

Collaborating to improve the management of acute malnutrition worldwide

Community Engagement: the 'C' at the heart of CMAM

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Abbreviations

СВО	Community-based Organisation
CCM	Community Case Management
CHW	Community Health Worker
C-IMCI	Community-based Integrated Management of Childhood Illness
CMAM	Community-based Management of Acute Malnutrition
iCCM	Integrated Community Case Management
IYCF	Infant and Young and Child Feeding
MAM	Moderate Acute Malnutrition
MCH	Maternal and Child Health
MUAC	Mid-Upper Arm Circumference
NGO	Non-Governmental Organisation
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SMS	Short Message Service
WHO	World Health Organisation

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1 Introduction

Acute malnutritionⁱ represents a huge global burden in terms of child morbidity and mortality. In 2011 an estimated 52 million children were wasted and 19 million severely wasted, contributing to almost 1 million preventable child deaths each year.¹ Children with severe acute malnutrition (SAM) are nine times more likely to die than healthy children and children with moderate acute malnutrition (MAM) are three times more likely to die.²

Health interventions for the management of SAM were initially provided in inpatient care and mostly in emergency contexts. Management of MAM is predominantly provided as an emergency response in outpatient care or in community structures. By the end of the nineties, the innovation of ready-to-use therapeutic food (RUTF) allowed children with SAM but without medical complications to be treated at home, instead of staying in inpatient care until full recovery. As a result, after successful piloting of the community-based management of acute malnutrition (CMAM) approach starting in 2000, it was scaled up in nutrition emergencies from 2003 onwards. The growing base of evidence on CMAM facilitated its endorsement by the World Health Organisation (WHO) led consensus in 2005,³ and by a joint statement of the United Nations in 2007.⁴ Since then, CMAM has been increasingly adopted by governments in development contexts and implemented as a routine child health service in areas with a high burden of acute malnutrition with support from donors, United Nations (UN) agencies and Non-Governmental Organisations (NGOs), referred to as partners in this report. By 2012, 60 countries had adopted CMAM.⁵

The CMAM approach includes community outreach (for community sensitisation and community involvement, active case finding and home follow-up of problem cases), outpatient management of MAM (depending on the context), outpatient management of SAM without medical complications and inpatient management for the stabilisation of SAM with medical complications. CMAM is closely linked with preventive and other curative health and nutrition interventions and social safety nets.⁴ This community-based approach has delivered impressive outcomes, achieving significantly higher coverage than the inpatient care-only approach, increasing recovery rates and compliance with treatment and decreasing case-fatality rates.⁶ CMAM has also greatly reduced the cost of treatment, improved access to care and demonstrated effectiveness in addressing high caseloads of children with SAM.^{7,8}

However, despite the rapid expansion of CMAM services and the increasing priority it is afforded in international and national agendas, both geographic and treatment coverage remain relatively low. In 2012 the geographic coverage of the management of SAM was estimate at 43% and treatment coverage at 14%, with only 2.6 million⁵ of the estimated 19 million² children with SAM admitted for treatment (or 8% when applying a different estimated denominator, i.e., 2.6 million of the estimated 34.6 million⁵ children with SAM accessed treatment). Geographic and treatment coverage for the management of MAM is expected to be much lower.

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Acute malnutrition includes moderate malnutrition (MAM) and severe acute malnutrition (SAM). SAM in children 6-59 months is defined as presence of bilateral pitting oedema and/or weight-for-height z-score less than -3 standard deviations of the median of the WHO 2006 standard population, or a mid-upper arm circumference of less than 115 mm. MAM in children 6-59 months is defined as weight-for-height z-score equal or above -3 standard deviations and less than 2 standard deviations of the median of the WHO 2006 standard population, or a mid-upper-arm circumference of equal or above 115 mm and less than 125 mm. See: WHO Updates on the management of severe acute malnutrition in infants and children. 2013:http://www.who.int/iris/bitstream/10665/95584/http://apps.who.int/iris/bitstream/10665/95584/1/9789241506328 en g.pdf?ua=1

A major factor contributing to this shortfall is the weakness and inadequacy of national health systems to implement the community component of CMAM. This weakness was highlighted in conferences, 9,10,11 country reviews, 12,13,14,15,16,17,18,19,20,21,22 syntheses, 23,24,25,26 coverage estimates and barrier analyses. 27,28,29,30,31,32 In practice, management of SAM (and sometimes MAM) is implemented by national health services. The community component is often neglected in the design, financial and human resource allocation, implementation, supervision, monitoring and reporting because of the lack of attention to community health outreach as part of the formal health sector. Community engagement is therefore mostly implemented and/or supported by partners as an 'add-on' rather than the basis of the approach.

In recognising that the community component is essential in the CMAM approach to guarantee the quality of health outcomes, stakeholders have called for a renewed focus on community. That call is the backdrop to this technical brief.

The aim of the technical brief is to summarise evidence, good practice and lessons learned on community engagement for CMAM and other relevant health interventions. The technical brief does not provide comprehensive practical guidance, but instead summarises the role of community engagement and how it can be strengthened in the context of government-led health interventions. The brief has three main sections: defining community and community engagement in CMAM; challenges and constraints to effective community engagement in CMAM; and pathways to more effective community engagement. It concludes by summarising key issues which need to be addressed in repositioning community engagement in CMAM.

In drafting this technical brief, we undertook a rapid review of both published and grey literature. Through the thematic analysis of this material, core topics emerged that addressed various aspects of community engagement. These core topics were used to structure discussions during a series of structured telephone and Skype interviews with key stakeholders purposively selected by the CMAM Forum. Interview material was synthesised with the literature review, and the emergent themes arranged according to the structure of the technical brief. A draft of the brief was shared with stakeholders for comment, and their feedback incorporated as appropriate. This led to a substantial redevelopment of the brief, and the final product was produced through collaboration between Anthrologica and the CMAM Forum.

2 Community, community engagement, and community actors and systems

This section describes the concepts of community, community engagement, community actors and systems. It outlines how and why community engagement for CMAM service delivery is important in significantly increasing coverage of services and impact on health outcomes.

2.1 Defining 'community'

Many definitions of 'community' exist based on a vast body of sociological and anthropological literature and drawing on the politics of identity construction and social allegiance. The lack of a standard definition has proved to be an obstacle in effective participatory health programming, as different collaborators make contradictory or incompatible assumptions about community. There is often an implicit focus on the denominator of location, with the aim of organising services or activities around population centres in order to maximise health coverage and equity. Yet, broader dimensions

of community should be considered: who participates, why they participate, how they participate and how they are connected individually and collectively. In this sense, a useful definition of community is 'A group of people with diverse and dynamic characteristics, who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings'. 33

Similarly, the notion of 'community-based' services has multiple interpretations that imply different constructions of community:³⁴

- Community as the setting of an intervention
- Community as the target or recipient of an intervention
- Community as the service-user (both actively as service-seeker and passively as service-receiver)
- Community as an actor, agent of change, or service-provider through involvement in service delivery
- Community as a resource or source of funds.

Linked to these various constructions of community, many terms are used to refer to community-based actions. Again, standard definitions do not exist, and terms are used inconsistently and interchangeably throughout policy and programming. With this caveat in mind, **Box 1** provides an overview of commonly used terms.

Box 1– Common terminology referring to community-based actions

1. Community sensitisation (community mobilisation is also used in this context)

- Community sensitisation creates awareness and responsiveness in people to certain ideas, events, situations or phenomena, and invites trusted authorities and community members to engage in disseminating information and counteracting misconceptions in beliefs and practices. In the past, sensitisation activities often involved the community only as passive respondents to instructions given by professionals in order to improve their health, such as during mass campaigns.³⁵
- In terms of CMAM, community sensitisation covers a range of activities that raise awareness and strengthen knowledge and understanding of the causes of the disease, its prevention and treatment, promote behaviour change, and encourage active and sustained engagement in the intervention design, implementation and evaluation.³⁶ ³⁷

2. Community participation or community involvement (used synonymously)

- Community participation emerged as one of the main principles of primary healthcare rooted in the Alma Ata declaration of 1978: 'people have the right and duty to participate individually and collectively in the planning and implementation of their healthcare'. 38
- Linked to basic human rights and the fundamental principles of democracy, community participation is defined as 'a cumulative process through which beneficiaries develop the managerial and organisational capacity to increase control over the decisions that affect their lives'. 39
- In terms of CMAM, community participation implies that community members are involved in the assessment, design, planning, budgeting and resource allocation, supply management and infrastructure, human resourcing through community volunteers, implementation, supervision, and in the monitoring, reporting and evaluation of the health intervention.

3. Community outreach

- Outreach services are defined as 'any type of health service that mobilises health workers to provide services to the population or to other health workers, away from the location where they usually work and live'. 40
- In terms of CMAM, community outreach is used as the overarching term for community assessment, community participation and sensitisation, community screening for early case-finding and referral of children with acute malnutrition, home visits to follow up problem cases, tracing of defaulters, and individual or group health and nutrition education or counselling.³⁶

To be consistent with its use of terminology, this technical brief adopts the term 'community engagement' to encompass all community components of CMAM. Engagement is understood to mean all interactions with the community. It seeks to move beyond community sensitisation, involvement and outreach as activities or outcomes in themselves, towards building community collaboration and ownership into all aspects and stages of CMAM as an integral part of service provision.

In this way, communities should no longer be seen as 'beneficiaries' or passive recipients of an intervention but as active participants. In essence, community engagement is a multi-dimensional process that necessitates continual dialogue, learning from the community as much as educating or administering to them. Community members must be involved in the decision-making process and allocate community resources, shifting the emphasis from 'community-based' to 'community-owned' interventions.⁴¹

2.2 Defining 'community engagement'

Community Engagement, or the 'C' in CMAM, involves the following activities:

- Involvement of the community in all stages of service delivery: assessment, design, planning, budgeting and resource allocation, implementation, monitoring, reporting and evaluation
- Sensitisation on promotion of good nutrition practices, causes and prevention of malnutrition, detection and treatment of malnutrition, and demand creation for treatment
- Group and individual health and nutrition education or counselling
- Community screening for acute malnutrition
- Referral of acutely malnourished children identified for treatment
- Follow-up of problem cases including tracing of defaulters
- Linking with other existing community initiatives for promotive, preventive and curative care and social safety nets.

