EVIDENCE OVERVIEW: A simplified, combined protocol is equally effective, more cost-efficient, and easier to scale than the current approach to wasting treatment

IRC and its partners have conducted research on community management of acute malnutrition (CMAM) treatment protocols across seven countries (Central African Republic, Chad, Kenya, Mali, Nigeria, Somalia, and South Sudan). IRC-led research on simplified approaches, including three operational pilots and a clinical trial, has enrolled more than 100,000 children. The resulting evidence demonstrates that a simplified, combined protocol is equally effective, more cost-effective, and easier to scale compared to the standard, more complex protocol.

The simplified, combined protocol is safe and effective, resulting in excellent recovery rates, noninferior to the standard protocol in a clinical trial.

- Effectiveness of Acute Malnutrition Treatment at Health Center and Community Level with a Simplified, Combined Protocol in Mali: An Observational Cohort Study (2022) IRC and the Mali Ministry of Health treated more than 27,500 children with a simplified, combined protocol. Overall, 92% of the children treated recovered. We analyzed outcomes for vulnerable subgroups of children (e.g. those with especially severe wasting) and found that all of these groups achieved at least 85% recovery.
- A simplified, combined protocol versus standard treatment for acute malnutrition in children 6–59 months (ComPAS trial): A cluster-randomized controlled non-inferiority trial in Kenya and South Sudan (2020). A cluster-randomized non-inferiority trial compared a combined protocol against standard care in Kenya and South Sudan. The findings concluded that a combined treatment for SAM and MAM is non-inferior to standard care. The amount of ready-to-use food (RUTF) required for a child with SAM to reach full recovery was less in the combined protocol, lowering the cost of treatment.
- Acute malnutrition recovery energy requirements based on mid-upper arm circumference: Secondary analysis of feeding program data from 5 countries, Combined Protocol for Acute Malnutrition Study (ComPAS) Stage 1 (2020). A study of secondary data from 5,518 patients treated for acute malnutrition in five countries across Africa and Asia found that admission and dosing according to MUAC is safe and effective.
- Response to Malnutrition Treatment in Low Weight-for-Age Children: Secondary Analyses of Children 6-59 Months in the ComPAS Cluster Randomized Controlled Trial (2021) MUAC is equally effective as complex weight-for-height measurements for acute malnutrition screening and dosing across the continuum of moderate to severe acute malnutrition. Children with a moderately low MUAC (11.5-12.5 cm) and a severely low WAZ (<-3) respond similarly to treatment in terms of both weight and MUAC gain on either 500 kcal/day of therapeutic or supplementary food. Children with a severely low MUAC (<11.5 cm), with/without a severely low WAZ (<-3), have similar recovery with the combined protocol or standard treatment.
- Combined protocol for SAM/MAM treatment: The ComPAS study (2016): This study found that using a mid-upper-arm-circumference (MUAC) for admission and as a basis for simplified dosing is effective. Using a simplified MUAC-based dosing chart to treat both SAM and MAM mirrored weight-gain results of the traditional protocol. This dosing methodology is much simpler than weight-for-height measurements, making it more accessible. Total energy needs of 95% of all children with a MUAC <125mm can be met with 1,000 kcals/day. Given this, a Combined Protocol is proposed that admits children with MUAC<125mm and/or oedema and treats as follows: MUAC <115mm - 2 sachets RUTF/d; MUAC 115mm- <125mm -1 sachet RUTF/d).

- Testing an adapted severe acute malnutrition treatment protocol in Somalia (2019) This Somalia Operational Pilot of the ComPAS project shows that children with uncomplicated SAM can be successfully treated using a simplified dosage protocol that supports a continuum of treatment across severe and moderate malnutrition.

The combined protocol is more cost-effective than traditional treatment protocols.

