

Regional perspectives on simplified approaches for the management of children with acute malnutrition: West and Central Africa

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A community healthcare worker checks a child's MUAC in Kananga, Kasai Occidental province, Democratic Republic of Congo (DRC), 2018

Vincent Thiemeau

Location: West and Central Africa¹

What we know: In 2018 almost two million children with severe acute malnutrition (SAM) were treated across West and Central Africa, an estimated 30% of the children in need.

What this article adds: A range of context-specific, simplified approaches (adaptations to treatment) are being piloted in the region by non-governmental organisations to improve treatment coverage and reduce treatment costs. UNICEF is supporting these innovations in collaboration with national governments, United Nations agencies and development partners. Simplifications may include but are not limited to: family mid-upper arm circumference (MUAC); use of a single product; reduced product dosage; reduced follow-up visits; MUAC-only programming and/or case management by community health workers. Published evidence is forthcoming and more research is planned, including in Burkina Faso, Chad, Democratic Republic of Congo, Mali, Mauritania, Niger and Senegal. Outstanding operational questions for simplified approaches were identified in a regional/country consultation. A regional meeting in late 2019 will consolidate knowledge and evidence emerging from the region.

Context

Rates of child wasting remain persistently high in West and Central Africa. It is estimated that, at any point in time during 2018, on average 7.9 million children suffered from the condition across the region (UNICEF, WHO & World Bank, 2019). Based on results of SMART surveys, the prevalence of wasting is considered 'serious' in Chad, Mali, Mauritania and Niger (i.e., prevalence >10%). It is important to note that these national figures tend to hide disparities at sub-national levels, where the critical emergency threshold of 15% is often exceeded. The estimated number of children suffering from severe wasting is excessively high in certain sub-regions (Figure 1).

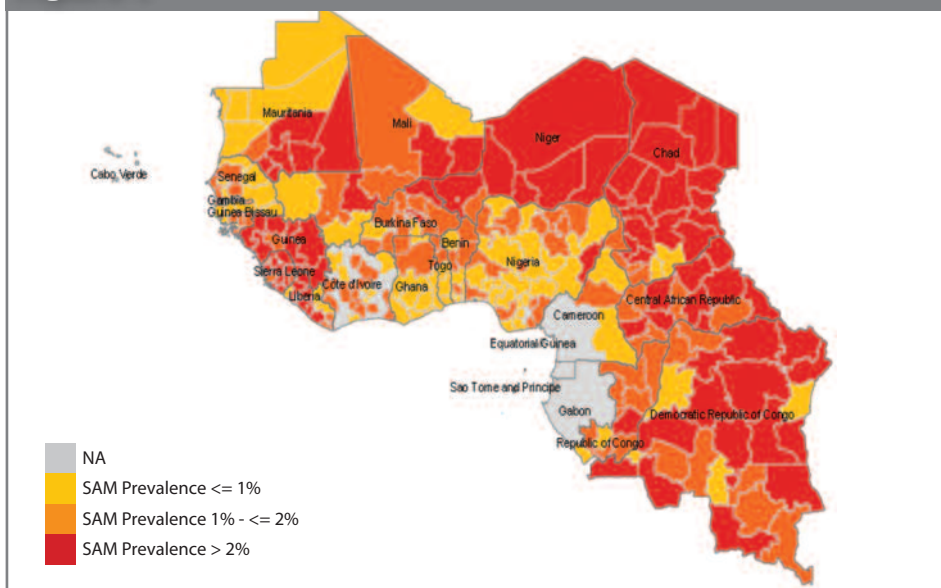
Since the international endorsement of the outpatient care of acute malnutrition (WHO, WFP & UNICEF, 2007) and its subsequent recognition as a high-impact intervention by The Lancet (Bhutta *et al*, 2008), countries across the region have been scaling up community-based management of acute malnutrition (CMAM). To date, all countries in the region have national CMAM protocols, based on international normative guidance, adapted

according to country policies and regulations. All of these protocols include the management of complicated and uncomplicated severe acute malnutrition (SAM) and many include the management of moderate acute malnutrition (MAM). In Burkina Faso, Mali, Mauritania, Niger and Senegal, SAM treatment services are now available in over 80% of health facilities. In 2018 almost two million children with SAM were treated across the region², reaching an estimated 30% of the need and contributing to a significant proportion of global admissions (figures being finalised).

