

PART 1: FACT SHEET

The fact sheet is part one of four parts contained in this module. It provides an overview of therapeutic care for severe acute malnutrition. Detailed technical information is covered in part two. Words in *italics* are defined in the glossary.

Introduction

The main objective of therapeutic care is to save the lives of individuals with *severe acute malnutrition* (SAM). SAM is a complex medical condition. It can be identified using *anthropometry* (body measurements). Management of SAM involves a combination of routine medication, specific therapeutic foods and individualised care. Therapeutic care programmes can obtain very high recovery rates (above 80 or 90 per cent) and reach most malnourished individuals in the community.

Therapeutic care has evolved in recent years from an approach based solely on inpatient care to an integrated strategy in which those with SAM and medical complications are treated in hospitals and those with no medical complications are treated at community level. This community based approach has been made possible through the development of *ready to use therapeutic foods* (RUTFs) which can be consumed by the patient at home. It was endorsed in 2007 by a joint United Nations statement.

The therapeutic care module uses Community-based Management of Acute Malnutrition (CMAM) as the generic term for describing the approach and package of services for the management of individuals affected by *acute malnutrition* as it is the most widely used.

Components of therapeutic care/CMAM

Acutely malnourished children are identified in the community or directly in the health facility. Three forms of treatment are provided according to the severity of the child's condition:

1. Individuals with *moderate acute malnutrition* (MAM) and no medical complications are supported in a *supplementary feeding programme* (SFP) which provides dry take-home rations and standard medicines. The objectives of SFP programmes are to treat moderate acute malnutrition and decrease the incidence of SAM. Technically this is not therapeutic care, but SFPs are usually linked to therapeutic care during emergencies.
2. Individuals with SAM with no medical complications are treated in *outpatient care* sites (health centres or posts), with RUTF and routine medicines. These are taken at home, and the child attends the outpatient care site weekly or biweekly.
3. Individuals with SAM who have medical complications need to be treated in *inpatient care* until they are well enough to continue being treated in outpatient care. Infants below six months of age with SAM are also treated in inpatient care.

A further essential component of CMAM is community mobilization and active case finding.

When to start therapeutic care

Four main considerations are taken into account:

1. A **global acute malnutrition rate** above 10% or between 5% and 9% plus the presence of aggravating factors could be considered as threshold for starting or strengthening CMAM.
2. **Contextual factors** including the causes of malnutrition, the socio-economic situation, the food security situation, general ration quantity and allocation, the presence of other interventions and projected future needs that will need to be addressed.
3. **Public health priorities** or whether other priority needs are already being met (e.g., access to food, shelter, safe water, sanitation) and if there are plans for integration of management of SAM into national routine health care services.
4. Availability of qualified human, material and financial **resources**.

Community mobilization

Community mobilisation aims to sensitise, inform and educate the community on nutrition matters in order for the community to internalize them and to promote and encourage their active participation in the activities for the management of acute malnutrition. It allows early detection and referral of cases to appropriate nutrition or health services (clinics or hospitals) and their follow-up. It is an important factor for obtaining **good coverage** through good uptake of the services provided by the population in need within a specific health catchment area.

Outpatient care

Outpatient care is provided for children (older than six months) presenting with SAM without medical complications and for patients that have recovered in inpatient care after they have regained appetite. Outpatient care facilities can be set up at health centres, or in dedicated sites. In emergency settings, they are often organised in the same facilities as SFPs. Patients visit centres once a week (or once every two weeks when distance or security conditions compel). These centres are usually run by health workers.

Admission criteria

Admission into a therapeutic program is based on *weight for height* (WFH) and/or *mid upper arm circumference* (MUAC) and/or presence of *bilateral pitting oedema*. The combination of admission criteria into a therapeutic programme and the respective cut-off points could vary from place to place depending on the local context. Recommendations in national guidelines should be used when available. Some organisations use only MUAC and bilateral pitting oedema to select admissions, as these tools are simple to learn and quicker to undertake. Adults and adolescents are admitted on the basis of low *body mass index* or MUAC or presence of bilateral pitting oedema.

Inpatient care

Inpatient care is provided for the treatment of cases with medical complications or infants less than six months old or for those that cannot participate in outpatient care (e.g. where

outpatient care is not available). It can be organised as residential care (with the patients staying overnight) or, less often, as day care (with the patients returning to their homes for the night). It can be established as an attachment to an existing hospital or health centre, or as an independent structure. Medical treatment and therapeutic feeding are given according to the principles of WHO guidelines. Average length of stay before referring to outpatient care is 7 to 10 days.

Malnutrition requiring inpatient care is identified by the presence of:

- Anorexia (lack of appetite), or
- Severe oedema or
- *Marasmus* with any level of oedema, or
- The presence of associated medical complications (such as extensive infections)

Infants below six months of age with severe acute malnutrition are always admitted to inpatient care with their mother or caretaker.

Inpatient care facilities should be staffed with nurses and with physicians (at least part time and reachable 24 hours), feeding assistants (one assistant for ten patients), cleaners and kitchen staff. One supervisor (usually a clinician) is needed for each inpatient feeding facility.

N.B: Inpatient and outpatient care are different components of the same programme. Even if sometimes they are implemented by different agencies, they need to be integrated and coordinated to be effective.

Treatment protocols

Routine medicines are given to children on admission to both inpatient and outpatient care. When children are being transferred between inpatient and outpatient therapeutic care units, care must be taken not to repeat treatments already given in the treatment unit the child was first admitted to. The table below summarise the routine treatments recommended in therapeutic care.