- A simplified, combined protocol versus standard treatment for acute malnutrition in children 6–59 months (ComPAS trial): A cluster-randomized controlled non-inferiority trial in Kenya and South Sudan (2020). In addition to the finding that a combined treatment for SAM and MAM is non-inferior to standard care illustrated above, the data demonstrated the cost-effectiveness of the combined protocol. The amount of ready-to-use food (RUTF) required for a child with SAM to reach full recovery was less in the combined protocol (122 versus 193 sachets), and the combined protocol cost US$123 less per child recovered (US$918 versus US$1,041).

Studies have shown that CMAM treatment with a simplified, combined protocol does not increase the risk of relapse or unhealthy body composition compared to a standard protocol.

- Post-Recovery Relapse of Children Treated with a Simplified, Combined Nutrition Treatment Protocol in Mali: A Prospective Cohort Study (2023) This study aimed to determine the 6-month incidence of relapse and associated factors among 420 children in western Mali who recovered from acute malnutrition following MUAC-based simplified combined treatment using the ComPAS protocol. Cumulative relapse incidence to MUAC < 125 mm was relatively high (26%); to achieve reduction in relapse, recovery criteria may need to be revised and post-discharge strategies tested.
- Relapse and post-discharge body composition of children treated for acute malnutrition using a simplified, combined protocol: A nested cohort from the ComPAS RCT (2021). A study of 850 children in Kenya found that there was no evidence of adverse effects from treatment with the combined protocol. Children treated with a simplified, combined protocol had anthropometry and relapse rates at 4 months post-discharge similar to those treated with standard care. MAM children treated with RUTF had similar body composition to those treated with RUSF and neither group exhibited excess adiposity.

Community health workers can effectively deliver treatment through a simplified, combined protocol, with recovery rates equal to that of traditional approaches, further enabling reach and scale.

- Effectiveness of Acute Malnutrition Treatment at Health Center and Community Level with a Simplified, Combined Protocol in Mali: An Observational Cohort Study (2022) With broader findings on effectiveness explained above, this study also proved that treatment by CHWs resulted in similar (94%) recovery as treatment by formal health care workers. The simplified, combined protocol results in high recovery and low RUTF consumption per child treated and can safely be adopted by CHWs to provide treatment at the community-level.
- Severe acute malnutrition treatment delivered by low-literate community health workers in South Sudan: A prospective cohort study (2020) High recovery rates were observed among SAM children treated for acute malnutrition by low-literate community health workers. Findings suggest that deploying CHWs to treat SAM in areas with high prevalence and low treatment access may improve continuity of care, leading to higher recovery, and shorter treatment time. Proper adaptations of tools and protocols can empower CHW cadres with low literacy and numeracy to successfully complete treatment steps.

- RISE for Nutrition: Delivering Acute Malnutrition Treatment Through iCCM Community Health Workers (2021) Across contexts, low-literate CHWs safely and effectively treated uncomplicated cases of severe acute malnutrition in the community with cure rates comparable to global standards. In Kenya, the study showed, CHWs can also safely and effectively treat uncomplicated cases of moderate acute malnutrition. Caregivers also indicated they were satisfied with seeing their children treated in the community by CHWs. The pilots also revealed that caregivers were satisfied with seeing their children treated in the community by CHWs.

31 countries have tested the simplified protocol indicating strong interest among stakeholders for the adoption of simplified approaches, and a key step towards implementation is global guidance.

- Combined protocol for severe and moderate acute malnutrition in emergencies: Stakeholder perspectives in four countries (2019) This ComPAS stakeholder Perspective Study found that a combined protocol to treat acute malnutrition provides for streamlined management of both severe and moderate forms in emergency settings. Stakeholders in Niger, Nigeria, Somalia, and South Sudan were strongly supportive of providing treatment for both forms of malnutrition at the same location.
- Factors affecting decision-making on use of combined/simplified acute malnutrition protocols in Niger, north-east Nigeria, Somalia and South Sudan (2019) Research in Somalia found that national governments are interested in adopting simplified approaches and would feel more comfortable with global guidance, such as a WHO Guidance Note.