In reality the steps involved in these activities are not distinct, many develop concurrently in ways that overlap, repeat and reinforce each other. **Box 2** provides examples of community engagement processes and **Box 3** examples of community engagement activities for CMAM. **Box 4** gives an overview of key guidelines currently available for implementing community engagement for CMAM.

Box 2 – Examples of community engagement processes

- 1. Establishing community dialogue for involvement and ownership
- 2. Conducting formative research to obtain baseline information on behaviours and practices and contextual elements
- 3. Undertaking participatory design and planning
- 4. Mapping community networks, groups, activities, and initiatives, and form relevant linkages
- 5. Recruiting, training and supervising community health workers or community volunteers and related health support workers (including remuneration, personal development or motivation)
- 6. Establishing and/or reinforcing links between community actors and health actors
- 7. Implementing community engagement activities
- 8. Monitoring, reporting and evaluating activities (including information and knowledge management with feedback loops)
- 9. Facilitating long-term engagement, ownership, empowerment and sustainability

Box 3 – Examples of community engagement activities

Community sensitisation

Raising awareness of health and nutrition issues, causes of malnutrition, prevention and treatment options for malnutrition, promoting behaviour change, creating demand for services and overcoming potential obstacles to access and uptake services through a variety of methods, e.g.:

- Mass media campaigns. The use of locally available media (public address systems, theatre, TV, radio, community notice boards, billboards) to share messages. Examples include radio broadcasts to improve awareness of health issues and services in Nepal;²¹ interactive health information hotlines in Myanmar;⁴² and push notifications via Short Message Service (SMS).⁴³
- Group counselling. This can target the community as a whole or address specific groups. Community health workers can provide general health talks at community and health facility levels or call for community meetings on specific feeding practices. Examples include food preparation demonstrations in Bangladesh; ⁴⁴ nutrition days in local schools and street drama performances in Nepal. ²¹ Barriers can be tackled by addressing identified issues (mistrust, stigma, misconceptions, social and cultural factors) and generating support with relevant community opinion leaders and social groups, such as male peer-to-peer groups and decision makers in Pakistan, ²⁰ and influential family relations, such as mothers-in-law and grandmothers in Ethiopia. ⁴⁴
- Home visits and individual counselling. Individual counselling of caregivers may lead to behaviour change
 and reduction in inappropriate feeding, poor health and hygiene practices, and can facilitate the follow-up of
 problem cases and referrals, as in Pakistan.²⁰
- Community-led health promotion. In Ethiopia, for example, members of women's associations and faith-based organisations were trained to promote positive infant and young and child feeding (IYCF) practices.
 Nutrition cards containing IYCF messages were given to members of the Women's Development Army and teachers and students received training on recommended feeding practices.

Community involvement

Communities are involved in all stages of service delivery, e.g.:

- Mapping of existing community initiatives, actors and their capacities.
- Organised and planned involvement of community actors in CMAM service implementation, with defined
 roles and responsibilities in the planning and implementation cycle (assess, design, budget and resource
 allocation, supply management, implementation of interventions, monitoring, evaluating and reporting
 activities.
- Community volunteers are selected and trained for service delivery.

Community outreach

Screening for early detection of acute malnutrition and treatment referral is undertaken during a wide variety of activities including:

- Mass screening at events, for example during vaccination and Vitamin A campaigns in Nepal,²¹ and child health and immunisation days, market days and funerals in Ethiopia.^{19,23}
- House-to-house visits for active case finding, for example, by community workers in Ethiopia. 19,23
- Extended screening amongst target groups. In Niger, ongoing research reflects the positive impact of empowering mothers to detect acute malnutrition using Mid-Upper Arm Circumference (MUAC). 45
- The involvement of opinion leaders to expand community capacity to screen and refer. In Mozambique, community leaders, traditional medical practitioners and school teachers have been trained to recognise and refer malnourished children, leading to an increase in the numbers of cases presenting at health centres.²⁵
- Home visits enable direct follow-up of problem cases or defaulters on a case-by-case basis, as in Ethiopia¹⁹ and Pakistan.²⁰
- Group support for overcoming barriers to service uptake and use: for example, women groups' meetings encourage defaulters to re-join the programme in Pakistan.²⁰

Box 4 – Selection of technical guides

Valid International (2006). Community-based Therapeutic Care (CTC): A Field Manual⁴⁶

http://www.validinternational.org/demo/reports//CTC/CTC%20Manual%20and%20Annexes.zip

A practical guide that aims to help health and nutrition managers design, implement and evaluate CTC programmes, including checklists and protocols. It discusses how the components fit together; how a programme evolves; practical elements of planning, staffing, equipment and supplies; target groups and admission criteria; protocols and procedures; data collection; and monitoring and evaluation. Its main focus is on NGOs working with local and national ministries of health to implement programmes in emergency contexts.

Food and Nutrition Technical Assistance Project (FANTA) (2008). Training Guide for Community-Based Management of Acute Malnutrition³⁶

http://www.fhi360.org/resource/training-guide-community-based-management-acute-malnutrition-cmam-pdf-english

This comprehensive training guide aims to increase knowledge and build practical skills of healthcare managers and providers who manage, supervise and implement CMAM. It covers eight modules over 10.5 days of training, and includes community outreach, outpatient and inpatient care for SAM, and supplementary feeding for Moderate Acute Malnutrition (MAM) in the context of CMAM. It reflects the need to adapt CMAM to non-emergency contexts in an integrated way, with varied external/NGO support.

CORE Group (2009). Community-based Integrated Management of Childhood Illness (C-IMCI) Programme Guidance 47

http://www.coregroup.org/storage/documents/Workingpapers/C-IMCI Policy Guidance Jan%202009.pdf

This provides an overview of C-IMCI: its development, components, benefits, and rational for use. It is directed at ministries of health, and advocates that they seek NGO implementing partners in order to provide expertise and capacity.

Emergency Nutrition Network (ENN) Infant Feeding in Emergencies Core Group (2009). Integration of IYCF support into CMAM: Facilitators Guide⁴⁸

http://www.ennonline.net/integrationiycfintocmam

This practical guide aims to train healthcare personnel and community health workers in the integration of recommended IYCF practices within CMAM. It equips participants with basic counselling skills and technical knowledge on recommended IYCF practices and is delivered through three modules over three days.

CORE Group (2009). Community Case Management Essentials: A Guide for Program Managers⁴⁹ http://www.coregroup.org/storage/documents/CCM/CCMbook-internet2.pdf

This aims to provide operational guidance – the 'how to' – for programme managers to design, plan, implement, monitor and advocate for community case management (CCM) that responds to local needs. It discusses how to make decisions related to starting a new program, improve an existing one or expand CCM to new geographic areas. Its incudes sections on enabling a supportive social and policy environment, and increasing access, availability, quality and usage of CCM.

FANTA (2010). Generic Guidelines and Job Aids for CMAM⁵⁰

http://www.fantaproject.org/focus-areas/nutrition-emergencies-mam/generic-cmam-materials

FANTA worked with partners to create a package of CMAM guidelines and job aids that can be adapted at the country level using national guidelines, local considerations and WHO recommendations. It includes template guidelines and job aids such as forms, reports and training aids.

Global Nutrition Cluster (GNC) (2011). Module 13: Management of SAM, in The Harmonised Training Package (HTP): Resource Material for Training on Nutrition in Emergencies⁵¹

http://www.unicef.org/videoaudio/PDFs/Module 13 pdf.zip

A resource for trainers (rather than an 'off-the-shelf' training package) that pulls together technical policy and guidance, recognising the key role of 'community mobilisation, case finding and sensitisation'. It considers CMAM from the perspective of agencies implementing it in ways that facilitate health sector integration, national scale-up and sustainability.

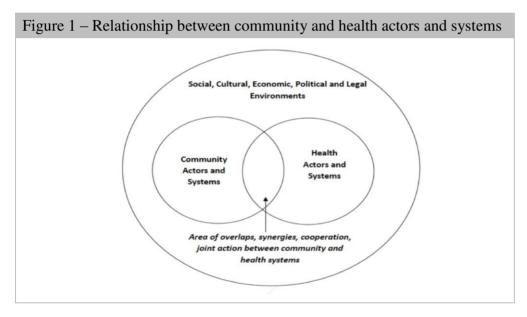
Infant and Young Child Nutrition Project (2011). Mobilizing Communities for Improved Nutrition: A Guide for Community Leaders⁵²

 $\frac{http://iycn.wpengine.netdna-cdn.com/files/IYCN_Mobilizing-Communities-for-Improved-Nutrition-Training-Manual-and-Participant-Guide-for-Community-Leaders_0711.pdf$

This manual gives instructions for facilitating a one-day workshop with community leaders to support and improve children's health and wellbeing through improved nutrition. It aims to help leaders share information in their communities, increase discussion and reflection on nutrition-related topics, and support families to feed their children well. It provides simple information on nutrition and the role of community leaders, as well as practical tools such as template work plans, strategic activity plans and reporting forms.

