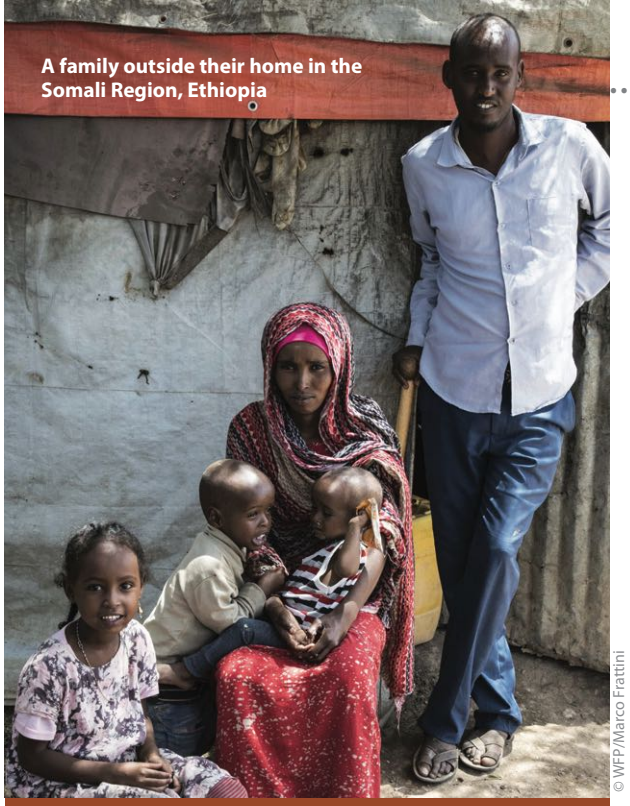

A family outside their home in the Somali Region, Ethiopia

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Family MUAC: A review of evidence and practice

By Emilie Buttarelli, Sophie Woodhead and Dolores Rio

Research summary[1]

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GLOBAL

What we know: There has been broad uptake of the 'Family MUAC' approach in recent years – whereby mothers, fathers and other caregivers use mid-upper arm circumference (MUAC) measurements to identify wasting in their children.

What this article adds: Evidence and practice of the use of Family MUAC in community-based management of acute malnutrition programmes in multiple contexts were reviewed. In terms of implementation, the review found that there is no 'one-size-fits-all' approach for teaching caregivers how to use a MUAC tape, interpret a MUAC measurement or check for oedema and that most implementation challenges are linked to the sustainability of the approach. The review also shows that monitoring, evaluation and follow-up actions are crucial in ensuring effectiveness and sustainability. In terms of outcomes, the review found little evidence linking Family MUAC to a shorter length of stay in the programme and/or an impact on programme performance indicators. A recent trial, however, indicates that children of caregivers who received MUAC training were more likely to recover which could be explained by a better care-seeking behaviour. The Family MUAC approach can also lead to an improved coverage of screening. Despite different tools, approaches and calculations to estimate and compare costs, it appears that a screening strategy that relies on caregivers is less costly than one that relies on community health workers. To ensure the sustainability of the approach, the authors recommend integrating Family MUAC into the health system to ensure continued training and monitoring and evaluation.

Introduction

In the 'Family MUAC' approach, mothers, fathers and other caregivers are trained to identify wasting in their children using a mid-upper arm circumference (MUAC) tape. This approach was developed with the objective of increasing the frequency and coverage of screening for wasting and ultimately detecting more children with wasting for early referral. Since the approach was first trialled by the Alliance for International Medical Action (ALIMA) in Niger in 2012 (Blackwell *et al.*, 2015), there has been broad uptake by national ministries, international non-governmental organisations (INGOs) and United Nations (UN) agencies. In the context of COVID-19, the adoption and roll out of the Family MUAC approach has been the most common modification to wasting treatment services to ensure continuity of screening at community level while limiting the risk of contamination (The State of Acute Malnutrition, 2020). To support continued learning as this approach moves to scale, the United Nations International Children's Fund (UNICEF) West and Central Africa Regional Office conducted a review of evidence and practice.

Methods

The review was mainly oriented around the effectiveness and cost-effectiveness of the Family MUAC approach to identify children with wasting. The following sources were used to identify documents for inclusion: electronic bibliographic databases to locate peer-reviewed literature using a set of defined keywords, previous issues of Field Exchange, the State of Acute Malnutrition website, websites of known implementers of Family MUAC, reference lists of relevant studies, Google and Clinical Trials to identify any other recent/future evidence. In addition, non-governmental organisation (NGO) partners active in the implementation of this approach in the West and Central Africa region were contacted.

