induction Course for Trainers and for building training capacity and recruiting trainers.

Suggested time-frame of actions for the Workshop Co-ordinator

Six months before

- ❑ Establish a budget and secure funding
- ❑ Identify which hospitals are to be invited
- ❑ Decide on the number of participants
- ❑ Visit each hospital, discuss with the Superintendent the purpose of the training and the need for baseline data, and negotiate who will be invited to attend the workshop and who will help collect the baseline data
- ❑ Assist hospital staff to collect baseline data (see pages 10-13)
- ❑ Negotiate dates for the training
- ❑ Identify possible venues away from participants' workplaces and check suitability. (residential with conference facilities and reliable electricity supply, photocopier, video machine and overhead projector)
- ❑ Get quotations and book the venue
- ❑ Liaise with the Training Director to identify trainers and facilitators
- ❑ Liaise with the Training Director and Trainers to arrange a 2-day Induction Course
- ❑ Order copies for the Trainers of the WHO Manual 'Management of Severe Malnutrition' obtainable from the WHO Department of Marketing and Dissemination – email address: bookorders@who.int

Three months before

- ❑ Collate the baseline information from all the hospitals and prepare the information for presentation at the advocacy day
- ❑ Send invitation letters to participants via appropriate channels
- ❑ Identify key stakeholders and invite them to the advocacy day
- ❑ Identify who will give the 'testimonies' at the advocacy day and invite them.

A month before

- ❑ Re-confirm the venue, facilities, food and accommodation
- ❑ Arrange transport to and from the venue
- ❑ Arrange transport for the persons giving 'testimonies' at the advocacy day
- ❑ Send transport and arrival details to participants, and explain the course is residential and that they are expected to attend throughout. Include details of how participants may be contacted whilst at the venue.
- ❑ Purchase all supplies (see list on page 9)
- ❑ Ensure availability of the equipment to be used during the training, including overhead projector, spare projector lamp, video machine, flipchart stand, enough tables and chairs to form a U-shape around the meeting room.
- ❑ Plan and organise the advocacy day
- ❑ Arrange for press coverage, if appropriate

A week before

- ❑ Make phone calls to all hospitals to re-confirm with the Superintendent the participation of the relevant staff. Phone participants to re-confirm their attendance and transport details
- ❑ Prepare a list of expected participants, their job titles and addresses

A day before

- ❑ Make sure that supplies are taken to the venue
- ❑ Ensure that participants have suitable accommodation

During the workshop

- ❑ Distribute list of names and addresses of participants
- ❑ Manage and monitor registration
- ❑ See to all administrative matters concerning accommodation, meals and refreshments
- ❑ Ensure meals are of good quality and there are adequate refreshments for the breaks
- ❑ Re-confirm departure arrangements and return transport
- ❑ Identify a contact person in each health district

After the workshop

- ❑ Visit each hospital within 4-6 weeks to support staff with their action plans and to help solve any problems.
- ❑ Identify and train people to monitor and evaluate implementation of the ten steps on a regular basis.

b) Training Director

The Director is responsible for the training course and ensuring that Trainers know what is expected of them during the workshop. The Director is responsible for co-ordinating and training the trainers, and ensuring that the training materials are ready for the Induction Course for Trainers. S/he is jointly responsible with the Co-ordinator for recruiting trainers and building training capacity.

Suggested time-frame of actions for the Training Director

Six months before

- ❑ In consultation with the Co-ordinator, identify trainers for the workshop. A minimum of four will be needed, one of whom can be the Training Director.
- ❑ Give Trainers their 'essential reading' pack
- ❑ Arrange with the Co-ordinator a 2-day Induction Course for Trainers (see Annex 1)

Three months before

- ❑ Give the Guide to the Trainers and ask them to read all the training materials before the Induction Course
- ❑ Hold the 2-day Induction Course for the Trainers
- ❑ Afterwards, prepare the workshop programme confirming who will teach each topic and send to the Trainers and Co-ordinator.