2.3 Defining 'community actors' and 'community systems'

Community engagement for CMAM involves interaction with multiple actors in social, cultural, economic, political and legal environments. **Figure 1** depicts how community, health actors and systems interact and operate together, influencing determinants of health and health-improving activities.⁵³



Source: Global Fund 2014

Community actors are individuals, groups or organizations that act at the community level to deliver community-based services, implement community-based activities and promote improved practice and policies. These include civil society organisations, groups and individuals that work with communities, particularly community-based organisations, NGOs, faith-based groups and networks or associations of people affected by particular health challenges such as HIV, tuberculosis, malaria and under-nutrition. Community actors also include public- and private-sector actors that work in partnership with civil society to support community-based service delivery, for example local government authorities, community entrepreneurs and cooperatives, and social networks such as women and youth groups.⁵³

A wide range of community actors are involved in healthcare provision.⁵⁴ They may be:

• **Employed by the government** in the public health sector (e.g., lady health workers in Pakistan, health extension workers in Ethiopia)

- Employed by civil society organisations (e.g., community health workers engaged in NGO projects such as integrated community case management (iCCM) projects)
- Employed by the private health sector (e.g., health workers engaged in private clinics)
- **Self-employed** (e.g., drug vendors, traditional healers, traditional birth attendants)
- **Volunteers** engaged by their communities or civil society organisations to serve their communities (e.g., village health workers in India, Red Cross/Red Crescent volunteers).

Community actors involved in healthcare provision usually work and live in their communities of origin and engage in promotion, prevention and/or curative care activities. They may also engage in health facility service delivery (e.g., nutrition assistants engaged by CMAM partners for counselling, adherence counsellors engaged by HIV programs). They are organised, trained and supervised by the entities which engage them. Some community actors involved in healthcare provision are employed by the public or private sector, including civil society organisations. Others are volunteers who do not receive a regular wage but may receive remuneration to cover their expenses, or non-monetary incentives such as special clothing or stationery.

In this technical brief, the term 'community health worker' (CHW) refers to a paid health worker and 'community (health) volunteer' refers to an unpaid health worker. Both engage in healthcare provision at the community level.

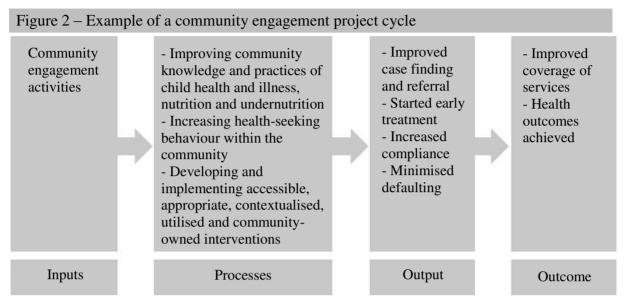
Community systems are structures and mechanisms through which community members and community-based organizations and groups interact, coordinate and deliver their responses to the challenges and needs affecting their communities. Community systems can be small-scale or informal. Others may be more extensive, function as networks between several organisations and can involve various subsystems.⁵⁴

Community systems strengthening (CSS) promotes the development of informed, capable and coordinated communities, community-based organisations, groups and structures. CSS enables a broad range of community actors to contribute as equal partners to the long-term sustainability of health and other interventions at the community level, including an enabling and responsive environment in which these contributions can be effective. The goal of CSS is to achieve improved health outcomes by developing the role of key populations, communities and community-based organisations in the design, delivery, monitoring and evaluation of services and activities related to prevention, treatment, care and support of people affected by major health challenges.⁵⁴

Human resources at the grass-roots level are key to community engagement for CMAM and greatly influence its scale-up and quality. However, the availability and involvement of these resources varies substantially. In some countries, the public health sector has a strong commitment to community-based healthcare and a well-established community health workforce (e.g., Brazil, Ethiopia, Nepal, Pakistan), while in other countries there is little formal interaction at the community level. In the latter case, NGOs and community-based organisations may assume these tasks in targeted areas. For example, Niger's national health policy plans for a system of community liaison personnel (*relais communautaires*) being employed by the local government administration, local health administration or community, and paid for through user fees collected for health services. As this financial system is not yet being implemented, NGOs fill the community support gap and pay incentives to community volunteers or directly employ CHWs. At the global level, volunteerism was at the forefront of discussions during the 2008 and 2011 International Workshops on the Integration of CMAM, 9,10 and the need to strengthen the community-based workforce was identified as central to improving community engagement in CMAM during the 2013 CMN International SAM Conference. 11

2.4 The importance of community engagement for effective CMAM service delivery

Community engagement activities result in a wide range of positive outcomes for the management of acute malnutrition and can significantly increase coverage of services and impact on improved health outcomes.⁵⁵ **Figure 2** shows the project cycle of community engagement with inputs, processes, outputs and outcomes.



Recent coverage surveys highlight key factors that exert a positive impact on treatment coverage of SAM including: good knowledge and understanding of the health intervention by the local population; key community figures actively supporting these health interventions; and regular active case finding by motivated volunteers. Examples are presented in **Box 5**. Conversely, common barriers to effective treatment coverage include the lack of awareness about malnutrition, limited knowledge of the health intervention and the mismatch between the admission case definition and the community understanding of the health problem.⁵⁶ A lack of community engagement has been shown to result in very low treatment coverage rates, as experienced by programmes in Matam, Senegal;³⁰ Batha in Chad;²⁸ and Danane in the Côte d'Ivoire.⁵⁷

Box 5 – The influence of community engagement on treatment coverage

Angola – The 2013 coverage assessment (applying the Semi-Quantitative Evaluation for Access and Coverage (SQUEAC) method) achieved an estimated coverage of 82.1% in Huambo. Community engagement played a key role in this, particularly through coordination and collaboration with local groups including mothers, community leaders and churches.²⁹

Nigeria – In 2012, Gombe State experienced high rates of default and continued poor nutritional status. In areas where defaulters were traced and enrolled back into treatment via a strong community engagement strategy, acute malnutrition rates were lower. These findings emphasise the need to prioritise sustained community engagement and follow-up activities to minimise defaulting and its associated adverse health outcomes.⁵⁸

In addition to improving impact and coverage of services, effective community engagement as part of the intervention package has been shown to have significant other benefits. These include:

• Improving cost effectiveness of SAM and MAM interventions by integrating services. A study in Bangladesh demonstrated that adding CMAM to a community-based health and nutrition

programme reduced the average cost for a child to recover from SAM through community treatment to one-sixth of the cost of inpatient treatment.⁵⁹

- Developing sustainability through increasing community ownership. This was illustrated in a
 review of the role of community participation in enhancing the uptake and sustainability of
 nutrition interventions for child survival and anaemia.⁶⁰
- **Increasing equity of services** as participative planning, implementation and monitoring can support the identification and targeting of the most vulnerable children, ²³ as well as provide potential strategies to reach them.⁵
- **Strengthening accountability** across many levels and advocating for participation as a critical element of a rights based approach to health.⁶¹

3 Challenges to effective community engagement in CMAM

Despite the acknowledged centrality of community engagement to the effective management of acute malnutrition, there are many challenges in implementation. Stakeholders have found the translation of the community engagement concept into practical, tangible actions to be a challenging process, ²⁵ and this has had a significant impact on the effectiveness and coverage of CMAM. This section discusses identified challenges to effective community engagement for CMAM covering themes of leadership, financing, workforce and information. Whilst challenges vary according to context, a number of examples have been selected based on common themes arising from the literature review and key informant discussions which were conducted during the development of this brief.

3.1 Imbalanced prioritisation of community engagement

The underdevelopment of community engagement activities (by both ministries of health and partners) has often been attributed to the lack of national capacity and resources in the context of weak health systems and competing health priorities. Hence, community-level activities are often disease or care-specific vertical programmes provided by NGOs and/or supported by United Nations agencies. The costs associated with effective community engagement are, however, substantially less than those required for inpatient service delivery or therapeutic products, thus it is not just an issue of capacity, resources or cost-effectiveness, but also of prioritisation and political will.

There are many reasons that community engagement has not been prioritised in the past: implementing partners lacked the necessary skills; governments lacked capacities and resources; and funding has been largely limited to emergency response and focused on rapid service delivery to save lives. In addition, the global health workforce shortage lead to task-shifting of CHWs who became increasingly involved in curative care at facility level, but at the expense of preventive community-based care and community engagement. Following Alma Ata, the major interest in community health systems that developed then lost momentum in the 1980s. However, the emergence of recent global health initiatives and programmes has once again boosted community approaches.

In the case of CMAM, resources are generally directed towards activities supporting treatment interventions such as the purchase of RUTF, the development of effective treatment protocols and health worker training. These activities are perceived to have faster, more 'concrete' results that are easily quantified and reported. As a result, effectiveness of care and impact are often evaluated in relation to these activities and not by how these needs are met at the community level.

This narrow perspective is linked to a biased understanding of what community engagement entails and does not take account of its specific health impact and healthcare consequences. As a result it is easy to dismiss community engagement as non-essential, or to include in programming only basic or tokenistic activities that 'tick the box' without meaningfully engaging with the community.

3.2 Insufficient policies and technical guidance

Whilst global technical guidance is available (see **Box 4**), the context of CMAM implementation has changed dramatically in recent years, and guidance has not been adapted to the government-led or integrated approach.

Translating technical guidance into comprehensive national policies and guidelines has also proved challenging, particularly given the diversity of community-based health services and the various implementation modalities of CMAM, C-IMCI, and Integrated Community Case Management (iCCM). Contradictory guidance and the fact that different CMAM partners use a variety of guidelines and terminology for community engagement has led to confusion and can negatively impact communities and their services. ¹⁰ In Mali, for example, different diagnostic practices in the community and health facility led to people being turned away from treatment sites resulting in poor coverage. ¹³

CMAM guidelines on community engagement are either absent or insufficiently detailed in many countries, proving a significant challenge for implementers. Again, the weakest component of the guidance that does exist tends to be community engagement. For example, until recently in Nepal, national guidance covered outpatient and inpatient care in detail, but guidance on community engagement and the roles of staff and volunteers was very limited.²¹

3.3 Unreliable and/or short-term funding

Community engagement is further constrained due to the way in which activities are funded. National budgets for CMAM are increasing, yet there remains a heavy reliance on international funds that usually have short-term funding cycles for humanitarian response, are renewable on a yearly or half-yearly basis, and often result in funding gaps between contracts. However, development donor interest is growing and one major donor recently shifted to providing 5-year funding. Funding streams for CMAM, including community engagement are almost never through pooled health funds, but mostly managed by parallel funding systems. They are rarely part of Sector Wide Approaches (SWAp)ⁱⁱ. However, as CMAM is increasingly integrated into routine health services, ministry of health budget lines for treatment, supervision, and monitoring may be absorbed by the regular budget for maternal and child health (MCH) interventions.