Results

A total of 46 resource documents were included; 40 were operational documents and six were research articles. Resources covered 10 countries in West and Central Africa, five in east and southern Africa and two in South Asia.

Implementation of Family MUAC

From the review, it is clear that there is no one-size-fits-all approach to teaching caregivers how to use a MUAC tape, interpret a MUAC measurement or check for oedema. Implementers have

[1] UNICEF. (2020). Rapid review: Screening of Acute Malnutrition by the Family at community level. https://www.unicef.org/wca/reports/screening-acute-malnutrition-family-community-level

used a variety of approaches and platforms for training, either opting for a facility or community-based approach. The selection of entry points seemingly depends on the context and the objectives and resources of the implementer. The main issue regarding training is sustainability which depends on the entry points selected and/or the integration of the training into the health system.

The review also shows that monitoring, evaluation and follow-up actions are as important as the training itself and are crucial in ensuring the effectiveness and sustainability of the approach. However, there is no standardised set of indicators and organisations use different tools and metrics which tend to be linked to internal monitoring and evaluation (M & E) systems as well as donor reporting requirements.

Most of the challenges related to implementation are linked to the sustainability of the approach and seem to plead for its integration into the health system or national protocols to ensure that training family members on MUAC measurement becomes routine at facility and community levels. Another noticeable challenge is the fact that, despite engendering great empowerment at community-level, the Family MUAC approach can face the same barrier as the community-based management of acute malnutrition (CMAM) services, namely distance to health facilities. It is therefore worth exploring how Family MUAC can be linked to the provision of severe acute malnutrition (SAM) treatment by community health workers (CHWs) in order to overcome this issue and bring treatment within closer reach.

Outcomes of the Family MUAC approach

Available documentation overwhelmingly demonstrates the capacity of caregivers to accurately measure their child's MUAC. However, operational experiences highlight that capacity may decline as time passes after the last training. In terms of timing of detection, there are promising results in operational findings and peer-reviewed studies supporting earlier detection. We found little evidence linking Family MUAC to a shorter length of stay in the programme and/or an impact on programme performance indicators. However, a recent trial (Daures *et al.*, 2020) indicates that children of caregivers who received MUAC training were more likely to recover which could be explained by better care-seeking behaviour resulting from such training. It is difficult to assess the impact of the Family MUAC approach on coverage of treatment independently from other factors (e.g., distance from a health facility) and this could explain why the impact on coverage for this approach is still unclear. However, importantly, our review indicates that Family MUAC can lead to an improved coverage of screening. Despite different tools, approaches and calculations to estimate and compare costs, it also appears that a screening strategy that relies on caregivers is less costly than one that relies on community health workers.

A mother and her children in Yobe State, Nigeria

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Conclusions and Recommendations

Based on the review of the available documentation, three key recommendations are proposed to support the scale-up of this screening approach to support effective treatment services for children with wasting and ensure the sustainability of this approach:

1. Integrate Family MUAC into the health system

This requires advocacy for integration of the Family MUAC approach into the health system/national protocols. It is also necessary to identify and use existing community mechanisms (entry points) to integrate Family MUAC training, use lessons learned from existing implementation in the country and coordinate with Ministries of Health/partners.

2. Ensure continued training

A strategy must be designed for refresher courses to ensure the continued uptake and regular practice of the approach. The role of mass communications should also be considered to ensure continued capacity and awareness of the approach at household level.

3. Design a monitoring and evaluation strategy

An M&E strategy must be defined at the community and health centre levels, using a small set of feasible and reliable indicators that are standardised at country and global levels. A strategy should also be designed to further assess the effectiveness of the approach in different contexts. Indicators of effectiveness should be used (earlier detection/increased coverage/improved quality of treatment) and comparisons with other standard mechanisms made to support advocacy and scale-up.

There is no standardised implementation of the Family MUAC approach in the West and Central Africa region. However, certain similarities can be observed across contexts in terms of training. M&E mechanisms could be harmonised by implementers to improve visibility of the effectiveness of the approach in different contexts and to support advocacy for further scale-up.

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