A month before

- ❑ Prepare the transparencies if only hard copies were printed in the Guide
- ❑ Photocopy the correct numbers of handouts, worksheets and case studies
- ❑ Laminate (optional) the Feed Chart (Handout 10.2) and Antibiotic Chart (Handout 8.1), one for each hospital (optional)
- ❑ Enlarge the protocol (Appendix 2) and laminate to make a wall chart, one for each hospital, to serve as standing orders
- ❑ Check that the Trainers are familiar with the information they are to teach
- ❑ Provide Trainers the contact telephones of the other Trainers and the Training Director.

During the workshop

- ❑ Ensure that the meeting room has all equipment needed

- ❑ Make sure that Trainers are ready to teach their allocated sessions. Keep them to their allocated time schedule
- ❑ Keep participants alert and engaged by helping Trainers with energisers and games
- ❑ Encourage participants to complete the relevant sections of their action plans each day
- ❑ Ensure that the Key Message cards are written, role-play instructions are photocopied, and other teaching materials are prepared a day before needed. Each evening, get the next day's handouts and worksheets ready to distribute, and get the video and cassette ready.

List of supplies that the Training Director should take to the venue

- ❑ Correct number of Handouts, Worksheets and Case Studies
- ❑ Transparencies (if not already in the Guide)
- ❑ Video cassette
- ❑ Welcome folders for each participant
- ❑ 24 sheets of stiff card (at least 24 by 24 inches) of different colours
- ❑ 2 pairs of scissors
- ❑ Flipchart
- ❑ Flipchart markers of different colours
- ❑ Blank overhead transparencies
- ❑ Non-permanent transparency pens
- ❑ Stapler and staples
- ❑ Prestik or other means of hanging large sheets of paper and Key Message cards without damaging walls (blu tack, masking tape)
- ❑ Thermometers (normal; low reading; some tapered; some blunt-ended)
- ❑ Safety pins
- ❑ Dietary scale able to read accurately to 5g, with removable pan, zero adjustment
- ❑ Sturdy rotary beater, and if possible a 1-litre electric blender
- ❑ 1 litre measuring jug with 10ml divisions (to measure long life milk or to add water)
- ❑ Large bowl, wide enough to allow efficient whisking
- ❑ Small 50ml graduated medicine cup, or syringe
- ❑ 1 kg milk powder and/or 2 litres long life milk
- ❑ 1 kg sugar
- ❑ 1 litre oil
- ❑ doll
- ❑ graph paper

Items to put into the welcome folders

- ❑ Name tag
- ❑ Eastern Cape Protocol (Inpatient Management of Children with Severe Malnutrition)
- ❑ Article '10 Steps to Recovery' from Child Health Dialogue 1996, Issue 3/4 pp10-12
- ❑ Blank action plan (see pages 14-19)
- ❑ Draft timetable (see pages 20-21 for an example)
- ❑ Writing pad
- ❑ Ball point pen and felt tip marker
- ❑ Yellow card

The welcome folders can be given out when participants arrive for Registration.

c) Trainers

Trainers are the people who deliver the course. They must be fully prepared and be able to run the sessions without constantly reading from the Guide. They should be familiar

with the materials through having been a participant at a previous training workshop. Trainers should have hospital experience in implementing the 10 steps so they can give practical advice, evaluate action plans and help others overcome obstacles. Trainers must provide correct answers to participants' questions and therefore require technical expertise. They should have read extensively and carefully about the management of severe malnutrition. They should be fully familiar with all the background materials provided in their 'essential reading' pack.

Trainers need to be effective communicators and have attended the Induction Course for Trainers where they will receive guidance about using the training materials and practise the teaching methods. Trainers will keep participants alert and lively by using 'energisers' and games. For long sessions it is a good idea to involve two or more trainers to share the load. For example, a co-trainer could take over the role plays, energisers and games, giving the lead trainer a chance to review what comes next. Co-trainers can also organise the distribution of worksheets and handouts, and check exercises.

The Guide gives detailed instructions so that new trainers know what to do. As trainers become experienced, they will develop their own style.