Community engagement is most commonly taken on by NGOs and/or Community-based Organisations (CBOs) because the formal health sector has only weak community health components,

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Under the Sector-Wide Approach (SWAp), project funds contribute directly to a sector-specific umbrella and are tied to a defined sector policy under a government authority. In essence, a SWAp calls for a partnership in which government and development agencies improve their relationships (to clearer government leadership), interacting more closely together in the formulation of policy, and less on the details of its implementation. Key characteristics of the SWAp should include: i) the partner government clearly leads and owns the programme; and ii) a common effort by external partners to support that programme, including provision of all or a major share of funding for the sector, in support of the government's unified policy and expenditure programme. Over time, some SWAps progress towards using government procedures for implementation and the disbursement of funds. See: WHO Trade, foreign policy, diplomacy and health: http://www.who.int/trade/glossary/story081/en/

if at all. Because of this, community health intervention strategies can lead to parallel systems and complicated coordination.⁵ Despite growing government support for community engagement for CMAM, it is not sustainable when NGOs leave or funding is terminated. Short-term funding cycles often have an inherent pressure for quick results, limiting investment in the community components of CMAM as these are seen to have slower, less tangible outcomes. It has therefore been difficult to plan ahead, integrate or scale-up activities⁹ and inadequate attention has been given to developing sustainable strategies.

As community engagement is a continuous and ongoing process, it requires longer-term funding, creative financing and appropriate accountability measures to encourage sustainability.

3.4 Challenges in managing community health workers and volunteers

Challenges associated with managing community health workers and volunteers have been identified as another major obstacle for community engagement for CMAM, as it has been for other community-based services and initiatives. The district health management teams and appointed health workers for community engagement play a crucial role in managing community-level activities. While they engage in health outreach activities (for example in Expanded Programme of Immunisation and reproductive health or health campaigns), they are often less keen to engage in community involvement. Reasons for this can include: lack of skills, high workload, lack of resources or means for travel and limitations in job descriptions. There are also issues around institutional resistance and the need to sustain motivation and performance,⁶² especially in the absence of clear policies, guidelines and regulation.⁶³ Dominant concerns and challenges in managing community health workers and volunteers include the following:

- Retention and motivation: Intensity of community engagement activities varies considerably and is problematic over longer periods when motivation drops off, particularly in the case of community volunteers. The level of community volunteer input is not always realistic from the start, and enthusiasm and commitment is often not sustained, particularly as many report lack of incentives to compensate time invested. In return, the level of effort (tasks) asked from community volunteers is often not realistic, as frequently the same person is involved in different parallel initiatives and campaigns. As high turnover is a key characteristic of volunteerism, it should be taken into consideration in capacity strengthening strategies.
- Incentivisation and remuneration: How community volunteers should be incentivised is a huge area of debate, particularly in terms of sustainability and accountability. There is, however, limited leverage in getting community volunteers to perform without remuneration. This is particularly relevant in contexts where funding mechanisms are based on the number of acute malnutrition cases diagnosed, as in Niger for example. In some contexts volunteers are inactive due to a lack of incentives or when incentives offered do not match their expectations of financial and non-monetary reward. In Somalia, for example, paying incentives had a negative effect, as it encouraged community health workers to assume larger case-finding catchment areas, which in practice they were not able to cover effectively. Examples from Malawi and Niger suggest that costly incentives may limit the sustainability of government-led programmes.^{25,64} Moreover, RUTF has a high market value and there are concerns around the capacity of health workers to resist social pressures linked to commodity distribution within the community.²⁴ The incentivisation of salaried health staff by NGOs is similarly contentious; it is often deemed necessary to ensure that work is completed but can be detrimental.
- Over-burdening: By adding acute malnutrition to the portfolio of community health interventions, there is a danger that community health workers and volunteers will be over-

burdened, with a negative impact on quality and coverage of care, motivation and attrition. In Malawi, for example, community health workers were often required to undertake tasks beyond the scope of their job description and different entities (both NGOs and the Ministry of Health) were involved in their training, management and payment of incentives.⁶⁴

- Supervision, quality of care, performance appraisal: In many contexts there is inadequate supervision and performance monitoring of activities at the community level and the link between local health facility and community health workers and volunteers can be weak. In Nepal, for example, geographic remoteness and a lack of capacity in the Ministry of Health made it difficult to monitor staff performance. Community workers also suggested that limited training opportunities were a factor in their not performing household visits and follow up. The knowledge and performance of community health workers can be highly variable and have far reaching consequences, if, for example, they incorrectly refer a child who is then refused access to services due to not meeting admittance criteria. Poor supervision mechanisms including a lack of performance appraisal can result in a lack of accountability, especially in the case of volunteers who work outside the formal health system with little support or control.
- Effective and appropriate task shifting: To overcome human resource shortages and extend care further into communities, task shifting to community workers is underway in some countries. In terms of CMAM, it generally implies shifting more responsibilities onto community health workers and volunteers so that in addition to community screening, referral and follow-up, they perform duties including diagnosis, triage and the treatment of children with acute malnutrition. Whilst such task shifting has been shown to potentially improve health outcomes, there remain significant challenges and notable concerns regarding quality and safety. Task shifting to community workers increases the need for training, supervision and support, incentives, supplies and equipment, and also implies changes in referral processes. The degree to which effective delegation is possible is also contentious, particularly with respect to the prescription of antibiotics, for example.
- Coordination of competing tasks: Multiple agencies, both governmental and non-governmental, deploy community health workers and volunteers whose networks overlap, are not always coordinated and often have competing agendas. The same community health worker or volunteer is expected to fulfil many different responsibilities. High-paying campaigns and specific trainings (which can provide a source of income through per diem payments) can also disrupt routine community work.

3.5 Lack of sufficient and skilled community actors involved in health

The challenge posed by weak human resources for health has been acknowledged in many forums as one of the main barriers to CMAM scale-up, with a detrimental effect on community engagement. 9,25,11 Common human resources challenges, valid for both community health workers and volunteers, include the following:

- **Insufficient numbers**: Community health worker systems are often absent or weak, and the numbers of workers are too small. Task-shifting is common practice in filling human resource gaps. Commonly, ministry of health-employed CHWs work in health facilities to fill-in for nurses and support clinical work, while volunteers take on community health activities and are often required to support health facility activities.
- Limited skill-sets and expertise: Community health workers often have limited formal education and many volunteers are illiterate. This proves challenging in terms of training, daily practice and management (e.g., following procedures, stock management and reporting). The level of training

may be inadequate or the wrong people trained, and high staff turnover increases the need for regular and repetitive in-service training and mentoring on CMAM. Variation in training content, the skills and qualifications of trainers and trainees' capacities may dilute the quality of training and result in conflicting advice that can negatively affect community acceptance and service uptake.

- High turnover and attrition: Staff turnover is especially high in under-resourced rural and remote areas, but this can also be due to other factors such as the lure of the private sector, inflated wages offered by United Nations agencies and international NGOs, and a reluctance to be posted outside urban centres.
- Limited engagement of other relevant community actors: Some community actors often have inappropriate personal, technical and organisational capacities and lack financial and material resources to engage in health activities. Conversely, a community actor may have the potential to engage in CMAM at community level, but their involvement is not sought.

3.6 Challenges in monitoring and reporting

Monitoring and reporting represents another major challenge to effective community engagement: if community engagement is difficult to organise, then so is its measurement and monitoring. Typically, community engagement has been assessed using quantitative or numeric data, by recording, for example, the number of people that attend a meeting or participate in an activity. Attendance, however, does not guarantee understanding, engagement or commitment⁶⁸ and there is a need for qualitative data to complement and supplement such reporting. Monitoring and reporting systems for community engagement are used by partners but are seldom standardised. Some monitoring aspects are captured in coverage assessments or Knowledge Attitudes, Skills and Practices (KAP) studies.

On the ground, community health workers or volunteers often do not have appropriate or adapted mechanisms to record their activities, leading to incomplete, inaccurate or missing data. The lack of standardised indicators is also a constraining factor and makes extrapolating information at a national or sub-national level complicated. In Pakistan, for example, data on active community screening and admissions are not disaggregated by gender, ethnicity or location, making the analysis of coverage and outcome in relation to population difficult.²⁰ In Kenya, where community health workers and volunteers have heavy workloads, the integrated nature of community screenings makes it difficult to trace child referrals because they access healthcare at various entry points.²² Furthermore, despite recognition that coverage is the single most important indicator of success for CMAM programmes, coverage assessments are not routinely built into ongoing monitoring and evaluation because the assessment method is intensive in terms of skills and resources required.

3.7 Barriers to access and service uptake

Finding context specific, flexible solutions to minimise barriers to access and service uptake in appropriate and acceptable ways is an important part of engaging the community in terms of demand generation and the utilisation of services. In addition, barriers may exist that prevent communities, households and individuals from being involved in community engagement activities. Formative research (e.g., barriers analysis, health and nutrition practices and behaviours) for CMAM remains limited. However, a meta-analysis on barriers demonstrated that dominant barriers (and drivers) are related to socio-cultural issues and quality of care. Common barriers to access, as identified by coverage assessments and various qualitative studies are listed below. A meta-analysis of barriers to access categorised three groupings of which quality of care accounted for 43% of all

barriers, socio-cultural barriers accounted for 28% and geographical barriers accounted for the remaining 23%.

