

In Chigwirigwidi, Burundi, farmers have been building stone bunds to control water run-off from the hill

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# Research gaps and priorities in nutrition in emergencies

## Background

The Global Humanitarian Overview estimated that 223 million people would require humanitarian assistance in 2023 – the highest figure in decades. With such a high burden and scarce resources, it is essential that programming for nutrition in emergencies can demonstrate cost-effectiveness and enable a better, more evidence-based response that maximises impact for affected populations. Over the past decade, there has been a sizeable increase in research investigating the effectiveness of nutrition in emergencies programming. However, considerable knowledge gaps remain. Conducting research on nutrition in emergencies is challenging due to logistical obstacles, ethical barriers and a lack of funding. Furthermore, where research has been conducted, there are often challenges around adequate data quality, which impacts overall research findings and subsequent programmatic recommendations.

## A light-touch mapping of research gaps and priorities in nutrition in emergencies

The Alliance is a global mechanism that aims to provide predictable, timely and coordinated nutrition technical assistance to meet the nutrition needs of people affected by, and at risk from, emergencies. The 2021 GNC annual meeting highlighted that the lack of nutrition research is impeding practitioner-level understanding of appropriate evidence-based responses for different and changing contexts – responses that could improve the effectiveness of programming for nutrition in emergencies. To begin to fill this void, a research mapping exercise was conducted (August 2022–January 2023) to highlight the key research gaps in each of the Global Thematic Working Groups (GTWGs):<sup>2</sup> Infant and Young Child Feeding in Emergencies (IYCF-E); Nutrition Information Systems (NIS); management of small and nutritionally at-risk infants under six months of age and their mothers (MAMI); and Cash and Voucher Assistance (CVA) for nutrition outcomes. The mapping was not intended to be a systematic or comprehensive review of all literature, but rather a light-touch exercise that drew from a broad range of existing work and the knowledge of the GTWGs (Box 1).

## Key findings IYCF-E

Since January 2022, 37 peer-reviewed papers have been published that relate to IYCF-E. However, only seven of these studies have contributed to answering the research priorities previously identified in 2016. Research on the effectiveness and cost-effectiveness of complementary feeding interventions and safe mechanisms for

supplying and managing breast milk substitutes in emergencies were also identified as top research priorities.

## MAMI

Comparing available research and the previously highlighted research gaps, many practical and foundational MAMI-related research questions appear to remain unaddressed. The lack of a validated anthropometric screening method was noted as a key barrier to programming, as well as the need for more research on how to effectively support at-risk mother-infant pairs once identified. Large research gaps were also noted in relation to the feasibility and cost-effectiveness of breastfeeding support packages for wasted infants.

## NIS

There appears to have been a limited amount of research on NIS in emergencies, with more focus on developing specific initiatives, tools and platforms. More operational research may be beneficial to enable further guidance to be developed. Based on the prioritisation survey, GTWG members highlighted gaps in obtaining accurate nutrition information where standard data collection mechanisms are not possible, the design of ‘good enough’ data collection systems, and the need to move away from dependence on repeated one-off surveys for NIS decision-making.

## CVA for nutrition outcomes

Despite the increasing utilisation of CVA as a modality for humanitarian assistance, there has been limited investment in evidence generation from programmes using CVA for nutrition in emergencies. The prioritisation survey identified research questions that focus on understanding context-specific impact pathways between CVA and nutrition outcomes to enable better informed programme designs. Several priority questions also related to the practical questions around CVA modalities and overall programme design for nutrition outcomes and cost-effectiveness.

## Wasting

Identified research questions fell into four main categories: impact and effectiveness of interventions for the treatment and prevention of wasting; improving detection and targeting for the prevention and treatment of wasting; the causal pathway for wasting; and integration of treatment and prevention of wasting into health systems. In the ongoing WHO guidelines update process, a number of research gaps were identified in the ongoing WHO guidelines update process. Building on the research gaps identified in the guideline development process and existing research prioritisation exercises, the UNICEF-WHO Technical Advisory Group on wasting aims<sup>4</sup> to identify



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This views piece summarises work on the recently published light-touch research mapping exercise conducted within the Global Nutrition Cluster (GNC) Technical Alliance (‘the Alliance’). The report is available at: [https://www.ennonline.net/attachments/4755/FINAL\\_Mapping-research-prioritise-for-nutrition-in-emergencies.pdf](https://www.ennonline.net/attachments/4755/FINAL_Mapping-research-prioritise-for-nutrition-in-emergencies.pdf)

<sup>1</sup> To find out more about the Alliance, visit <https://ta.nutritioncluster.net/>

<sup>2</sup> The GTWGs are groups of technical experts in a thematic area that provide a platform for developing timely, consensus-driven, stop-gap guidance in response to key technical gaps identified by the Alliance.



and prioritise formative and operational research and knowledge gaps on wasting prevention and treatment.