Essential reading pack for Trainers

- ❑ WHO Manual 'Management of severe malnutrition'.
- ❑ Eastern Cape Protocol 'Inpatient Management of Children with Severe Malnutrition'
- ❑ Article by Ashworth et al 'Ten steps to recovery' from Child Health Dialogue 1996, Issue 3/4 pp10-12
- ❑ Article by Schofield & Ashworth 'Why have mortality rates for severe malnutrition remained so high?' In Bull WHO 1996;74:223-229
- ❑ Article by Puoane et al 'Evaluating the clinical management of severely malnourished children – a study of two rural district hospitals' from S African Medical Journal 2001; 91: 137-141.

d) Facilitator

Having an experienced practitioner to facilitate the training can be advantageous particularly to new training teams. The facilitator serves as a resource person and should have technical expertise in the management of severely malnourished children. The facilitator can help trainers by responding to questions not covered by the materials or filling gaps in trainers' responses. S/he gives guidance and feedback so that trainers will be better equipped for future workshops.

COLLECTING BASELINE DATA

Collecting baseline data helps hospital staff identify practices that need improving and provides a base for future evaluations of changes achieved and benefits gained. The data to be collected include resources available, current practices, and death rates among paediatric admissions and among those with severe malnutrition. The mortality data will reveal whether malnutrition deaths represent a high proportion of all paediatric deaths, and the percentage of malnourished children who die during treatment.

The first step in collecting baseline data is to schedule an appointment with the Superintendent and the Matron of each hospital scheduled for training. The purpose of the meeting is to explain the need for training and for collecting baseline information, and

to get the hospital's support. Three methods of data collection are suggested. They are a) reviewing hospital records b) interviewing staff and c) observing ward conditions. These are outlined below:-

a) Reviewing hospital records

Mortality data: The paediatric ward sister and the Workshop Co-ordinator (or Training Director) go through the ward's admission register and tally all admissions and all deaths during the previous year. Then the tally is repeated for admissions with severe malnutrition as the main or associated diagnosis (or marasmus, kwashiorkor, marasmic kwashiorkor). The data can then be collated as shown below. Notice that the % dying is much higher among the malnourished admissions, and that more than half of all paediatric deaths are due to deaths of malnourished children, even though they represent a small percentage of admissions.

	Hospital 1	Hospital 2	Hospital 3
Total admissions	770	465	717
Total deaths	24	19	25
% of all admissions dying	3%	4%	3%
Admissions due to malnutrition	72	31	26
Deaths due to malnutrition	20	14	13
% of malnourished children dying	28%	45%	50%

b) Interviewing staff

Ask about Practices for Malnourished Children	
Number of meals/24h	
Time of last meal	
Time of first meal (to get overnight gap)	
Do children receive normal hospital food (<i>If special meals are given, what are they</i>)	
Circumstances when IV fluids are given	
Are diuretics given to treat oedema	
Are albumin infusions given	
Are all malnourished children prescribed antibiotics on the first day	
Do mothers stay at night	
Are mothers taught how to feed the child after discharge. (<i>If instruction is given, is this only verbal instruction or do mothers practise. What specifically are mothers told</i>)	
Are there special play sessions (<i>If so, are these designed to improve child development. How is this achieved</i>)	
Are mothers given a referral letter on discharge (<i>If so, who does the letter go to</i>)	

Resources

In each hospital, ask the ward sister which of the following supplies she currently has on the ward.

ITEMS	YES	NO
Glucostix/Dextrostix or glucometer		
Child weighing scales (note if x10g, x25g, x50g, x100g)		
Pan-type scale/sling to weigh very ill children		
Graph paper for weight charts		
Fluid intake/output charts		
Paediatric nasogastric tubes		
Paediatric giving set		
Glucose/Dextrose (10% oral)		
Sterile Glucose/Dextrose (10% or 50%)		
½ strength Darrow's with 5% dextrose;		
Ringer's lactate with 5% dextrose		
Half-normal saline with 5% dextrose,		
Ringers lactate.		
Oral rehydration solution (ORSOL)		
Oxygen		
Multivitamins		
Eastern Cape KCl solution for malnutrition		
Eastern Cape mineral mix (Mg/Zn/Cu)		
Ferrous sulphate (or other iron preparation)		
Folic acid		
Vitamin A		
Metronidazole		
Co-trimoxazole (Bactrim)		
Ampicillin		
Gentamicin		
Chloramphenicol		
Mebendazole		
Eastern Cape Protocol		
Working fridge		
Electric food blender		
Food for mothers		
Washing facilities for mothers		
Mattresses for mothers		
Blankets for mothers		
Problems keeping malnutrition ward warm		
Ward heater		
Reliable electricity supply		

c) Observing ward conditions

Observe:-	
Number of children on ward	
Number of beds (to get children:bed occupancy)	
Number of mothers/carers present	
If malnourished children are in a separate room	
If ward is warm	
If there is a wash basin in the ward with running water	
If soap/hexadine is visible	
Blankets for every child	
Any toys visible	