Common barriers for CMAM (specifically in relation to SAM)

- Poor outreach activities is a major barrier, which includes lack of active case finding, lack of defaulter follow-up, lack of motivation/training of the community health worker and/or volunteer and lack of sensitisation. Of these barriers, lack of active case-finding was cited as a dominant barrier, due to lack of transportation, lack of motivation, lack of organisation, lack of community acceptance, security constraints and seasonal barriers.⁶⁹
- **Distance**: Despite the decentralisation of services, accessing treatment may still require clients to travel long distances and/or cover difficult terrain with poor transport options. 'How far is too far' is difficult to define and time, distance (taking into account climate, security, socio-cultural factors) are inextricably linked to opportunity costs, particularly in terms of seasonal mobility. The movement of mobile populations (e.g., pastoralists, slum dwellers, seasonal labourers, and internally displaced persons) makes ongoing community engagement challenging.
- Poor delivery of services (perceived quality of care, trust in health services, staff attitude, service-user interface): The attitude of health workers can be an important factor in timely care-seeking. Use of different diagnostic measurements in the community and the health facility, misdiagnosis, and unclear admission criteria can lead to rejections, which have an impact on service uptake and communities' willingness to positively engage with services.
- Stock-outs of RUTF and supplementary feeding supplies: People who have experienced previous stock-outs can be discouraged from using the services. (Frequent stock-outs suggest that supply management systems are inadequate, under-resourced and/or struggle with expanding services).
- Lack of awareness about malnutrition and the availability of care: Communities experience contradictory information or lack knowledge about nutrition, causes of malnutrition, prevention and treatment, and the availability of appropriate services. Often 'traditional' beliefs, customs and misconceptions continue to be influential.
- Poorly contextualised sensitisation messages: Awareness-raising activities are not always adapted to local contexts or socio-cultural specificities, and are often short or one-off activities that do not foster ongoing dialogue. Involving all members of a community in sensitisation activities is difficult given the lack of sufficiently informed community actors, large distances and limited investment by governments in reaching remote and under-served populations.
- **High opportunity costs**: Caregivers often face cumulative opportunity costs and may delay seeking treatment (inadvertently allowing the condition to worsen and resulting in even higher costs). The necessity to engage with health services for treatment of acute malnutrition may not be understood or is not prioritised by families, and often requires the negotiation of competing needs and responsibilities in resource-strained environments.
- Context-specific socio-cultural barriers: The environments in which CMAM operates may
 require that socio-cultural barriers be mediated. In Pakistan, for example, proscribed gender roles
 (the customary seclusion of women at home) and community resistance (due to the perception that
 NGOs promote culturally inacceptable practices) were challenges for community engagement and
 treatment.

4 Pathways to more effective community engagement

In order to strengthen the community component of CMAM, a number of areas warrant consolidated focus and investment. This section discusses good and emerging practices related to the challenges and constraints outlined above and addresses the need to: revise and adapt policy and technical guidance; engage with varied community groups and networks; utilise the potential of informal health service providers; develop community management and ownership; integrate CMAM with other community health strategies; incorporate appropriate and innovative technology; strengthen management of community-based workers; build capacity and expertise of personnel; systematise research and the sharing of lessons learnt; and improve monitoring and evaluation. In addition to boxes highlighting key information, three case studies presenting examples of good practices are included.

4.1 Involving communities in management and strengthening ownership

Communities strengthen their ownership of health interventions by knowing their healthcare needs and being actively incorporated in the provision and management of the health services. Most communities have some sort of local organisation, structure or committee that are linked to the health sector, or that have the potential to express their needs. In Malawi, for example, a factor determining the successful scale-up of iCCM was the formation of village health committees that were linked to each village health clinic and engaged community leaders in their management. Similarly, the recent study of a multiple package of interventions (vitamin A supplementation, use of insecticide-treated nets, home management of malaria, short-course directly-observed treatment for tuberculosis) in different countries demonstrated that significantly higher coverage was achieved through community-directed processes than other delivery approaches, and that communities and community implementers were more deeply committed and motivated. Community ownership underpins successful and sustainable engagement activities and community health interventions, and needs to be addressed in national strategies and guidance for the successful scale-up and increased coverage of CMAM.

4.2 Adapting policies and technical guidance

National policies and guidelines include community engagement for CMAM that specify the roles and responsibilities of ministries of health and other health and nutrition actors, depending on the country context. Simple and accessible guidance demystifies the concept of community engagement and provides a practical strategy for engaging communities in assessment, design, planning, resource allocation, implementation, supervision, monitoring, reporting and evaluation. ^{5,21} National guidelines are complemented by additional tools to strengthen community engagement systems that link with other community initiatives.

4.3 Integrating and linking CMAM with other community health strategies

Integrating community engagement for CMAM with other community-based health strategies can provide an important platform for service provision. It can streamline action and strengthen activities, networks, ownership and sustainability of interventions. There are several potential avenues for integrating community engagement for CMAM, but existing systems should be strengthened and developed. ^{17,24} It requires careful coordination to determine context-appropriate operational plans that can be coupled with nationally and locally-led strategies to meet community health needs. Some examples are:

- Incorporating CMAM into integrated community-based health services such as iCCM and C-IMCI. In Malawi, for example, the Ministry of Health-led iCCM approach (including elements of SAM management) has demonstrated success: its user rates are stable, care-seeking behaviour has improved, and there is a relatively high measurement of quality of care. 66,70
- Collaboration with broader community-based nutrition and food security related activities.
 The integration of CMAM and IYCF in Nepal has shown positive results including a reduction in the SAM caseload.²¹
- Collaboration with other community-based health interventions. In Ethiopia, for example, resources for the National Tuberculosis Programme were used to sensitise health extension workers on CMAM and provide refresher training to community volunteers, resulting in more communities having access to information and CMAM-related services.²⁵
- Linking with other complementary sectors and services such as community-level water, sanitation and hygiene projects, and programmes that enhance household food security and sustainable livelihoods, can help ensure services are interrelated and holistic. There are many approaches to such cross-sectoral collaboration and the integration of nutrition into other community-based activities. The Bangladesh, for example, nutrition education was included in microfinance programming.

4.4 Strengthening the management of community health workers and volunteers

Evidence-based strategies are needed to develop sustainable and country-specific approaches for managing community health workers and volunteers in terms of organising, training and motivating them to provide quality services at the community level for which they are accountable. 41,65 Considering the issues associated with effective management discussed above, the following outlines key approaches that may address some of the inherent challenges:

- Operational design, role definition, workload and task shifting: More support needs to be provided to community workers with regards to their role and activities. Engaging and implicating actors at all levels is essential in providing leadership, coordination and recognition that improves ownership and influences the effectiveness of the community health system. It is also important to be realistic in the definition of activities and time commitment required by each cadre involved as this has a proven effect on attrition. If task shifting is implemented, it must be formalised in policy or strategy and be accompanied by the necessary training and support.
- Incentives: There is gradual consensus that some incentive (either financial or material) for community volunteers has a positive impact on performance, retention and motivation. The an increasing number of countries, community volunteers receive token remuneration and/or material incentives (e.g., T-shirts, boots and raincoats, transport money or per diems for attending trainings or meetings). Sustainable mechanisms for generating payments or providing incentives to community health workers and volunteers have proven their effectiveness. Examples include: flat fees for service provision; performance-based pay; revolving fund; collective funds; and microcredit schemes. Tritically, however, remuneration is not the only solution and on its own will not sustain workforce motivation and quality of care. Whilst high staff turnover may be minimised, insufficient attention to issues such as quality supervision and continuous training have a negative impact on performance. Creative ways to keep community workers motivated and actively engaged, such as performance-based exchange tours, badges, recommendation letters, and certificates of attendance, have all been successfully used in India, and combined with strong management and feedback, community and professional support and career advancement opportunities, yielded good results.

- Management, support and training are key factors in inspiring, motivating and retaining community health workers and volunteers. Ideally, a community can self-select persons with the drive to provide a volunteer service to their community and share knowledge. This can be challenging, however, as individuals are often 'volunteered' by others or nominated by community elders, and the person with the right profile is not always selected. Quality trainings that are standardised, well planned and organised, multi-phased and incorporate regular refresher sessions, impact performance and motivation. Furthermore, knowledge shared through peer-to-peer mentoring stimulates acquired expertise. Didactic teaching sessions balanced with practical sessions achieve improved learning. Equally, mechanisms need to be put in place by which the formal health sector collaborates with communities for effective supervision, support and smooth logistics. Ensuring opportunities for career progression and skills development is essential for the retention of health workers. Such aspects involve significant investment and currently are rarely prioritised.⁴¹
- **Resources and funding:** Adequate resources are required to ensure that community health workers and volunteers have the necessary tools and supplies to carry out their community engagement work effectively.

4.5 Strengthening skills and expertise

As part of broader health system strengthening initiatives, capacities to achieve successful integration and scale up of community engagement for CMAM need to be developed. Understanding around the value of community engagement needs to be built and practical skills developed for conducting activities that target all health and community actors involved (i.e., health workers, health managers, community leaders, community groups, volunteers, community members). However, capacity strengthening for community engagement takes time and commitment, and necessitates long-term funding.

Community engagement for CMAM should be taught to all health and nutrition professionals involved in community health. This should include pre-service education and in-service training that combines classroom teaching with on-the-job training, peer-to-peer mentoring and supportive supervision. This would encourage students and trainees to retain and develop skills, minimise time away from service provision and with adequate planning, facilitate more staff to be trained. In Sierra Leone, for example, CMAM and IYCF training is successfully combined and in Mozambique CMAM is routinely included in HIV trainings. Ongoing on-the-job and regular refresher trainings are important to help combat staff turnover and poor performance. In Ghana, issues of motivation have been tackled by including CMAM training as a part of the required criteria for career promotion in the national performance appraisal system. More creative methods for building capacity have also been introduced including: mentoring by international partners; learning visits whereby health workers from high performing sites visit low performing sites and trainees are seconded to higher-capacity institutions; distance learning; mobile mentoring teams; on-the-job supervision aids; and problem-solving hubs responding to questions in real time.

