

“Simplified Approaches” in relation to the new WHO guideline on the prevention and management of wasting and nutritional oedema (acute malnutrition) in children under 5 years

Second edition

The World Health Organization (WHO) guideline on the prevention and management of wasting and nutritional oedema (acute malnutrition)¹ has a child health focus. This means putting the child’s health and nutritional needs both now and for their future growth and development at the forefront.

The recommendations and good practice statements in this guideline have an important impact on current programming and services, including on the use and promotion of the “simplified approaches package” (see [Annex 1](#) for the definitions of these).

WHO recognizes that in order to maximize the number of malnourished children cared for, interventions need to be as feasible and low-cost as possible without compromising the health of children – and these principles were incorporated into the development of the new/updated recommendations. In exceptional circumstances, and as part of a response to a time-bound acute emergency, some adaptation of standard protocols² may be needed; as also reflected in the 2019 joint United Nations (UN) agency communique on this topic. But as emergencies become more and more

protracted, a return to standard protocols is advisable as soon as feasible to deliver the best possible care to malnourished children and their families.

While leading on the simplified approaches agenda globally, United Nations Children’s Fund (UNICEF) recognizes and adopts the latest evidence-based recommendations from WHO. The package of the so called “simplified approaches” has been instrumental in testing new ways of delivering services to children and their families in a variety of contexts. Going forward, UNICEF acknowledges that some of these adaptations will remain for emergency-only programming and services, while the new WHO 2023 recommendations will result in some of these interventions no longer being recommended. Furthermore, UNICEF acknowledges there is a need for further evidence generation on a number of these adaptations.

For both agencies, evidence generation and research on all aspects of the prevention and management of acute malnutrition remain of high importance.

1 The guideline document predominantly uses the terms wasting and/or nutritional oedema (sub-divided into moderate wasting and severe wasting and/or nutritional oedema); however, communication documents and the operational guidance that will be produced to aid implementation of these recommendations will use the term acute malnutrition (sub-divided into moderate acute malnutrition, MAM, and severe acute malnutrition, SAM).

2 Standard protocols refer to protocols and guidelines based on WHO recommendations. These standard protocols may continue to be used in emergencies, but adaptation and production of emergency protocols may also be needed.

3 <https://www.who.int/news-room/events/detail/2019/03/26/default-calendar/simplified-approaches-for-the-treatment-of-child-wasting>

This document aims at providing clarifications on how the WHO recommendations, based on the latest evidence, relate to the package of interventions called “simplified approaches.”

“SIMPLIFIED APPROACH”	WHO RECOMMENDATIONS AND GOOD PRACTICE STATEMENTS
Family mid-upper arm circumference (MUAC)	<ul style="list-style-type: none">• The effectiveness of Family MUAC as a screening tool was not prioritized by the guideline development group (GDG) to be covered in a guideline question.• Therefore, there is no specific recommendation for or against the use of Family MUAC.
Community health worker (CHW)-led management of acute malnutrition	<ul style="list-style-type: none">• CHWs can provide nutritional supplementation to infants and children 6-59 months with moderate acute malnutrition (MAM) and nutritional treatment to children with severe acute malnutrition (SAM).• This is a conditional recommendation which in this instance means it should only be operationalised when governments or implementing partners can ensure adequate training and supervision of CHWs with regular and ongoing dedicated resources to enable this.• Nutritional supplementation and treatment are recommended in kcal/kg/day, implying that for standard protocols, CHWs must be able to weigh a child at the time of giving out this supplementation or treatment for correct dosing. CHWs must also measure weight as part of monitoring progress during treatment.• It will be important to document the operationalisation of this recommendation in terms of opportunities and challenges, especially related to weighing children at community level and by CHWs.
Reduced frequency of follow-up visits	<ul style="list-style-type: none">• Frequency of follow up visits was not prioritized by the guideline development group (GDG) to be covered in a guideline question.• Therefore, there is no specific recommendation for or against whether the frequency of follow up visits for children 6-59 months of age with acute malnutrition can be reduced.



MUAC/Oedema only programming

Infants less than 6 months of age at risk of poor growth and development:

- MUAC **can be** used as a sole anthropometric criterion, in addition to an assessment of medical problems and appetite, to **admit** an infant less than 6 months of age to inpatient care or **enroll** into outpatient care.
- MUAC **cannot** be used to measure an infant's **progression** in terms of their clinical or nutritional status. Weight gain must be used along with clinical and feeding assessments.
- MUAC **cannot** be used to decide if an infant will "**exit**" care before they are 6 months of age. An assessment is made when the infant is 6 months of age to decide which appropriate services they should be referred to (e.g. standard infants and young child feeding [IYCF] services, nutritional treatment for SAM, etc) based on anthropometry and clinical signs.

Infants and children 6-59 months of age with acute malnutrition:

- MUAC **can** be used as a sole anthropometric criterion, in addition to an assessment of medical problems and appetite, to **admit** a child to inpatient care or **enroll** into outpatient care.
- MUAC **cannot** be used to decide **how much** nutritional supplementation for MAM (e.g. ready-to-use supplementary food (RUSF), ready-to-use therapeutic food (RUTF), supercereal plus) or nutritional treatment for SAM (RUTF) to give to a child. **Weight** must be used.
- MUAC **cannot** be used to measure a child's progression in terms of their clinical or nutritional status. **Weight gain** must be used along with clinical assessments.
- Both MUAC and weight-for-height z-score (WHZ) must be $\geq 125\text{mm}$ and ≥ -2 standard deviations (SD), respectively, for a child to exit from outpatient care along with no nutritional oedema for at least 2 visits. This is to ensure that a child could not be readmitted the same day as they exit (in a different location) because one of these measurements still meets admission/enrollment criteria. However, if one measure normalizes but the other does not, and the clinical team assess the child to be no longer needing nutritional treatment (SAM) or supplementation (MAM), a decision can be made for the child to exit the service as "recovered."



