RESEARCH LANDSCAPE REVIEW
INTRODUCTION

In support of
NO WASTED LIVES

BACKGROUND

In January 2018, the Council of Research & Technical Advice on Acute Malnutrition (CORTASAM) and the No Wasted Lives Coalition published a global Research Agenda for Acute Malnutrition, outlining seven priority research areas to drive the use of evidence to support scale-up and impact for children with wasting[1] globally. This Research Agenda included an initial mapping of the evidence that was conducted in 2017 to identify outstanding research questions and research needs in each area as well as outcomes to be achieved by 2020.

In 2019, recognising the significant research efforts that have progressed since the original Research Agenda was released, CORTASAM initiated a Research Landscape Review to evaluate the progress made towards the outcomes specified in the Research Agenda. The objectives of the Landscape Review in 2020 were to:

1. Review completed, ongoing, or planned research in the seven research priority areas of the Research Agenda, building on the original mapping of evidence and focusing on new efforts since 2017; and
2. Evaluate outstanding research needs and progress made to date towards the 2020 outcomes specified in the Research Agenda.

The Landscape Review was not intended to be a systematic review to synthesise all research and evidence in the priority areas. Rather, the Landscape Review can be considered an integrative review with elements of a semi-systematic review aiming to provide an overview of a research area, including developments over time, and to create a critical narrative of research progress and outstanding gaps in each area.

The results of the Landscape Review on completed, ongoing, and planned research in the priority research areas can be accessed here. Details on the methodology of the Landscape Review can be accessed here. For further information, contact us at info@nowastedlives.org.

RESEARCH AREAS

1. Effective approaches to detect, diagnose, and treat acute malnutrition in the community
2. Appropriate entry and discharge criteria for treatment of acute malnutrition to ensure optimum outcomes
3. Optimum dosage of ready-to-use food (RUF) for treatment of acute malnutrition
4. Effective treatment of diarrhoea in children with severe acute malnutrition (SAM)
5. Rates and causal factors of post-treatment relapse to acute malnutrition across contexts
6. Identification and management of at-risk mothers and infants <6 months of age (MAMI)
7. Alternative formulations for ready-to-use foods for acute malnutrition

1 While the term 'wasting' will be predominantly used in these landscape reviews, there are sources cited that use the term 'acute malnutrition' as this was the predominant terminology used at the time of publication of the original Research Agenda. Both 'wasting' and 'acute malnutrition' are defined here as weight-for-height z-score (WHZ) <-2, oedema and/or mid-upper arm circumference <125mm.

1 RESEARCH AREA: EFFECTIVE APPROACHES TO DETECT, DIAGNOSE, AND TREAT ACUTE MALNUTRITION IN THE COMMUNITY

KEY RESEARCH QUESTION

What are the most effective approaches to diagnose and treat acute malnutrition in the community?

SUMMARY

There is increasing evidence that community health workers (CHWs) can manage severe wasting in the community at village or household level and have the potential to increase treatment coverage. Cost-effectiveness analyses of completed experimental studies suggest that costs per child treated and recovered can be reduced through CHWs compared to standard community-based management of acute malnutrition (CMAM) if coverage is increased sufficiently, and that costs for beneficiaries can be reduced markedly. A range of experimental and observational studies are ongoing that will generate further evidence on effectiveness, cost-effectiveness, and effects on coverage. Questions remain regarding best practices and the right level and frequency of training, supervision, and support (including enumeration). Moreover, most projects using CHWs were implemented at small-scale, integrating management of severe wasting into integrated community case management (iCCM). Broader integration into health systems remains to be demonstrated, although these projects have had an influence on national policies in some settings. There is limited representation of evidence across different contexts, with few studies outside of sub-Saharan Africa. Most studies focus on severe wasting; there is little evidence on the use of CHWs for managing moderate wasting.