Medication	When
Amoxicillin	At admission
Anti malaria (according to national protocol)	Test at admission if clinical signs
Mebendazole or Albendazole	Single dose at second week
Vitamin A	Single dose at discharge
Measles vaccination	During treatment

Routine antibiotics are given to all children, given the high prevalence of silent infection in severe malnutrition. Anti-malarials are often included in areas of high *malaria* prevalence. Anti-malarial treatment should follow national guidelines. Immunisation status of children should be checked at each visit according to the standard immunisation schedule. Children older than nine months are normally vaccinated against measles if they have not received the dose already.

A second line antibiotic is used in inpatient units if a child fails to respond to routine antibiotics. The use of IV lines is strictly avoided except in case of septic shock or septicemia.

Feeding protocols

Nutritional management in outpatient units uses Ready-To-Use therapeutic Foods (RUTF). RUTF are soft or crushable foods that can be consumed directly from the packet by children from the age of six months. RUTF is provided at between 150 and 220 kcal/kg/day. Commonly practiced dosing is 200 Kcal/kg/day. Children should be assessed for appetite to eat RUTF before admission to outpatient care and on a weekly basis once admitted. Children who fail the appetite test should be referred to an inpatient unit. Children need to be offered clean drinking water along with RUTF both at facility level and at home.

Patients with complicated SAM or with no appetite should be admitted to an inpatient facility for the *stabilisation phase*. This is achieved with F75 *therapeutic milk* and specific medical treatment. Meals are given six to eight times per 24 hours (throughout the day and night). The patient should not receive any other food during this period.

When appetite returns and oedema is reduced, the patient is ready for the *transition phase* of inpatient care. During the transition phase the patient should receive an increased amount of energy, but still needs careful monitoring. RUTF/F100 is started during this period. If the patient eats more than 75% of the daily RUTF ration, then the patient is transferred to an outpatient programme. If the patient does not take enough RUTF or has difficulties swallowing, a replacement feed (F100, a specialised therapeutic milk to promote weight gain) is given.

As soon as the child starts gaining weight without developing complications he/she is upgraded to the *rehabilitation phase* which ideally should be implemented in outpatient care using RUTF. When this is not possible, the patient should stay in inpatient care for the remainder of treatment with F100.

Infants below six months of age (or below three kg of weight) are treated with a different protocol aimed at reinstating breastfeeding, when this is appropriate for the mother or another female carer. This is achieved by a method called *supplementary suckling technique* where the infant is fed diluted F100 through a tube attached to the mother's nipple thereby stimulating milk production at the same time as being fed. The mother is also stimulated to breastfeed and once milk is being produced by the mother, the amount of therapeutic milk given is reduced until the child is gaining weight and breastfeeding and can go back home.

HIV-infected malnourished patients can recover their nutritional status with these protocols although minor modifications may need to be made to the antibiotics given. To prevent toxicity, antiretroviral drugs are started only when nutritional status improves and any metabolic disturbances have been corrected.

It is important to train mothers or caretakers on how to feed their child properly. This advice should include breastfeeding (when this is appropriate for the mother or a female carer), use of available local foods, and use of therapeutic products offered as part of the treatment.

Emotional and Physical stimulation

Throughout treatment, it is important to promote emotional and physical stimulation of the child, to prevent developmental delays and mental disorders. Special programmes for this should be organised in all centres.

Monitoring, discharge and referral

During outpatient care, the patient visits outpatient facilities every week or every two weeks for follow up and receives routine drugs and RUTF. During these visits, health and nutritional education, with an emphasis on appropriate *infant and young child feeding* practices, should be given. If the patient is not recovering at home, or if complications occur, the patient is assessed by a clinician and referred to inpatient care if necessary. Referral of patients from inpatient to outpatient or vice versa needs to be managed carefully so that there is no discontinuity of treatment.

During treatment the patient is monitored through a patient's card where weight, MUAC, clinical assessments and treatment received are noted. Individualised patient monitoring cards are used in outpatient care and multi-chart in inpatient care.

Patients are discharged from outpatient care when they meet target weight for height or MUAC, and have good weight gain with no signs of oedema for two weeks. Patients discharged from therapeutic care are then followed up at an SFP for a period of four months.

Key messages

1. Severe acute malnutrition is a complex medical condition that needs specialised care to save the patient's life.
2. Therapeutic care programmes can deliver treatment in different ways. Current protocols can obtain very high recovery rates and reach most malnourished individuals in the community.
3. Therapeutic care programmes are initiated when population malnutrition and mortality rates reach specific levels taking into account contextual factors, available resources and other public health priorities.
4. Therapeutic care components include inpatient care for individuals with complicated severe acute malnutrition and infants less than six months with severe acute malnutrition and outpatient care for individuals with uncomplicated severe acute malnutrition.
5. Community mobilisation, case finding and sensitisation are key elements of therapeutic care programmes.
6. Management of patients involves a combination of routine medication, special therapeutic foods and care. Only a small percentage of patients will need specialised medical treatment due to medical complications.
7. Malnourished children below 6 months are managed largely through reinstating breastfeeding with special techniques when this is possible.
8. HIV-infected malnourished patients can recover their nutritional status with normal treatment protocols. When available, antiretroviral treatment should be given only after completing stabilisation and transition phases of treatment of severe acute malnutrition.
9. Therapeutic care programmes can work in conjunction with SFPs and other health and nutrition programmes to obtain maximum impact at the population level.
10. Therapeutic care should be integrated into routine primary health systems in post and non-emergency situations.