Community management of uncomplicated malnourished infants under six months old: barriers to national policy change

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Location: ***Yemen, Malawi and Vietnam***

What we know: WHO 2013 guidance on SAM treatment recommends community-based management for uncomplicated cases in infants under six months old (infants < 6m); this has not been adopted in country-level policy.

What this article adds: A small, qualitative study examined barriers to including community-based management of acute malnutrition in infants < 6m in recent national guidance updates in Yemen, Malawi and Vietnam. Identified barriers include low awareness of current WHO recommendations; lack of practical anthropometric indicators for community assessment and means to monitor infants closely; weak country-level evidence on interventions, including cost-effectiveness; concerns regarding caseload, health worker capacity, skillset needed and risks of outpatient care; and lack of simple management protocols and tools. Lack of systematic screening for infants < 6m means potential caseload and spectrum of case types in different settings are unknown; policy makers (often clinicians) are informed by experiences managing inpatient complex cases. These gaps led to country-based consensus not to include community-based management as an option; external expert technical input and advocacy were not sufficient to bring policy change. Country-level evidence (robust research) to address context-specific questions is critical for international guidance uptake and to further inform both global and country-level policy updates. Community-friendly anthropometric indicators are needed to help identify at risk infants.

Background

Globally, 8.5 million infants under six months old (infants < 6m) are estimated to be acutely malnourished, of whom 3.8 million are severely malnourished (Kerac et al, 2011). Until recently, policy guidance centred on inpatient management only, limiting coverage, accessibility and type of intervention availability and not reflecting the spectrum of need and severity amongst this population of at-risk mothers and infants (ENN, 2010). Recognising this, the latest WHO guidance on SAM treatment (WHO, 2013) now distinguishes between complicated and uncomplicated severe acute malnutrition (SAM) among infants <6months and recommends the latter be treated in outpatient care (WHO, 2013). However, positive global policy development has not yet been reflected at country level; a recent review of 48 national SAM/CMAM (community-based management of acute malnutrition) guidelines found that inpatient care still dominates for this age group; none recommend outpatient case management (McGrath, 2016).While translating international recommendations to national guidelines takes time, countries who have revised their national SAM guidelines since 2013 have not made a provision for community-based management of this age group. There are indications that additional barriers may prevent national policymakers from aligning guidance with WHO.

This study aimed to understand the issues and challenges involved in making a national policy shift from inpatient-only care to outpatient management for uncomplicated, malnourished infants < 6m.

Process

Three case studies were conducted on Yemen, Malawi and Vietnam, where national CMAM/IMAM (integrated management of acute malnutrition) guidelines were recently revised but the 2013 WHO recommendation of managing uncomplicated SAM infants <6m as outpatients was not adopted. Countries were selected where outpatient management of uncomplicated malnourished infants <6m was considered as part of the guidelines review process, but where it was decided against including this recommendation.

Sampling was purposive and done to saturation. Twelve key informants were interviewed; five for Yemen, five for Malawi and two for Vietnam. Key informants represented a variety of stakeholders involved in the guidelines development process, including representatives from Ministry of Health (MoH) (n=1); UNICEF, other United Nations (UN) organisations, and WHO (n=4); a local non-governmental organisation (NGO) (n=1); academia (n=1); a service provider (n=1); and people with a technical support role to the MoH (n=4). Only two key informants were interviewed for Vietnam due to non-responsiveness and a language barrier. Interviews were conducted by phone or Skype. One phone interview was completed with written answers due to weak internet connection and one interview was submitted in writing for the convenience of the key informant. Key informants reviewed interview transcripts to ensure views had been accurately captured; five out of 12 key informants did so.

Thematic analysis was carried out to identify the main barriers and issues that policy-makers face in adopting the WHO guidelines on the treatment of the <6m age group with uncomplicated SAM. Each interview was coded and themes were formed from codes.