RECENTLY EMERGING EVIDENCE

EFFECTIVENESS OF CHWS FOR DIAGNOSING AND TREATING WASTING IN THE COMMUNITY

- A systematic review[1] summarised research and operational experience of using CHWs for managing severe wasting (18 studies from 9 countries). Most studies indicated that clinical outcomes met SPHERE standards and achieved high treatment coverage, but few studies had comparison groups. All but one example from Ethiopia were small-scale pilot projects supported by NGOs or UN agencies.
- The C-Project studies are a portfolio of rigorous evaluations of integrating wasting management into iCCM with CHWs providing wasting-related services in the community (focusing on severe wasting). An article in Field Exchange provides an overview[2].
- Completed cluster-randomised trials include the C-Project in Mali[3] and C-Project in Pakistan[4]. The C-Project in Mali found similar/superior clinical outcomes in the CHW group (94.2% cured ratio in the intervention group vs. 88.6% in control). Severely wasted children admitted by CHWs were on average in a relatively less severe condition (less likely to have oedema and better anthropometric measurements) than children admitted through the standard CMAM programme[5]. The C-Project in Pakistan found inferior clinical outcomes in the CHW group (76.6% cured ratio vs. 83.3% in control). Quality of care assessments for the C-Project in Mali[6] found high quality of care, while lower quality of care was found for the C-Project in Pakistan[7], underlining outstanding questions about levels of supervision and support of CHWs across contexts.
- The results of the C-Project led to the integration of CHWs for managing severe wasting into the national CMAM protocol in Mali[2]. The second phase of the C-Project in Mali is a prospective, non-randomised implementation study of three different models of training and supervision for CHWs managing severe wasting (moderate or intense vs. no support). Results from effectiveness, coverage, workload, and cost-effectiveness analyses are expected in 2020.
- Further experimental evaluations of CHWs for managing severe wasting include the C-Project in Niger, where CHWs receive formal health education and regular salaries, the C-Project in Mauritania, where CHWs are volunteers with lower levels of education, and the iCCM study in Kenya. Results are expected in 2020. There is little evidence published on the use of CHWs for managing moderate wasting.
- A combined protocol for management of severe and moderate wasting by CHWs is being implemented within the health system (rather than research setting) in one district in Mali, covering 29 health facilities. An observational evaluation is ongoing into 2020. Preliminary results suggest high cure rates (of about 7000 children admitted, 93.5% discharged as cured for severe wasting and 97.3% for moderate wasting).
- An observational study in South Sudan by IRC on the feasibility of management of severe wasting integration into iCCM with low-literate CHWs[8] found that clinical outcomes met SPHERE standards (75.4% recovery) and high quality of care. A larger effectiveness study is being planned.

COMMUNITY-BASED DIAGNOSIS AND TREATMENT COVERAGE

- The experimental evaluations of the C-Project in Mali[3] and C-Project in Pakistan[4] found varying effects of CHWs on treatment coverage for severely wasted children. The C-Project in Mali was found to increase coverage (86.7% in the intervention group vs. 41.6% in the control group, with similar coverage prior to intervention). The C-Project in Pakistan was not found to increase coverage (46.2%in intervention vs. 55.0% in control).
- The IRC study in South Sudan found indications of increased coverage (84% of caregivers of treated children reported no treatment in the past four months) but there was no control group.
- Further evidence on the effects of CHWs on treatment coverage is being measured and will emerge from the ongoing studies (mentioned above).
- There is increasing evidence on caregivers detecting severe wasting with mid-upper arm circumference (MUAC) methods (also called Family MUAC – see the Community of Practice on Family MUAC), although effects on coverage are less clear. The CeaSurge project is a quasi-experimental study in Kenya that will evaluate effects of Family MUAC on coverage (results expected by the end of 2020). Outstanding questions around Family MUAC include right level of support, including from CHWs, and how to best involve men/fathers.

INTEGRATION INTO HEALTH SYSTEMS AND COST-EFFECTIVENESS

- The C-Project in Mali cost-effectiveness evaluation[9] found lower costs per child recovered in the intervention group (259 USD vs. 501 USD in control). The C-Project in Pakistan cost-effectiveness evaluation[10] found similar costs of per child recovered between the CHWs (382 USD) and control group (362 USD). Both evaluations found benefits for beneficiaries (reduced costs and time).
- Further evidence on cost-effectiveness of CHWs for management of severe wasting will emerge from the ongoing studies (mentioned above).
- A range of cost-effectiveness analyses on CMAM have been published (summarised in a systematic review[11]). An expanded review on costing and cost-effectiveness methods for treatment of wasting by Action Against Hunger UK and Save the Children UK will be published online early in 2020.
- A systematic review of integrating nutrition interventions into health systems[12] found a paucity of studies and information of integration of nutrition into health systems. Most projects on CHWs are small-scale and integration into health systems remains to be demonstrated. The study on a combined treatment protocol for moderate and severe wasting with CHWs in Mali is implemented in health system rather than research setting and will provide insights on integration of CHWs into health systems. Further operational pilots of simplified protocols (which commonly include CHWs) are being implemented with support by the UNICEF Western and Central African regional office (WCARO).

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