## Moving forward research on nutrition in emergencies

Research on nutrition in emergencies is essential to continue building evidence regarding what works, to maximise impact and to ensure the effective and efficient use of resources. However, many challenges remain in conducting research in emergencies and in ensuring high-quality data, including high levels of insecurity, mobile populations, and the lack of infrastructure and resources to implement comprehensive study designs. It is often not possible to create a control group in such a setting, and as a result most research is observational. Research also often requires additional coordination and stakeholder engagement that actors may not have the capacity for in emergency contexts. However, opportunities remain to embed operational research and more robust monitoring, process and outcome measures into ongoing programming.

A key finding from the light-touch research mapping activity is that conducted research often tends not to answer the identified research priorities. For example, only 19% of peer-reviewed studies conducted on IYCF-E in 2022 contributed to answering previously identified research priorities. This may reflect the need for further advocacy and dissemination of identified research priorities, and/or for revisiting or broadening these priorities.

Additionally, engaging those involved in guidance development during research design is critical to ensure research is ultimately used to shift guidance and policy. Within guidance development, the fundamental question of what research and evidence is 'good enough' to shift implementation requires examination, particularly given the current relatively strict inclusion criteria that are often needed by systematic reviews such as Cochrane and the subsequent updates to health and nutrition programme guidelines led by WHO. Emergency responses are often informed by needs and available resources rather than by optimal research, as seen in the implementation of some simplified approaches to wasting treatment despite the fact the evidence base remains fairly limited.

At the same time, given the challenges in conducting research in emergencies, it is essential to identify which questions cannot be answered in more stable settings and what study designs are best suited to answer these specific questions. For many of the thematic areas, practical questions remain around intervention design, cost-effectiveness and feasibility, and these might be better answered through operational research and feasibility studies than through randomised controlled trials.

The light-touch research mapping exercise identified a sparsity of evidence for MAMI, NIS and CVA for nutrition outcomes in emerg-



A women's cooperative uses solar energy to operate the borehole that supplies water to the market garden on the banks of the Senegal River in Mauritania

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## Box 1 Methodology

- **IYCF-E:** We mapped published peer-reviewed research captured in the IYCF-E research repository (as of 1 January 2023)<sup>3</sup> against a previously published research prioritisation exercise from 2016 (Prudhon et al, 2016), as well as against a 2021 research stock-take (not yet publicly available), and explored with Infant Feeding in Emergencies Core Group members what they felt were the current key research priorities.
- **MAMI:** We conducted a small-scale, non-systematic review of published peer-reviewed and grey literature to identify research conducted following a published research prioritisation exercise conducted in 2015 (Angood et al, 2015).
- **NIS and CVA for nutrition outcomes:** We identified research gaps for both thematic areas through a small-scale, non-systematic review of published peer-reviewed and grey literature, building off work already done by the groups. Utilising an online survey, members of each GTWG were then asked to prioritise these identified research gaps and list any that had been missed.
- **Wasting:** There have been several recent research prioritisation exercises on the prevention and treatment of wasting and ongoing efforts by World Health Organization (WHO) and UNICEF to update and move forward the wasting research agenda. Given this, we summarised previously identified research gaps and articulated any published work that has begun to address these gaps.

ency contexts. Wasting remains one of the most prominent topics for nutrition in emergencies research, with the focus on identifying wasting as a possible barrier to research in other thematic areas, as well as an opportunity to explore synergies and leverage ongoing initiatives.

Given the scale of continued nutritional needs, a continued focus on research in emergency contexts is vital. Research funding that is flexible to the rapid and changing nature of emergencies needs to be made more readily available. Further funding is needed to strengthen the quality of nutrition in emergencies research alongside working to ensure that research answers priority questions and can be effective in influencing programming and guidance.

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<sup>3</sup> The repository is compiled for the IFE Core Group by the Johns Hopkins Center for Humanitarian Health at Johns Hopkins Bloomberg School of Public Health, the Friedman School of Nutrition Science and Policy at Tufts University and the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill. The repository aims to provide the reader with a snapshot of what is published, and is updated on a quarterly basis: <https://www.enonline.net/ife/iycferepository>

<sup>4</sup> The UNICEF-WHO Technical Advisory Group on wasting is a multidisciplinary group of healthcare workers, policy-makers, programmers and researchers established in 2022 to conduct various tasks, including coordinating the wasting-related research agenda.

## References

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