Key findings

All three countries implement preventive and inpatient activities for infants < 6m, but not outpatient care. In all countries investigated, community-based management provision was proposed for inclusion in the guidelines by a person in a technical support role to the MoH. After discussions among stakeholders and/or a technical committee with the MoH, outpatient treatment for uncomplicated infants <6m was not endorsed. In all cases, exclusion was based on a majority consensus. Barriers identified have been grouped under technical, political, operational and epidemiological barriers.

Technical barriers

There was reluctance to distinguish between com-


Supplementary suckling as part of inpatient management

plicated and uncomplicated SAM cases in this age group, especially in Yemen and Vietnam. Many considered all severely malnourished infants < 6m to be complicated cases who need close monitoring and whose condition may quickly deteriorate. It was often mentioned that cases usually have comorbidities that require inpatient care and are challenging to manage even in inpatient settings.

Lack of appropriate diagnostic criteria and tools to identify, manage and follow up infants in the community was cited in all three countries as a major barrier to outpatient treatment. Lack of official mid-upper arm circumference (MUAC) cut-offs and the impracticability of weight-for-length measurement (current WHO recommendation for anthropometric assessment of this age group) make identifying infants in the community difficult. Likewise, there is no straightforward method to closely monitor the condition of infants in the community by health workers in order to evaluate how the child's condition changes and identify when they should be referred to inpatient care. Some key informants suggested MUAC might make identifying infants easier. In Malawi the importance of looking at wider causes of malnutrition in SAM infants was also emphasised, while expressing difficulties for CHWs to do this.

As outpatient management of infants <6m consists largely of breastfeeding support, it was regarded by many as a preventive measure that is already covered by general infant and young child feeding (IYCF) activities. In Yemen this generated debate as to whether what is perceived as 'prevention' should be part of a treatment guideline; this was a major barrier to policy change. Some voiced that a severely malnourished infant indicates failure of community-based prevention and breastfeeding support and therefore warrants inpatient treatment.

All countries, especially Yemen, raised questions on what constitutes 'treatment'; to be given something substantial – beyond feeding support -– was expected. This in turn raised fears that expectation of product-driven 'treatment' would undermine exclusive breastfeeding (EBF). The lack of a tangible, ready-to-use therapeutic food (RUTF)-like intervention for infants < 6m made decision-makers hesitant to implement community-based care for this age group: *"Because they are still young, we can't give RUTF, so we run out of options – there's not much to give them to go home."* (Malawi) and: *"[Infants <6m] should be admitted to hospital because there's no treatment for [SAM] children under six months[in the community]"* (Vietnam). The inappropriateness/impracticality of using milk-based products in communities was also raised.

Non-breastfed cases were considered an especially challenging group to cater for; both for hygienic reasons (milk feeds are considered inpatient interventions) and because giving products instead of breastmilk is seen as a threat to EBF, the core message of community health workers for that age group.

All countries called for more evidence on the effectiveness of community-based management of uncomplicated infants < 6m, particularly national evidence. Lack of implementation protocols was a significant barrier; in Malawi this was a major reason for the MoH not to include outpatient treatment for infants. Even key informants who were familiar with the C-MAMI tool[1] suggested that a barrier to implementation was lack of a clear protocol to follow. A tested approach to treating infants < 6m and success stories would facilitate policy uptake of C-MAMI.

For many stakeholders in the guidelines review process, outpatient care for infants <6m was a new concept and there was a general lack of in-depth knowledge about how infants <6m could be identified, managed and monitored in the community; several key informants posed this question in the interview, asking about the C-MAMI tool (ENN and LSHTM, 2015) and the WHO recommendation on SAM infants <6m. Technical support staff in two countries were posed questions by the MoH regarding case management that they could not answer: *"People kept asking how this can work in the local context and we didn't have answers, so if we don't have answers, we can't have it in the guidelines"* (Malawi).