Capacity strengthening is a key area where national and international CMAM partners can support governments and communities. Renewed support should focus on strengthening community engagement expertise and capacity at all levels and the technical integration of CMAM with existing community systems. Decentralised teams of 'master trainers' that provide training on community engagement have been shown to be beneficial, and can distribute standardised training materials and job aids. Standardised job descriptions aligned with policies and technical guidance are particularly helpful in terms of management and service provision.

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4.6 Engaging with varied community groups and networks

Aligning community engagement processes with community networks ensures that CMAM is inclusive, equitable and contextually appropriate. Developing such a platform provides interlocutors with multiple opportunities to engage and strengthen the role of community health workers and volunteers by rooting their work in broader community structures of recognition and accountability. 18 Communities have organised groups, structures and systems that may be influential for interacting with a specific audience, catchment area, or mandate. One positive example is l'école des maris (school for husbands) in Niger. The use of influential community personalities or opinion leaders, such as community leaders, religious leaders, teachers, traditional healers, drug vendors or a selection of 'champions', can support certain visions and improved behaviours, such as the Councils of Champions in Ghana.⁷⁸ Similarly, in Mozambique, community leaders and school teachers are included in CMAM training to enable them to recognise and refer malnourished children at the community level.⁶⁴ These examples demonstrate constructive collaboration between health workers and the wider community. Moreover, existing structures and new networks are being developed to facilitate community engagement for CMAM. For example, in Kenya, mothers' support groups that have received training and meet regularly have contributed to a reduction in SAM and MAM default and relapse cases.²² Similarly in Ethiopia, mother-to-mother communication has increased identification and referral of new cases²⁵ and peer-to-peer dialogue among men has reinforced the promotion of good feeding practices.⁴⁴ Community participation has permitted the mobility of lady health workers and more equitable access to services in Pakistan, 20 and prioritised resources for healthcare in Kenya.²²

Case Study 1 – Effectively engaging diverse community groups in IYCF⁴⁴

Community programme activities are implemented by national NGOs (Bangladesh), integrated in health projects with the support of local governments (Ethiopia), national ministries of health (Vietnam), and other state and non-state actors such as the Women's Union (Vietnam). An important component of the programming is establishing community support to:

- Identify networks and traditional structures in the community in order to engage technical and social support, including health committees, women's groups, community leaders, community- and faith-based organisations, immediate and extended family, and kinship networks.
- Target groups for appropriate and specific activities.

In Ethiopia, members of women's associations and faith-based organisations are trained to promote improved IYCF practices as part of their outreach services. Nutrition cards containing IYCF messages are given to health extension workers, and both teachers and students receive training on recommended feeding practices. Some communities hold meetings on specific feeding issues, demonstrate food preparation, and celebrate families that adopted recommended feeding practices by awarding certificates.

The Bangladesh programme engages a wide cross-section of the community (fathers, community leaders, adolescent girls, teachers, religious leaders, traditional birth attendants, private sector and alternative healthcare providers) through orientation and social mobilisation sessions that have reached over 75,000 people.

In Vietnam in areas with IYCF support groups, community leaders attend quarterly group meetings on IYCF.

Community engagement must start with mapping community actors and systems (who does what and where) to identify strengths, gaps, synergies and opportunities. Community engagement should involve all groups within a community, and requires the purposive inclusion of marginalised, vulnerable, remote and under-served groups. This is particularly important in tackling issues related to socio-cultural attitudes, including social norms and gender, issues of stigma, mistrust and misconception of services. Activities designed to specifically target these issues and engage relevant

opinion leaders and groups have resulted in improved community knowledge and acceptance of services, with a positive impact on quality, equity, utilisation and coverage. **Case Study 1** outlines practical approaches used to engage community groups in Bangladesh, Vietnam and Ethiopia that aimed to improve child nutrition by increasing rates of exclusive breastfeeding and improving complementary feeding practices.

4.7 Utilising informal health service providers

In many contexts, formal government health structures are not the frontline providers of healthcare. Rather, traditional healers, traditional birth attendants, private pharmacies or drug vendors, and private clinics are often attended in the first instance due to their geographic, financial and cultural accessibility. In Pakistan, for example, 50% of healthcare is reportedly provided by private clinics;⁷⁹ in Cameroon, 25% of the population purchase drugs from informal providers;⁸⁰ and in Vietnam, private pharmacies are the most frequented points of delivery, accounting for approximately two-thirds of all health service contacts.⁸¹ Children with SAM are often taken to traditional healers first, due to a belief that acute malnutrition is not a medical but a spiritual problem associated with 'evil eye', cursing, or other belief systems.^{18,24}

Many studies highlight the potential of collaborating with the informal health sector to enhance community-level healthcare. Examples include: implicating traditional healers in tuberculosis treatment in South Africa⁸² and in HIV/AIDS prevention and care;⁸³ increasing referrals through the education of traditional healers in Mozambique (see **Case Study 2**); ⁸⁴ improving the knowledge and practice of private pharmacists through training and supportive supervision in Vietnam;⁸¹ and optimising community pharmacies in Pakistan.⁷⁹ There is also evidence that informal and formal health sectors are being linked through national policies or local initiatives. In Ghana, for example, it is common in cases of SAM that traditional healers refer the child to a health facility to deal with the clinical aspects of the condition, whilst they address the spiritual aspects of the disease.¹⁸

In Cameroon, informal healthcare providers often regard their role as complementary to that of formal healthcare providers, and actively cooperate with and align their services to biomedical practices. Roles They are situated within the community, both socially and geographically, and are often respected and legitimised by informal community-based regulation. In general, they represent a largely untapped human resource who can participate in providing services to the most difficult to reach populations, overcome barriers and encourage the timely uptake of treatment in a culturally appropriate and sustainable manner. S.24,25

There is, however, a general paucity of evidence on such collaboration beyond small-scale, often NGO-implemented, pilot studies. In practice, governments and other health service providers do not often collaborate meaningfully with the informal health sector and there is reticence amongst policy makers to incorporate such practitioners in programming. The informal health sector is heterogeneous, largely unregulated, unorganised and sometimes illegal. Despite its potential, designing and instigating collaboration remains challenging. Lessons learnt and best practices must be shared and appropriate strategies, guidance and regulation devised if the informal and formal health sectors are to work together to achieve targets set by national health policies and plans. **Case Study 2** describes how educating traditional healers in rural Mozambique increased referrals.

Case Study 2 – Educating traditional healers to increase referrals in rural Mozambique⁸⁴

The Ministry of Health and various traditional healer organisations in Mozambique created a formal partnership and collaborated with a university-affiliated NGO (Friends in Global Health) to design a system for: a) documenting referrals made by traditional healers to health facilities; and b) providing feedback to traditional healers regarding patient diagnoses. A primary health training course for traditional healers in each study district taught how to identify patients with HIV, TB, malaria, malnutrition, diarrhoea and mental illness, and provided information on the importance of early detection and referral for standard methods of treatment.

This education-based intervention resulted in a sustained increase in HIV knowledge and a 35% increase in referral rates, although the number of referrals per month remained low and the most common symptoms among referred patients remained the same. Building positive relations between traditional healers and the clinics was crucial for improving referral. Use of referral forms was highly acceptable particularly as pictorial forms were available for healers with low literacy levels. Because training-related costs were covered by the project, however, a major limitation to the future sustainability of the scheme was the lack of Ministry resources. Despite this, the study demonstrated the feasibility of implementing a referral system and increasing referral rates through an inexpensive intervention, suggesting a formal relationship with traditional healers as a viable, cost-effective method of directing patients to the health facility.

4.8 Incorporating appropriate and innovative information and communication technology

The potential of using appropriate and innovative information communication technology (ICT), particularly mobile phones, to facilitate health interventions is enormous and has seen a marked upsurge in recent years. mHealthⁱⁱⁱ can assist in facilitating the provision of care to communities in remote areas far from the clinical setting, and can help overcome challenges associated with knowledge and problem solving, organising and tracing referral, routine data collection, training and supervision. It may also improve outcomes related to quality of care, efficiency of services, the skills of community health workers and volunteers, and utilisation of services.

A recent systematic review found that mHealth activities have focused largely on sexual and reproductive health and maternal and child health (MCH), with over half addressing HIV/AIDS. ⁴³ The main benefits observed included: the improved collection of complete, high quality, accurate and timely data; better compliance to standards and guidelines for health services (mostly through decision support and alert and reminder tools); the provision of real-time advice, information and support for frontline health professionals, particularly geographically dispersed community workers; the support of education and training activities; the creation of professional networks between community workers themselves and with their supervisors; and the facilitation of improved leadership and management practices, particularly in terms of remote supervision.

There are, however, many challenges in optimising mHealth and there is little documentation on how to apply mobile technology for community engagement beyond communication and information sharing. In Malawi and Ghana, for example, SMS is being used by community health nurses to communicate with volunteers who conduct follow-up visits to children with SAM, helping overcome issues of transport for health outreach. ^{18,24,25} In Uganda, where mobile phone network coverage is

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mHealth (also written as m-health) is an abbreviation for mobile health, a term used for the practice of medicine and public health supported by mobile devices.

relatively good, SMS is being trialled by community health workers to communicate with health staff when they identify a child in the community with SAM. This enables health workers to estimate how many referrals to expect and to inform community health workers whether referrals fail to present at the health centre.²⁵

A global-level mHealth working group^{iv} is supporting the integration of mHealth into nutrition programming. They have consolidated resources and created an mHealth tool kit^v. Whilst these are positive steps, it is notable that this initiative remains NGO led. Of the 400 mHealth interventions contributing to the project across 74 countries, the majority are led by international NGOs and fail to capitalise on ministry involvement or national-level approaches.

