

# New WHO guideline on the prevention and management of acute malnutrition in infants and young children: remaining challenges

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Wasting and nutritional oedema, often referred to together as ‘acute malnutrition,’ are life-threatening nutritional disorders that affect infants and young children under 5 years. Over the last 25 years, significant advances have been made in managing acute malnutrition, including improving inpatient protocols for severely ill children and expanding opportunities for management beyond the inpatient setting to community-based programmes for children with severe acute malnutrition (SAM). More recent advances have included the incorporation of front-line workers into national and regional systems to detect and treat acute malnutrition; and greater recognition of the dynamic nature of growth faltering and weight loss, including relapse after treatment for SAM.<sup>1</sup>

Despite these technical and clinical advances, global progress to eliminate acute malnutrition has been slow. In 2022, around 6.8% of all children under 5 years old (45 million children) experienced wasting, short of the global 2025 target of 5%.<sup>2</sup> Against this background, the WHO released new, updated guidelines on the management of wasting and nutritional oedema on 20 November 2023. The current version is a much-needed update and major expansion from the last edition published in 2013. Areas of expansion include guidelines for supportive care of infants with risk factors for poor growth and development, integrated care of both caregivers and children, management of

moderate acute malnutrition (MAM), and continuity care after inpatient discharge.<sup>3</sup>

With the introduction of these new guidelines, a group of global health practitioners and child nutrition experts met to review the guidelines critically, with a particular emphasis on social paediatrics and child rights. Our primary goal was to offer insights into the challenges of implementing these directives, drawing from our varied experiences in lower-resourced settings around the world. Each team member conducted a thorough review of the guidelines and contributed key talking points, which were subsequently synthesised.

The most important policy implication of the new guidelines is the inclusion of Good Practice Statements—plain language and sensible summaries of high-impact interventions and approaches. Many of these Good Practice Statements push for more timely, comprehensive approaches, with a particular focus on the onset of acute malnutrition. These guidelines provide Ministries of Health and other stakeholders, including clinician organisations, civil society and advocacy organisations, with the evidence they need to allocate resources to social programmes upstream rather than focusing exclusively on the acute phase of malnutrition.

Similarly, from the perspective of social paediatrics and community-based and rights-based approaches, one of the most welcome developments is the vigorous focus on integrated care of both the caregiver and the infant, and on the need for wrap-around services and continuity of care after inpatient discharge for acute malnutrition. These two points are aimed at the early identification of risk factors that impact child and caregiver well-being and prevention of nutritional relapse after inpatient discharge, two areas where improvements are needed to progress towards global wasting targets.

At the same time, it is important to reflect that many of these new guidelines

are aspirational, and it will require significant work by governments, policy and advocacy organisations, and clinicians to operationalise. As the WHO’s press release states: ‘(The) WHO is working closely with UNICEF and the other UN agencies collaborating on the Global Action Plan to develop pragmatic operational guidance...’<sup>4</sup> We emphasise this point because as the focus on acute malnutrition expands more towards both prevention and postacute care, realising many of the new recommendations will require significant health system restructuring, resource allocation towards local health and nutrition management centres, and the development of new infrastructure and expansion of the healthcare workforce.

One example of these challenges is found in the Good Practice Recommendation A1 that ‘mothers/caregivers and their infants less than 6 months of age at risk of poor growth and development should receive regular care and monitoring by health professionals.’ Guideline commentary goes on: ‘This...should be coordinated and delivered by a health professional (such as a doctor, nurse, midwife) capable of identifying and acting on any clinical deterioration...’. Although the novel focus on prevention for infants younger than 6 months is praiseworthy, we should recognise that there are many operational challenges to achieving this recommendation including (a) pervasive sentinel-centre, tertiary-care referral models which concentrate and restrict access to clinicians skilled in comprehensive assessment of infants and caregivers; (b) severe health workforce capacity constraints and time limitations; (c) lack of training in family-centred, collaborative care models and (d) widespread but often unacknowledged cultural and linguistic barriers which lead many families and caregivers to resist facility-based care.

Another operational hurdle involves linking families with identified psychosocial needs to the necessary resources. The guidelines note that ‘Children with medical problems needing mid or long-term follow-up... and/or additional social factors (eg, household food insecurity, vulnerable household) have also been referred to appropriate care/support services care...’. In settings where social support systems are limited or non-existent, this task becomes particularly daunting. Moreover, it is important to recognise that achieving sustainable and long-term improvements in these social determinants of health necessitates governmental action and policy changes.