After more than 10 years of implementation and scale-up in this region, many important operational lessons are emerging on how these CMAM protocols respond to the needs, at scale and within national health systems. A

¹ For UNICEF, the West and Central Africa Region includes the following countries; Benin, Burkina Faso, Cameroon, Cabo Verde, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo
² UNICEF Regional Integrated Management of Acute Malnutrition (IMAM) dashboard.

Figure 1 Estimated number of children with severe wasting in 2019 across West and Central Africa



series of bottleneck analyses (BNAs) conducted across the region in 2018 have helped to document key issues with regard to service delivery and uptake, particularly with regard to outpatient SAM management. Human resources are a persistent bottleneck. Besides issues relating to limited availability and quantity of health staff, which affect the system more broadly, there are issues with regard to the training of health staff. In most countries, CMAM modules do not feature in pre-service training, which inhibits the effective implementation of CMAM protocols and appropriate case management at facility level. There is also anecdotal evidence of health staff finding current protocols complex and difficult to deliver. Other major problems have been identified concerning community outreach. While many efforts have been made to integrate screening for acute malnutrition into community health platforms and other health interventions (e.g., seasonal chemoprophylaxis of malaria), active outreach and screening remains limited and is often dependent on the support of non-governmental organisation (NGO) partners. Finally, issues have been identified around access and utilisation, including long distances to treatment facilities and limited awareness of the service and its mechanisms, meaning that initial utilisation of services remains low. There are also barriers to retaining children as a result of high opportunity costs, long waiting times, stock-outs and geographic access.

Regional exercises have also taken place in recent years to review challenges for sustainable scale-up of services within health systems. These exercises have reinforced the presence of access issues identified at country level and have also identified ongoing challenges around policy and financing. From a policy perspective, it has been recognised that SAM treatment is not prioritised as a key child-survival intervention, resulting in SAM services being omitted from key child-survival packages and action plans. In addition, service inputs remain highly dependent on external financing mechanisms (for the most part

humanitarian funding streams) which are short term and unpredictable in nature. Furthermore, the cost per SAM child treated in outpatient care across the region remains high, ranging between USD85-219 (UNICEF; Isanaka *et al*, 2015), with a substantial proportion of this cost associated with treatment products. As a result, integration of this intervention into national health systems has been challenging.

As well as working on overall structural issues (such as financing mechanisms) in recent years, UNICEF has supported many partner organisations to pilot modified and simplified approaches to address issues of access, coverage and cost. The results are promising and UNICEF continues to support pilots and the collection of evidence regarding modifications to programme design, together with other members of the No Wasted Lives coalition.³ The overall objectives of these modifications are to improve coverage, cost-effectiveness, quality and continuum of treatment for children suffering from acute malnutrition. The main driver of simplification is to ensure greater coverage of services for children at high risk. Crucially, UNICEF is committed to supporting the integration of these services, where proven to be safe and effective, into national health systems to ensure that service delivery models are as acceptable and feasible as possible for health systems, while ensuring high-quality nutrition outcomes.

Definition of simplified approaches

Simplified approaches are adaptations to existing national and global protocols and programmes designed to improve coverage and reduce the costs of caring for children with uncomplicated wasting, while maintaining quality of care. There is no single or prescriptive set of simplifications, but rather a series of different approaches that might be adapted and adopted according to the opportunities and challenges in each context. Some of the key simplifications that have been explored in the context of research projects or

emergency responses are:

- Engaging family members to screen and refer their children (Family MUAC);
- Use of a single ready-to-use therapeutic food (RUTF) product for treatment;
- Admission, treatment and discharge based on mid-upper arm circumference (MUAC) >125mm and/or presence of oedema;
- Treatment dosage of RUTF reduced over the course of recovery;
- Reduced number of follow-up visits during treatment; and
- Management of wasting and other forms of acute malnutrition by community health workers.