Political barriers

Several key informants emphasised the need for guidelines to be practical, with an easily followed protocol. In all countries, MoH cut down substantially from the draft guidelines in general; infant <6m community management was typically removed as seen as complicated and "confusing" (Yemen). Not all key informants were aware of the WHO guidance regarding outpatient treatment of infants. Implementing outpatient treatment did not receive wide support and it was a consensus in each country that outpatient treatment for infants would not be included. In one country, the MoH's consultative committee comprised of clinicians who strongly preferred admission to inpatient care.

Implementing infant <6m outpatient care was also not a priority/difficult to achieve given other more pressing issues. In Yemen ongoing conflict meant the priority for guidance was on CMAM delivery in the emergency response; in Vietnam, attention has been on integration of treatment in the national health system. In both countries, inpatient treatment for infants <6m was included for the first time in the latest revision.

Language may have hindered adoption; what materials there are currently are English-only.

Operational barriers

In all countries the capacity of community health workers (CHWs) and/or community volunteers, on whom screening and management of SAM infants in the community would depend, was identified as a major barrier to implementing outpatient care. Low level of education coupled with the degree of responsibility that this service would entail was not considered appropriate. Key informants hesitated to give CHWs responsibilities such as determining whether an infant <6m should receive inpatient or outpatient care, especially with the current diagnostic tools available; at what point a child is referred to a facility if their condition deteriorates; and supporting a SAM child with breastfeeding (since "breastfeeding promotion has already failed at that point"). Referral for inpatient care was deemed the easiest action for CHWs.

The appropriateness of current outpatient therapeutic programme (OTP) models to care for infants < 6months was questioned in terms of monitoring children, providing milk feeds in the community and lack of functioning referral lines if the infant's condition deteriorates. There is no strong alternative to inpatient treatment: *"We thought that [treating SAM kids as inpatients] is obvious unless maybe our communities are really equipped."* (Malawi).

Epidemiological barriers

Epidemiological barriers featured more prominently in Vietnam, where SAM in infants <6m has not been observed and is not regarded as a burden. Some key informants from other countries mentioned that malnutrition in this age group is rarer. Lack of easy diagnostics, for its part, makes it more difficult to establish a burden of disease.

Discussion

In each country, several factors contributed to the fact that community-based management of acute malnutrition in infants <6m has not been adopted by national policy-makers. Barriers are 'ideological' – such as no recognition of uncomplicated and complicated SAM in infants, 'practical' – accepting that some infants could be treated as outpatients but implementation is difficult, and 'personal' – guideline-development stakeholders draw on personal experience with caseload management which influences decision-making, especially in the context of lack of national evidence. Many felt there wasn't enough MAMI expertise at national level.

Many perceive C-MAMI as already covered by preventive IYCF activities and those whom it fails require inpatient care. Many consider SAM infants as complicated with concurrent illness; this may reflect the caseload they have experience of, rather than the spectrum of potential caseload since there is no systematic screening of all

[1] Both identification and management of acute malnutrition in infants <6m are outlined in the C-MAMI tool which was developed under the leadership of ENN and London School of Hygiene and Tropical Medicine and modelled on the IMCI approach as a first step to catalyse programme development. This is undergoing pilot and development through field implementation but requires intervention trials to determine effectiveness.

infants. Little is known of the profile of those malnourished infants who are currently not detected in communities in different contexts.

Management of the uncomplicated cases group sits between preventive activities and inpatient treatment and touches on IYCF, health and CMAM/IMAM; this multi-sectorality likely fuels uncertainty regarding where community-based management for this age group belongs and who should drive it.

There is currently no community-friendly anthropometric indicator to help identify acutely malnourished infants in communities, especially those at highest risk. Appropriate tools are also needed to track infants and refer them to inpatient care if their condition gets worse.

C-MAMI is not perceived as an easy intervention. Indeed, without knowing the burden, who benefits from C-MAMI, and with existing preventive activities for infants, compounded by uncertainties related to outpatient management, referral by CHWs to inpatient care is considered the safest option for country stakeholders. Non-breastfed infants in the community remain a special concern.