THE INDUCTION COURSE FOR TRAINERS

Prior to the training workshop, the trainers will need to become familiar with the materials, be given guidance about how to train, and practise the various types of teaching methods. Further explanation about some of the techniques trainers will use is given in Annex 1. Commonly-used terms are explained in Annex 2.

ACTION PLAN FOR IMPROVING THE MANAGEMENT OF SEVERE MALNUTRITION

Instructions: For each activity, ask yourselves:-

1. 'Do we do this now?' (If yes, put a tick under Current Status. If no, write in what you do now).
2. 'What must we do to start this activity?' (Consider all the actions that are needed to introduce each change and write them in).
3. 'Who will take responsibility for seeing that these actions are carried out. And by when?'
4. 'What new resources will we need?'
5. 'Who will take responsibility for getting these resources. And by when?'

Step	Current status (What we do now)	Changes to be introduced (New things we must do)	Who will organise changes?		New resources needed	Who will organise resources?	
			Who?	When?		Who?	When?
<p>Malnourished children need <u>different</u> care from other children Have a separate room or corner for severe malnutrition</p> <p>Step 1. Prevent / treat hypoglycaemia Admit quickly to the ward</p> <p>Feed every 3 hours day and night</p> <p>Start straightaway</p> <p>All staff feed on time</p> <p>All staff know danger signs -low temperature -feels cold -becomes drowsy</p> <p>Give antibiotics</p>	(Refer to Step 5. No action needed here)						

Step	Current status (What we do now)	Changes to be introduced (New things we must do)	Who will organise changes?		New resources needed	Who will organise resources?	
			Who?	When?		Who?	When?
Step 1 (cont'd) <u>If hypoglycaemic</u> , give 10% glucose or sucrose solution <u>If unconscious</u> give 10% sterile glucose IV							
Step 2. Prevent / treat hypothermia Feed every 3 hours day and night Cover child with blanket Keep room warm -use heater -exclude draughts Change wet clothes and bedding -have 24h linen supply <u>If hypothermic:</u> Feed straightaway and re-warm with:- -heater or lamp, or -kangaroo method							
Step 3. Treat / prevent dehydration Rehydrate orally except in shock Know how much to give and how often							

Step	Current status (What we do now)	Changes to be introduced (New things we must do)	Who will organise changes?		New resources needed	Who will organise resources?	
			Who?	When?		Who?	When?
<p>Step 3 (cont'd) Record volume given, and time</p> <p>All staff know danger signs of over-hydration -monitor pulse and respirations hourly</p> <p>Replace ORS at 4h, 7h, and 10h with equal volume of starter formula</p> <p><u>To prevent</u>, give ORS after each watery stool</p> <p><u>If in shock</u>: -give IV 10% glucose -give IV fluids -use giving set -monitor pulse and respirations every 5-10 min.</p>							
<p>Step 4. Correct electrolyte imbalance Give daily: Potassium chloride or Slow K Mineral mix</p> <p>Restrict salt</p> <p>Do not give diuretics</p>							

Step	Current status (What we do now)	Changes to be introduced (New things we must do)	Who will organise changes?		New resources needed	Who will organise resources?	
			Who?	When?		Who?	When?
<p>Step 5. Treat infections Give antibiotics even if no clinical signs</p> <p>Give straightaway</p> <p>Know what to give, and correct dose</p> <p>All staff give on time</p> <p>Protect broken skin e.g. -use paraffin gauze -bandage hands if scratching</p> <p>If unimmunised, give measles vaccine if >6m</p> <p>Prevent cross infection: -staff and carers know how infection spreads -one child per bed -wash hands -barrier nurse if infectious -boil water for feeds -store feeds in fridge -feed by cup, not bottles -do not share spoons -no flies, rats etc</p>							