To date, these simplifications have been piloted by NGO partners with the support of UNICEF in several countries across the region. The pilots have taken different approaches and formulations, depending on the context and organisation. Published evidence on these simplifications is building but remains limited.

UNICEF is taking a country-by-country approach to ensure that a package of simplifications is adapted to the context of each country. Some of these simplifications are already approved by normative guidance on the basis of evidence of their safety and effectiveness, such as the Family MUAC approach, where practitioners are encouraged to involve community members in the screening of children. Across the West and Central Africa region over 1.5 million mothers and community members have now been trained on the use of MUAC. UNICEF and partners are looking to expand opportunities to integrate MUAC training into existing health; water, sanitation and hygiene (WASH); and education intervention packages. Other simplifications remain in the pilot stage and need a much stronger basis of evidence before they can be scaled up at national level.

Planned activities across the West and Central Africa region during 2019

A variety of country-level pilot projects and meetings are planned in the region in 2019 to support the advancement of evidence on the modification of acute malnutrition treatment to improve coverage and access. These include the following:

In *Burkina Faso* the Ministry of Health (MoH) Directorate of Nutrition, with the support of UNICEF, convened partners and sub-national health staff to standardise simplified approaches for implementation in exceptional circumstances after the implementation of various simplified approaches by NGO partners – notably OptimMA-Burkina Faso – by ALIMA.

In *Central African Republic* UNICEF and World Food Programme (WFP) are exploring options to implement a series of simplified approaches to treat acute malnutrition to reach more children in a timely manner and will collect outcome data to add to the evidence base.

In *Chad* the MoH, in collaboration with UNICEF, WFP and IRC, will pilot a combination of simplified approaches in one province as a response to issues faced in the integration of the current treatment model into the health system.

In the *Democratic Republic of Congo* ALIMA will implement a randomised controlled trial (RCT), OptiMA-DRC, to test a package of simplified approaches to build the evidence base. UNICEF is coordinating with ALIMA and PRONANUT on this pilot.

In *Mali* IRC is currently conducting an operational pilot combining community MUAC with a single-product approach based on MUAC <125mm. ALIMA will also be implementing an operational pilot in the urban context of Bamako, entitled OptiMA-Mali. Action Against Hunger also plans to conduct a package of simplified approaches in other regions of the country. These pilots are supported by a national-level steering committee under the guidance of the MoH Division of Nutrition with support from UNICEF.

In *Mauritania* a national-level workshop led by the MoH with support from UNICEF was held with Nutrition Cluster members to discuss opportunities and challenges for simplified approaches with the objective of defining a simplified package based on the existing barriers to service delivery, to be tested in 2020.

In *Niger* ALIMA plan to implement OptiMA-Niger, an RCT to test a package of simplified approaches to support the building of generalisable evidence specific to dosage optimisation. Prior to this, given the high burden of SAM, ALIMA will run the package of simplified approaches in two health facilities to gain a better understanding of caseload and dosage to inform the RCT. UNICEF is supporting in the supply chain and national coordination.

In the final quarter of 2019 UNICEF Regional Office for West and Central Africa, in collaboration with partners, intends to hold a regional meeting to consolidate the knowledge and evidence coming from this vast array of studies in the region.

To support the acceleration of evidence to action, a series of outstanding questions has been identified across the region. These questions were identified through a consultation process with members of a regional technical group and country teams. Efforts are being made to ensure that consideration is given to these questions during the design of any new operational pilots.