It is clear that the use of mobile technologies to support and empower community health workers and volunteers in their role as a bridge between the formal health sector and communities has the potential to strengthen community engagement in CMAM. Experiences must be shared in order to optimise lessons learnt and establish standard tools and guidelines. Increased governmental involvement is also needed in global mHealth platforms and initiatives as well as strong ministry-level commitment to implementing mHealth both nationally and sub-nationally. Case study 3 presents a positive example of how mobile technology is being used to improve maternal and child health in rural Rwanda.

Case study 3 – Using mobile technology to improve MCH in rural Rwanda⁸⁶

An SMS-based alert system developed to improve MCH using RapidSMS® (a free and open-sourced software development framework) was piloted in 2011 in Musanze, a mountainous district in northern Rwanda with a low rate of assisted deliveries (49% in 2009). It is one of the first large-scale mHealth projects to have been subsequently rolled out on a national scale, led by the Rwandan Ministry of Health (who covered SMS costs) with the support of UNICEF who developed the RapidSMS® platform. The system allows community health workers to register new pregnancies and effectively monitor them through to delivery and the post-partum period. It sends automated reminders at specific dates for clinical appointments; activates an emergency alert-system in case of danger signs; provides immediate feedback to the community health worker and advises on immediate action; and requests ambulances from the nearest ambulance vehicle point to ensure that the mother/infant is transferred for emergency obstetric and neonatal care in good time.

Many positive outcomes were noted: reporting compliance among community health workers was 100%; community health workers confirmed they were more pro-active in finding new pregnancies and following them up as a result of reminders sent to their mobile phones; they felt they received more trust and respect from the community as a result of being empowered to request an ambulance in emergencies; and service users (pregnant women) were happy to receive reminders via SMS. The project is still in its early stages and it is therefore difficult to analyse the impact on MCH outcomes, but it is clear that the use of mHealth technology helps reduce the delay in seeking healthcare, serves as a remote data entry point into national health information systems, and acts as a unique interface providing real-time information to mothers, health facilities staff and programme managers.

The most critical enabler was strong government commitment to innovation in general and to the RapidSMS® initiative from its inception. Other success factors included the use and development of locally based software and expertise to promote sustainability; an already existing and well organised community-based health programme; clearly defined roles and responsibilities for community health

iv See www.mhealthworkinggroup.org

V See www.k4health.org/toolkits/mhealth

workers; well-delineated administrative boundaries facilitating monitoring and quality; good mobile phone coverage reaching even the most remote areas of the country; the public-private partnership between the Ministry of Health and the mobile phone network provider which substantially lowered SMS costs and was crucial for sustainable expansion; and the national Performance-Based Financing approach (community health worker income is based on performance) coupled with the scale-up of community health insurance.

4.9 Improving monitoring and reporting

Global guidance on monitoring and reporting of community engagement for CMAM has been limited, and good practices have not been shared (see 4.11 below). Coverage assessment methods have covered some of the gaps but as they are not part of routine monitoring systems, access to that information is not always open or systematic. Examples of commonly used indicators for community engagement are provided in **Box 6**.

Box 6 – Examples of commonly used and suggested indicators for community engagement

Indicators of community engagement quality have not been standardised but could include some of the following:

- Number of community health workers and/or volunteers per community; total number of community health
 workers and/or volunteers per health facility with CMAM interventions; total number of community health
 workers and/or volunteers per health district
- Number of communities sensitised on CMAM
- Number of training courses for community health workers and/or volunteers conducted
- Number of supportive supervision visits for community health workers and/or volunteers
- Number of children screened for malnutrition in the communities
- Frequency of active community screening of a child under 5 (monthly is best)
- Method of community sensitisation/involvement/screening applied
- Number of children identified with SAM/MAM and referred for treatment
- Number of SAM and MAM admissions
- Proportion of children identified with SAM/MAM, referred for treatment and admitted
- Proportion of children identified with SAM/MAM, referred for treatment but not admitted due to misdiagnosis
- Proportion of SAM/MAM cases with early initiation of treatment (admissions without advanced illness or complications, not low MUAC reading, low death rate, low inpatient admission)
- Treatment coverage
- Level of community involvement in design, planning, implementation and monitoring of community outreach (ownership and accountability)

4.10 Systematising research

Formative and operational research allows the development of evidence-based activities and strategies that take account of local contexts and care-seeking behaviours, including how a community conceptualises malnutrition, recognises the condition and its causes and perceives treatment. Section 5 lists topics for research that have been identified in the development of this technical brief.

4.11 Systematising lessons learnt, evaluation, and knowledge management

Treatment coverage is a key indicator to evaluate the performance of community engagement for CMAM and the impact of CMAM interventions. Coverage assessments are highly technical, however, and the application of the various methods (and tools) needs thorough training and is resource intensive. **Box 7** presents an overview of various methods of coverage assessments that have been developed over time. Although coverage assessments are promising, like other aspects of community engagement they have not been evaluated in terms of value-for-money and opportunities to build a strong evidence base have not been maximised.

The sharing and analysis of different approaches to community engagement is essential in developing future policy and practice. The evolution of CMAM has produced rich knowledge, yet the retention and constructive use of information and on-the-ground experience remains scarce. A four-country CMAM review concluded that excellent and promising practices are being tested or implemented, yet there is still only limited documentation, information sharing and use of lessons learnt from these opportunities, despite the often expressed need and eagerness for learning and accessing information. This is particularly relevant in translating the experiences and expertise of NGOs to better inform government-led strategies. Such information is also key in advocacy, decision-making and the allocation of funds that prioritise community engagement activities.

Box 7 – Overview of coverage assessment methods

Centric Systematic Area Sampling (CSAS) was developed in 2002 as part of CTC research and used for several years until deemed too expensive for routine use and superseded by less resource intense SQUEAC and SLEAC methods.

Semi-quantitative Evaluation of Access and Coverage (SQUEAC) provides in-depth analysis of barriers and boosters to coverage, designed as a routine monitoring tool through the intelligent use of routine monitoring data complemented by other relevant data that are collected on a 'little and often' basis.

Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage (SLEAC) is a rapid low-resource survey method that classifies coverage (low, moderate or high) at the service delivery unit level. Its advantage is that relatively small sample sizes (e.g., $n \le 40$) are required to make an accurate and reliable classification. It can also estimate coverage over several service delivery units, hence is ideal for coverage survey of wide areas.

Simple Spatial Survey Method (S3M) is a development of CSAS for very wide area usage. It makes highly efficient use of the sample at a lower cost than CSAS. It is simple to conduct and its results are easy to understand.

5 Conclusion and way forward: Repositioning community engagement

Despite significant changes in operational context over recent years, there remains great potential for CMAM to exert huge impact on the health and wellbeing of children worldwide, particularly through its integration into national health systems as part of routine child health services. A key theme behind current challenges and critical in effectively moving forwards is a **renewed focus on community engagement as the foundation of CMAM**. Engagement with the community should be participatory, inclusive, equitable, reciprocal, creative, continuous, accountable and transparent. It must be adapted to a local context in a way that inspires ownership, empowerment and shared responsibility. At the same time, strong commitment at local, subnational, national and international levels needs to be structured through relevant policy and broader community health system strengthening strategies that are informed by health systems analysis, including root cause analysis. These measures combined with ongoing analysis and sharing of promising practices, will help to ensure the feasibility and sustainability of CMAM.

Key considerations are outlined below. Their aim is to strengthen strategies and interventions that contribute to improving the responsiveness of governments, civil society, private sector and the community to the health and nutrition needs of individuals. It is important to note, however, that many of these considerations go beyond community engagement for CMAM and **implicate broader national and international community-level strategies**. Community engagement for CMAM should not be seen in isolation and its evolution must be tackled in a holistic way, linking it with other community-based initiatives and approaches as part of the greater effort to improve coverage of healthcare and extend sustainable services into the community.

Prioritising community engagement for CMAM as part of community system strengthening of MCH services.

Advocacy and networking is needed to ensure that community engagement for CMAM is taken up as an essential community health intervention with a renewed focus on community involvement and ownership (empowerment) and sustainability. In addition, community mechanisms that will support community-level management and explore public-private partnerships should be promoted and established.

• Developing up-to-date guidance for community engagement for CMAM.

Guidance should be developed where it is not in place, and existing guidance should be updated to support strategic planning for comprehensive community engagement in humanitarian and development contexts. Such guidance should be adapted to the evidence base, needs and operational environment of countries and aligned with national policies, resources and community capacities. Moreover, global guidance for CMAM implementation including community engagement should be updated and adapted in line with the shift towards a government-led, integrated approach (as the focus moves away from NGO-led programmes in emergency contexts). Furthermore, research is needed on country-specific preconditions and enabling factors that will inform 'how to' guidance and promote high quality, safe and sustainable services. ⁸⁶ Not only do we need to know what works, but also for who, when and why vi. Only then will we be achieve evidence-informed guidance on community engagement.

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vi See Pawson and Tiley 2004, http://www.communitymatters.com.au/RE chapter.pdf

• Integrating community engagement for CMAM as part of MCH with other community interventions, services and initiatives.

Potential synergies (within the health sector and through cross-sectoral collaboration) should add value to community engagement for CMAM and optimise coherence, coverage and cost effectiveness. Planning for integration with other community-based initiatives is needed to avoid overburdening communities, particularly in areas where community health outreach and community coherence are weak.

• Allocation of sustainable funding.

The allocation of appropriate national funds for community health activities that bring longer-term benefits and which are sustainable requires a change in how community engagement for CMAM as part of MCH services is financed. Reliable and ongoing funding and allocation of resources are crucial and require increased advocacy. Moreover, governments and partners must explore appropriate mechanisms for the sustainable generation of payments to community health workers and volunteers adapted to the specific context.