Step	Current status (What we do now)	Changes to be introduced (New things we must do)	Who will organise changes?		New resources needed	Who will organise resources?	
			Who?	When?		Who?	When?
Step 6. Treat micronutrient deficiencies Give:- Vitamin A Folic acid Multivitamins Mineral mix (see step 4) Iron (in catch-up phase) Know correct doses Do not give iron initially							
Step 7. Start cautious feeding Give starter formula Know how much to give Chart amounts offered, leftover, taken, vomited Tube-feed if needed -know when needed -know how to pass tube -know how to use e.g. do not push, let feed run in Know what to do if child vomits Transfer child to catch-up formula when very hungry							

Step	Current status (What we do now)	Changes to be introduced (New things we must do)	Who will organise changes?		New resources needed	Who will organise resources?	
			Who?	When?		Who?	When?
Step 8. Catch-up growth Give catch-up formula Give as much as child can eat 7 times/day Weigh child daily Plot weight on chart daily							
Step 9. Give loving care and stimulation Staff and carers be kind and loving Provide types of play that improve development Use everyday activities to improve development							
Step 10 Prepare for discharge and follow-up Teach mothers about feeding at home Teach mothers how to give structured play Organise referral letter							

WORKSHOP TIMETABLE

Day of the week and time	Activity
THE DAY BEFORE TRAINING BEGINS	
14.00 - 16.00	Participants arrive at the workshop/Registration
16.00 - 16.30	Tea
16.30 - 19.00	Participants meet Orientation to the course
19.45	Dinner
FIRST DAY OF TRAINING	
08.30 - 10.00	Introduction to the ten steps
10.00 - 10.15	Tea break
10.15 - 13.00	Step I. Hypoglycaemia
13.00 - 14.00	Stakeholders arrive. Lunch
14.00 - 15.30	Advocacy meeting with the stakeholders
15.30 - 16.00	Tea break
15.45 - 16.15	Continue with advocacy meeting. Stakeholders depart
16.30	Meeting with the steering committee
SECOND DAY OF TRAINING	
08.30 - 08.45	Feedback from steering committee, clarify any uncertainties from previous day's work
08.45 - 10.00	Step 2. Hypothermia
10.00 - 10.15	Tea break
10.15 - 11.00	Continue with Step 2
11.00 - 13.00	Step 3. Dehydration
13.00 - 14.00	Lunch break
14.00 - 14.30	Continue with Step 3
14.30 - 15.30	Step 4. Correct electrolyte imbalance
15.30 - 15.45	Tea break
15.45 - 16.30	Work on Action Plans
16.30- 17.00	Steering committee meeting

Day of the week and time	Activity
THIRD DAY OF TRAINING	
08.30 - 08.45	Feedback from steering committee, clarify any uncertainties from previous day's lectures
08.45 - 10.00	Step 5. Infection
10.00 - 10.15	Tea break
10.15 - 10.45	Continue with step 5
10.45 - 12.30	Step 6. Correct micronutrient deficiencies
12.30 - 13.00	Work on action plans
13.00 - 14.00	Lunch break
14.00 - 15.00	Step 7. Cautious feeding
15.00 - 15.15	Tea break
15.15 - 16.00	Step 7. Cautious feeding continued
16.00-16.30	Steering committee meeting

FOURTH DAY OF TRAINING

08.30 - 08.45	Feedback from steering committee, review of previous day's lectures
08.45 - 10.00	Step 7. Cautious feeding
10.00 - 10.15	Tea break
10.15 - 13.00	Step 8. Catch-up growth
13.00 - 14.00	Lunch break
14.00 - 15.00	Continue with step 8
15.00 - 15.15	Tea break
15.30 - 16.30	Work on action plans
16.30	Meeting with steering committee

PARTICIPANTS CONTINUE WITH ACTION PLANS

FIFTH DAY OF TRAINING

08.30 - 08.45	Feedback from steering committee, clarify any uncertainties from previous day's lectures
08.45 - 10.00	Step 9. Loving care, play and stimulation
10.00 - 10.15	Tea break
10.15 - 11.00	Continue with step 9
11.00 - 13.00	Step 10. Preparation for discharge and follow-up
13.00 - 14.00	Lunch break
14.00 - 16.15	Presentations of action plans, evaluations

**Day of the
week and time**

Activity