Next steps and recommendations

UNICEF remains committed to transparent, evidence-based leadership for the prevention and treatment of acute malnutrition. The risks and opportunities of adopting different simplifications explored in different pilots can only be adequately and responsibly assessed when the evidence and experiences are openly and publicly available. In instances when the implementation

of simplified approaches requires changes to existing normative guidance, UNICEF will support the World Health Organization in reviewing this evidence using existing guideline review procedures. In instances where the implementation of simplified approaches does not require changes to existing normative guidance, UNICEF will work with inter-agency platforms and initiatives, including the Global Technical Assistance Mechanism for nutrition (G-TAM), No Wasted Lives/Council of Research and Technical Advice on Acute Malnutrition (CORTASAM), and Inter-agency Harmonization Working Group/Food Aid Quality Review to review and adopt programmatic and operational changes that can safely care for more children with wasting.

UNICEF will continue to work with national governments and their ministries of health to ensure that efforts to simplify treatment are well coordinated in order to build the evidence base effectively. Establishing national-level piloting committees may be an effective way to support the collaborative design and supervision of approaches, capture learning and support the standardisation of operational tools. In addition, clear research questions should be identified to justify the intervention, even in the context of operational pilots, to provide clarity on the objectives of the modifications and to ensure robust data-collection systems. Nutritional outcomes of children should be followed closely in any modification to treatment protocols and, where possible, individualised datasets should be recorded and analysed during piloting phases.

Furthermore, it is important to capture the voice of health staff and families to ensure that modifications are acceptable and indeed serve to facilitate both access and utilisation of services. Finally, it is important to document costs and cost-effectiveness of pilot approaches so that these pilots can effectively influence national and global policy.

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Table 1 Outstanding operational questions for simplified approaches

Theme	Questions
Financing and costs	What are the implications on cost of harmonising to one supply chain and procuring only one product for acute malnutrition?
	What are the implications on cost per child treated and how are these distributed within an operational programme (RUTF and supply chain, delivery, length of treatment, etc)?
	How do costs change over time?
Policy and decision-making	Which contexts should be prioritised for the implementation of the simplified approaches?
	How should the caseload be estimated using the simplified approaches?
	How does the caseload of SAM change over time with the simplified approaches?
Health system infrastructure	How will supply chains be impacted by a harmonised product and how will this impact on the health system?
	Do health staff prefer the simplified approaches? What is the level of appropriation of the new protocol by health staff?
	What are the positive and negative impacts of this approach on the health system at all levels, from a vertical and transversal perspective?
Nutritional outcomes	Does simplification facilitate better integration into community health platforms?
	What is the optimum dosage for children who are both wasted and stunted?
	What is the optimum dosage for SAM children, particularly older and larger ones?
Coverage and programme quality	What should be the accepted recovery rates for MUAC <115mm?
	Can ready-to-use supplementary food (RUSF) be used as the single product for the simplified protocols?
	How do the simplified approaches affect ease of access from the perspective of the family/caregiver?
	Do the simplified approaches lead to early detection and admission?
	How do simplified approaches impact on defaulting?
	How do simplified approaches impact on length of stay?

References

Bhutta ZA Ahmed T, Black RE, Cousens S, Dewey K, Giugliani E, Haider BA, Kikwood B, Morris SS, Sachdev HP, Shekar M. (2008) *What works? Interventions for maternal and child undernutrition and survival*. *Lancet*. 2008 Feb 2; 371 (9610): 417-40. doi: 10.1016/S0140-6736(07)61693-6.

Isanaka S, Menzies NA, Sayyad J, Ayoola M, Grais RF, Doyon S. Cost analysis of the treatment of severe acute malnutrition in West Africa. *Matern Child Nutr*. 2016;(June):1-9.

UNICEF, World Health Organization & World Bank Group. (2019). *Levels and Trends in Child malnutrition*. In Joint Child Malnutrition Estimates edition. www.who.int/nutgrowthdb/estimates2018/en/

World Health Organization, World Food Programme, United Nations System Standing Committee on Nutrition & United Nations Children's Fund (UNICEF). (2007). *Community-based management of severe acute malnutrition: a joint statement by the World Health Organization, the World Food Programme, the United Nations System Standing Committee on Nutrition and the United Nations Children's Fund*. World Health Organization. www.who.int/iris/handle/10665/44295

UNICEF Regional IMAM Dashboard