Summary table: Anthropometric measurements and clinical signs used for decision-making in the management of infants and children **6-59 months of age with acute malnutrition**

Anthropometric measure/index or clinical sign	Admission into inpatient care/ enrollment into outpatient care <i>(in addition to medical problems and appetite assessment)</i>	Prescribing nutritional supplementation/ treatment	Monitoring progress of nutritional supplementation/ treatment <i>(in addition to medical problems and appetite assessment)</i>	Transfer from inpatient to outpatient care	Exit from outpatient care
Weight-for-height z-score (WHZ)	Yes	No	No	No	Yes
Mid upper-arm circumference (MUAC)	Yes	No	No	No	Yes
Nutritional oedema	Yes	No	Yes	Yes	Yes
Weight	No	Yes	Yes	Yes <i>(Weight gain rather than absolute weight)</i>	No
Weight for age z-score (WAZ)	Yes <i>(Children already with moderate wasting, additional enrollment criteria)</i>	No	No	No	No



Expanded admissions criteria

- The guideline defines the anthropometric measurements and clinical signs which categorise MAM and SAM (in accordance with the [*International Classification of Diseases, 11th edition*](#)).

Severe acute malnutrition (SAM):

- nutritional oedema and/or
- WHZ or weight for length z-score (WLZ) < -3 and/or
- MUAC <115mm (children 6-59 months).

Moderate acute malnutrition (MAM):

- WHZ or WLZ < -2 and/or
 - MUAC ≥ 115 and <125mm (children 6-59 months) and
 - no nutritional oedema.
- There are specific criteria recommended for children with SAM for admission into inpatient care/enrollment into outpatient care, transfer from inpatient to outpatient care and exit from outpatient care.
 - There is also a recommendation on how much RUTF to give as nutritional treatment to children with SAM in kcal/kg/day until they no longer have acute malnutrition.
 - The guideline emphasizes that not all children with MAM will need a specially formulated food (SFF), and for those who need it, SFF should only be given to supplement the home diet.
 - The guideline also recommends evidence-informed risk factors⁴ which can be used to prioritise which children with MAM to give a SFF to supplement their home diet, based on risk factors which make them at higher risk of mortality and non-recovery than others.
 - As such, children with MAM and SAM should be cared for in the appropriate programme or service and given nutritional supplementation or nutritional treatment respectively, according to the specific recommendations for either MAM or SAM and not protocols with a simplified dosing schedule which covers both and with no consideration of their weight gain.

⁴ See Briefing Note for more details on these risk factors: https://www.childwasting.org/files/uqd/2b7a06_2cf788d9c0f342b89c054b288f4862e3.pdf or Guideline itself on MAGICapp <https://app.magicapp.org/#/guideline/7330>

Use of a single nutritional product**Moderate acute malnutrition:**

If a SFF is used to supplement a child to recover from MAM, the following products should be used **based on the evidence of effectiveness**:

- Lipid-based nutrient supplements (meeting the technical specification of ready-to-use supplementary food [RUSF] or RUTF) are the preferred type.
- When these are not available, Fortified Blended Foods with added sugar, oil, and/or milk (improved FBFs) are preferred compared to Fortified Blended Foods with no added sugar, oil, and/or milk.

This hierarchy may be adapted for different contexts taking into account feasibility, acceptability and equity considerations (in addition to effectiveness mentioned above) as well as resource considerations and production capacity. As only RUTF can be used to treat SAM (see below), it should be prioritised for children with this condition and only when all the needs of children with SAM have been met should RUTF be used for children with MAM.

Whichever SFF is used, this is only meant to provide 40-60% of the child's daily energy and nutrient needs. Programme managers should put in place systems to ensure that children have access to high quality foods at home to cover the remaining 40-60% of their daily energy and nutrient needs.

Severe acute malnutrition:

- RUTF (either in paste or biscuit form) should be used for the nutritional treatment of severe wasting and/or nutritional oedema (RUSF or another SFF should not be used for this purpose).

Reduced dosage

In infants and children 6-59 months of age with SAM who are enrolled in outpatient care, ready-to-use therapeutic food (RUTF) should be given at a quantity that will provide:

- 150-185 kcal/kg/day until anthropometric recovery and resolution of nutritional oedema;
- OR
- 150-185 kcal/kg/day until the child is no longer severely wasted and does not have nutritional oedema. At this point, the quantity can be reduced to provide 100-130 kcal/kg/day, until anthropometric recovery.

The decision as to whether to reduce or not should consider the capacity of health workers delivering the treatment to safely follow a reducing quantity protocol and the food security context with considerations of level of sharing of RUTF in the household.

NOTE: The recommendations on the prevention of wasting and nutritional oedema did not cover aspects related to the “simplified approaches.”

Annex 1

The most implemented and researched simplified approaches are:

	Family MUAC	Caregivers are trained and equipped to screen their own children using a MUAC tape
	CHW-led treatment	CHWs admit and treat wasting (without medical complications) at community level
	Reduced frequency of follow-up visits	Reduction of visits for wasted children admitted into treatment from weekly to bi-weekly or monthly
Combined protocol	MUAC/Oedema only	Use of MUAC and/or edema as the only criteria for admissions and discharge
	Expanded admissions criteria	Increasing the MUAC cut-off to admit all children <125mm
	Use of a single treatment product	All children admitted for treatment receive RUTF
	Reduced dosage	Dosage of RUTF product modified over course of treatment

Source: <https://www.simplifiedapproaches.org/what-are-simplified-approaches>