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One area of surprising omission in the new guidelines is the caregiver's experience and family-centred approach in the hospital setting. The language in the guidelines focuses on the integrated care of the child and caregiver solely in the preventative and postacute phases of malnutrition care. For those on the front lines, it is commonplace that negative in-hospital experiences reverberate through communities and lead to significant resistance to inpatient treatment for SAM. These negatives may include overtly stigmatising and discriminatory language and behaviours towards caregivers; visitation policies that isolate primary caregivers with their hospitalised child, leaving them to worry about other children left at home; and lack of leisure activities and other in-hospital support services. We should also consider the weighty direct and indirect costs that inpatient paediatric care imposes on families, including lost wages, the need to arrange childcare for siblings and transportation costs. These expenses are often overlooked and continue to deter families from accessing care.

Equity must be considered in the implementation of these guidelines and operationalised with intentionality, particularly when considering integrated care and wrap-around services. For instance, it is noted that 'Health workers tasked with making these treatment decisions must have the training and expertise to recognise and act on the signs and symptoms described in this recommendation and detailed below.' In many contexts, community-based services are provided by community health workers who are not always provided adequate training and mentorship or even formal employment status. This problem is often exacerbated in rural areas resulting in decreased access to and quality of care. Systems and financing structures will need to be put in place so that providers have nutrition and paediatric-specific training and have access to the appropriate support in rural communities. Otherwise, inequity in access to and quality of care will be widened. We hope that as these guidelines are operationalised, further attention is focused on equity; and that concrete, actionable recommendations are made for overcoming barriers to care, especially for those from distinct cultural or linguistic backgrounds and with prior negative experiences with biomedical care.

One final area that must be addressed is the fact that ready-to-use therapeutic foods (RUTFs), ready-to-use supplementary foods (RUSFs) and specially formulated foods feature extremely prominently in the guidelines both for SAM and for MAM. It should be noted that these products are largely produced in higher-income settings, often commercially, and sourced to countries through bilateral aid agreements and other forms of aid subsidy. In addition to the ethical challenges posed by the commercialisation of global nutrition products, the use of these products to some degree contradicts healthy nutrition practices for children because of their high-energy, high-fat and high-sugar composition.<sup>5</sup> In some settings such as India, which contains a large proportion of the global burden of acute malnutrition, RUTFs are not commonly used because clinicians, policy-makers and advocacy organisations have convincingly argued how they displace whole food interventions which can be deployed with equal efficacy and a higher degree of sustainability.<sup>6</sup> More advocacy is urgently needed to continue to improve local, sustainable food solutions globally.

The updated WHO guidelines have the potential to dramatically curb the incidence of acute malnutrition and provide comprehensive community-based nutrition care. However, it is essential that the implementation of these guidelines is done thoughtfully and intentionally with full financial and administrative support from local Ministries of Health and implementing partners. These general guidelines not cause clinicians to lose sight of the necessity to individualise care to each child and family, which is essential for the management and prevention of acute malnutrition and which includes a need to act quickly on risk factors and early onset of growth faltering long prior to the diagnosis of MAM and SAM.

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### REFERENCES

- 1 Papadopoulou E, Lim YC, Chin WY, et al. Lay health workers in primary and community health care for maternal and child health: identification and treatment of wasting in children. *Cochrane Database Syst Rev* 2023;8:CD015311.
- 2 United Nations Children's Fund (UNICEF) WHOW, International Bank for Reconstruction and Development/The World Bank. Levels and Trends in Child Malnutrition: UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates: Key Findings of the 2023 Edition. New York: UNICEF and WHO, 2023.
- 3 World Health Organization. WHO guideline on the prevention and management of wasting and nutritional oedema (acute malnutrition) in infants and children under 5 years. 2023. Available: <https://app.magicapp.org/#/guideline/noPQKE>
- 4 WHO. WHO issues new guideline to tackle acute malnutrition in children under five (press release). 2023.
- 5 Bazzano AN, Potts KS, Bazzano LA, et al. The life course implications of ready to use therapeutic food for children in low-income countries. *Int J Environ Res Public Health* 2017;14:403.
- 6 Working Group for Children Under Six. Should India use commercially produced ready to use therapeutic foods (RUTF) for severe acute malnutrition (SAM). *Soc Med* 2009;4:52–5.