In all countries we investigated, C-MAMI was proposed for inclusion by some "champion" but was not sufficient to effect policy change. Knowledge of WHO guidelines' recommendations for infants <6m was not widespread or were not considered applicable to the context.

Introducing C-MAMI has training implications; lack of outpatient and staff capacity to address the needs of SAM infants and questions regarding capability and workload of CHWs to 'step up' on MAMI were major barriers across all countries.

Conclusions and recommendations

There are significant and understandable barriers to national policy change to accommodate community-based management of acute malnutrition in infants < 6m; some political but many practical. Barriers should not be interpreted as a sign that MAMI is not relevant at country level; a recent global research prioritisation by No Wasted Lives identified management of acute malnutrition in infants < 6m as the third top priority research question needed to inform scale-up[2]. Country-level research to investigate local burden, case profile (complicated, uncomplicated) and answer context-specific questions on feasible, cost-effective interventions are necessary. Where MAMI is located – in nutrition or health, in treatment or prevention – requires further scrutiny and will likely vary by setting; 'whatever works here' should be the guiding principle. To date, small-scale pilots on implementation of the C-MAMI tool have relied on models that rely on significant NGO support; plans are underway for implementation research in government settings. However, robust randomised trials in multiple settings with government collaboration are critical to inform both national and international policy updates and protocol development. International policy development must be accompanied by dissemination that includes translation. There is an urgency to identify community-friendly anthropometric indicators to help identify at-risk infants in the community.

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[2] *Prioritising acute malnutrition research: preliminary results of a CHNRI survey. Field Exchange* 55, July 2017. p68. www.ennonline.net/fex/55/acutemalnutchnrisurveyprelim

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Shock-responsive social protection systems research

Summary of research[1]

Location: ***Global***

What we know: Cash is increasingly used in humanitarian response; there is limited evidence on the potential for government social protection schemes to respond to 'shocks'.

What this article adds: Research was carried out including six country case studies, a literature review and global consultations to explore the potential role for long-term social protection systems in response to large-scale shocks. The study found different options for shock-responsive adaptation (tweaking design/piggybacking existing programmes; expanding existing programmes (topping up support to beneficiaries or adding beneficiaries); or aligning with humanitarian systems. Context-specific considerations during programme design include the level of political will; regulations; government capacity; financing and conflict. Operational considerations include carrying out effective needs assessments; deciding on appropriate transfer values and distribution modes; and good communication with beneficiaries and non-beneficiaries. Collaboration between social protection, disaster risk management and humanitarian actors is important at all levels; there are examples in the case studies of different coordination bodies, but much more coordination is needed. The authors make 12 recommendations to policy-makers and programmers.

The Shock-Responsive Social Protection Systems study is a UK Department for International Development (DFID)- funded research programme (2015 to 2018) led by Oxford Policy Management (OPM), in a consortium with Overseas Development Institute (ODI), Cash Learning Partnership (CaLP) and INASP. Its aim is to strengthen the evidence base on when and how social protection systems can better respond to shocks in low-income countries and fragile and conflict-affected states (FCAS) in order to minimise negative shock impacts and reduce the need for separate humanitarian responses. The study aimed to explore the potential role for long-term social protection systems in the response to large-scale shocks, either before or after the crisis occurs, and opportunities for coordination/integration of humanitarian interventions, disaster risk management (DRM) and social protection. Six case studies were undertaken (Pakistan, Philippines, Mozambique, Lesotho, Mali and the Sahel region), as well as a literature review and a series of consultations globally.

[1] O'Brien C, Scott Z, Smith G, Barca V, Kardan A, Holmes R, Watson C and Congrave J. (2018), *Shock-Responsive Social Protection Systems Research: Synthesis Report*. Oxford Policy Management, Oxford, UK.