

Note on Terminology of “Wasting” and “Acute malnutrition”

February 2023

The International Classification of Diseases version 11 (ICD-11)¹ includes under the category of “undernutrition” two terms: 1) wasting (5B51) and 2) acute malnutrition (5B52). Although these terms have sometimes been used interchangeably, the precise definition of each is slightly different. This note aims to clarify the use of the terms to be used by WHO to avoid confusion.

Wasting in children under 5 years of age is defined as having weight-for-height <-2 standard deviations (SD) from the median of the World Health Organization (WHO) Child Growth Standards. This definition is also used in global statistics on child malnutrition² and is the basis of the targets of the Sustainable Development Goals (SDGs) and the Global Nutrition Targets³. A mid-upper-arm circumference (MUAC) < 125 mm can be used in field settings (outside of health facilities) as an alternative measure.

Wasting can be sub-classified as severe or moderate:

- **Severe wasting:**
 - weight-for-height <-3 SD
 - (or MUAC <115 mm for children 6-59m as an alternative field measure)
- **Moderate wasting:**
 - weight-for-height between -3 SD and -2 SD
 - (or MUAC between 115 mm and 125 mm for children 6-59m as an alternative field measure)

Acute malnutrition in children under 5 years of age is defined as having weight-for-height or -length z-score more than 2 standard deviations (SD) below the median of the WHO child growth standards (WHZ or WLZ < -2) or having nutritional oedema. Again, a MUAC less than 125mm can be used in field settings as an alternative measure to define acute malnutrition alongside weight-for-height and nutritional oedema. Acute malnutrition can be spelled out as “wasting and/or nutritional oedema”.

Nutritional oedema is bilateral pitting oedema which starts in the feet and can progress up to the legs and the rest of the body, including the face. It is pathognomic of severe acute malnutrition. Clinical assessments for undernutrition should always include an assessment for nutritional oedema.

Acute malnutrition may be further sub-classified as:

- **Severe acute malnutrition (SAM):**
 - severe wasting (as defined above) **and/or**
 - nutritional oedema
- **Moderate acute malnutrition (MAM):**
 - moderate wasting (as defined above) *without* nutritional oedema

The proportion of children who have nutritional oedema amongst those identified with SAM can vary greatly, one study from 2016 reports 1.6% in Pakistan to 50% in Malawi⁴; highlighting that its prevalence is very context specific. It is thus noted that only using wasting prevalence in the Sustainable Development Goals and other international targets could be underestimating the true burden of acute malnutrition in many countries.

¹International Classification of Diseases version 11 (ICD-11) <https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2fcd%2fentity%2f480150735>

² <https://www.who.int/data/gho/data/themes/topics/joint-child-malnutrition-estimates-unicef-who-wb>

³ World Health Organization. Global targets 2025. To improve maternal, infant and young child nutrition www.who.int/nutrition/topics/nutrition_globaltargets2025/en/

⁴ Alvarez JL, Dent N, Browne L, Myatt M, and Briend A. Putting Child Kwashiorkor on the Map. CMAM Forum technical brief. March 2016.

Furthermore, although estimates and evidence varies, there is considerable concern that mortality is often higher amongst those children with nutritional oedema (ibid).

WHO recognizes the importance of correctly identifying and managing children with nutritional oedema and that this serious component of SAM should not be forgotten and always given proportionate attention and care.

It should be noted that the word “acute” may not have the same meaning when used as part of acute malnutrition as in other uses in medical contexts. “Acute” usually refers to an event or condition that begins and worsens quickly and as a corollary, is not “chronic” which takes a long time to develop or worsen. However, the conditions which lead to acute malnutrition may well develop over a relatively protracted period. Furthermore, there may be a connotation that something “acute” can, and must, always be treated and resolved relatively quickly. Children with MAM might not always need urgent medical or nutritional treatment, but more social protection and health education services.

It may also be noted that there are other forms of malnutrition, including micronutrient deficiencies or excesses, overweight/obesity, diet-related noncommunicable diseases, and other forms of undernutrition such as stunting and underweight.

The terms MAM and SAM are currently the most familiar and widely used amongst policy makers, programme managers and health care workers in national health systems and within both national and international non-governmental organisations (NGOs). For this reason, this grouped terminology will be used more frequently in the operational guidance and derivative tools of the guidelines, which will be used by these more front-line audiences.

The guideline document itself will use the terms wasting and/or nutritional oedema (with the subgroups of severe wasting and/or nutritional oedema and moderate wasting).

The Sustainable Development Goals (SDGs) and WHA Global Nutrition Targets are based on weight-for-height data only, and thus the terminology of “wasting” will continue to be used in this context

The Global Action Plan on Child Wasting⁵ will keep the same title, but it is acknowledged that it describes actions and initiatives for children with wasting and/or nutritional oedema.

⁵ <https://www.childwasting.org/>