• Ensuring well managed adequately trained and motivated health and community actors for strengthened community involvement and ownership.

Country-specific strategies must focus on organisation, training, motivation and retention of sustainable human resources for community engagement and health outreach.

Strengthening skills and expertise.

Building health sector, civil society, private sector and community capacity on community engagement for CMAM as part of MCH should be linked with broader initiatives to strengthen human resources. Increased sharing of experiences and lessons learned may support strategies for maximising the role of volunteers and mitigating the risks associated with low educational levels.

Involving community groups and networks.

For maximum reach and impact, activities should be aligned with community organisations and existing networks.

• Utilising informal health service providers and community networks.

Further investigation into the most efficient means of collaboration with the informal health sector (including traditional healers, traditional birth attendants, drug vendors and private clinics) is required.

Organisational capacity strengthening.

Defining the role of actors for organisational capacity strengthening of CMAM is important. Given the current capacity and level of commitment to CMAM in many countries, governments and communities will continue to require the support of different CMAM actors to ensure effective community engagement. Depending on the context, these actors should facilitate and strengthen the capacity of the community to participate in engagement activities, providing technical expertise, building knowledge and skills and supporting the development of community-level strategies and their implementation.

Optimising appropriate and innovative information and communication sharing.

Mobile phone technologies have the potential to play a major role in accurate and timely information sharing for community engagement, particularly in terms of community interventions, supervision and performance monitoring. Further pilots and operational research is needed to inform the development of practical guidance and encourage the use of ICT in everyday practice.

• Strengthening monitoring and reporting.

Monitoring and reporting should be both qualitative and quantitative and provide evidence on the impact and outcome of community engagement for CMAM as part of MCH. Disaggregated data

should be routinely collected from the community level upwards and rigorous monitoring and evaluation should be built into programmes from the start, with the aim of communities being able to identify and engage in solving their own health challenges.

• Evaluation, sharing of experiences and best practices.

This is an important aspect of strengthening health and community actors. Shared evidence can underpin future community engagement strategies and support creative and adapted approaches in different contexts.

Identified Research Questions

Research should provide an evidence-base for the development of policies, guidance and practices. Based on background reviews for this technical brief and ideas presented at recent conferences, the following questions have been highlighted as important areas for future research:

- How can governments be effectively supported to engage with community systems and strategies and sustainably scale-up CMAM?
- How effective are strategies to integrate community engagement for CMAM with other community-based health interventions?
- What are the most effective and appropriate means of collaboration with informal healthcare providers?
- Which enabling factors and barriers are associated with the motivation and retention of community workers?
- What is the role of formative research in community engagement, particularly in terms of barriers analysis and mapping?
- How can community engagement impact on positive social behaviour change that results in the improved health and wellbeing of children, but also in the timely recognition of SAM and treatment seeking?
- How effective are new and evolving approaches to community engagement, including mHealth, social behaviour change communication, community action cycles and communication for development?
- How can the monitoring and evaluation of community engagement for CMAM be improved and made sustainable, including coverage assessment methods and other mixed methods (both qualitative and quantitative)?
- How can tools and indicators for the monitoring and evaluation of community engagement be standardised and include impact assessment?
- What are the most effective means of data collection for routine monitoring of community engagement at community level?
- How can communities better participate in actively monitoring and evaluating activities?
- What approach or method of community engagement is the most appropriate, cost-effective and efficient in a particular context?
- How can lessons learnt be capitalised and experiences from community engagement shared across sectors and systems?

For key resources on 'Community Engagement for acute malnutrition', refer to relevant section in: CMAM Forum. Key resources for management of acute malnutrition. 2014. Available from: http://www.cmamforum.org/Pool/Resources/Key-Resources-for-mgmt-of-acute-maln-CMAM-Forum-June-2014.doc

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6 References

- 1 Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet* 2013; **382**(9890): 427-51. http://dx.doi.org/10.1016/S0140-6736(13)60937-X.
- 2 Black RE, Allen LH, Bhutta ZA, Caulfield LE, De Onis M, Ezzati M, et al. Maternal and child undernutrition: global and regional exposures and health consequences. *The Lancet*. 2008;**371**(9608):243-60. http://dx.doi.org/10.1016/S0140-6736(07)61690-0.
- 3 Prudhon C, Weise Prinzo Z, Briend A, Daelmans BM, Mason JB. Proceedings of the WHO, UNICEF, and SCN informal consultation on community-based management of severe malnutrition in children. *Food & Nutrition Bulletin*. 2006;27(Supplement 3):99-104.

 http://www.who.int/maternal_child_adolescent/documents/fnb_v27n3_suppl/en.
- 4 World Food Programme WFP, World Health Organisation WHO, UN Standing Committee on Nutrition UNSCN, UNICEF. Joint statement on community-based management of severe acute malnutrition. 2007 May. http://www.who.int/maternal_child_adolescent/documents/a91065/en.
- 5 UNICEF. Global SAM management update, Summary of findings. 2013. http://www.cmamforum.org/Pool/Resources/Global-SAM-Management-Update-2013.pdf.
- 6 Collins S, Dent N, Binns P, Bahwere P, Sadler K, Hallam A. Management of severe acute malnutrition in children. *The Lancet*. 2006; **368**(9551): 1992-2000. http://dx.doi.org/10.1016/S0140-67360669443-9.
- 7 Khara T, Collins S. Community-based therapeutic care CTC. ENN special supplement. 2004. http://files.ennonline.net/attachments/856/supplement23.pdf.
- 8 Collins S, Sadler K, Dent N, Khara T, Guerrero S, Myatt M, et al. Key Issues in the success of community-based management of severe malnutrition. Technical background paper for WHO Consultation. 2005. http://www.who.int/nutrition/topics/backgroundpapers Key issues.pdf.
- 9 Food and Nutrition Technical Assistance Project FANTA, Emergency Nutrition Network ENN. International workshop on the integration of community-based management of acute malnutrition.Oxford: ENN; 2008. http://files.ennonline.net/attachments/1200/integration-of-cmam-washington-enn-2008.pdf
- 10 Emergency Nutrition Network ENN. Conference on government experiences of community-based management of acute malnutrition and scaling up nutrition. ENN: Addis Ababa; 2011. Presentations available from: http://cmamconference2011.org.
- 11 Coverage Monitoring Network CMN. International SAM Conference, London: CMN; 2013. Presentations available from: http://www.coverage-monitoring.org/2013/11/12/london-conference-presentations-available.
- 12 Deconinck H, Bahwere P. Review of community-based management of acute malnutrition in Niger. Washington DC: FANTA; 2010.
 http://www.fantaproject.org/sites/default/files/resources/FANTA_CMAM_Niger_Apr2011_Final_wCover.pdf.
- 13 Deconinck H, Bahwere P, Di Bernardo D. Review of community-based management of acute malnutrition in Mali. Washington DC: FANTA; 2010. http://www.fantaproject.org/focus-areas/nutrition-emergencies-mam/cmam-integration-review-multi-countries.
- 14 Deconinck H, Diene S, Bahwere P. Review of community-based management of acute malnutrition in Burkina Faso. Washington DC: FANTA; 2010. http://www.fantaproject.org/focus-areas/nutrition-emergencies-mam/cmam-integration-review-multi-countries.
- 15 Deconinck H, Diene S, Bahwere P. Review of community-based management of acute malnutrition in Mauritania. Washington DC: FANTA; 2010. http://www.fantaproject.org/focus-areas/nutrition-emergencies-mam/cmam-integration-review-multi-countries.
- 16 UNICEF. Evaluation report of the community health strategy implementation in Kenya. New York: UNICEF; 2010. http://www.unicef.org/evaldatabase/files/14 2010 HE 002 Community Strategy Evaluation report October 2010.pdf.

- 17 Forsythe V, Sharawy R, Sorkatti S, Albalula SA, Hassan E, Deconinck H, De Bernardo D, El Badawi AN. 2010. Community outreach for community-based management of acute malnutrition in Sudan: a review of experiences and the development of a strategy. Washington DC: FANTA; 2008. http://www.cmamforum.org/Pool/Resources/SUDAN-Community-Outreach-CMAM-Dec2010-FANTA1.pdf.
- 18 Bahwere P, Akortey Akor S, Neequaye M, Sagoe-Moses I. Review of the integration of community-based management of acute malnutrition into the Ghana Health System. Washington DC: FANTA-2 Bridge; 2011. http://www.fantaproject.org/sites/default/files/resources/Ghana CMAM Review Report Oct2011.pdf.
- 19 UNICEF. Evaluation of community management of acute malnutrition CMAM: Ethiopia country case study. New York: UNICEF; 2012. http://www.unicef.org/evaldatabase/files/CMAM Final Ethiopia.pdf.
- 20 UNICEF. Evaluation of community management of acute malnutrition CMAM: Pakistan country case study. New York: UNICEF; 2012. http://www.cmamforum.org/Pool/Resources/Evaluation-of-CMAM-Global-synthesis-Exec-summary-UNICEF-2013.pdf.
- 21 UNICEF. Evaluation of community management of acute malnutrition CMAM: Nepal country case study.

 New York: UNICEF; 2012.

 http://www.unicef.org/evaluation/files/Nepal Evaluation of Community Management of Acute Malnutrition CMAM

 Nepal Country Case Study.pdf;
- 22 UNICEF. Evaluation of integrated management of acute malnutrition IMAM: Kenya country case study. New York: UNICEF; 2012. http://www.cmamforum.org/Pool/Resources/Kenya-Evaluation-of-IMAM-case-study-UNICEF-2012.pdf;
- 23 Deconinck H, Swindale A, Grant F, Navarro-Colorado C. Review of community-based management of acute malnutrition CMAM in the post-emergency context: synthesis of lessons on integration of CMAM into national health systems in Ethiopia, Malawi and Niger. Washington DC: FANTA; 2008. http://www.fantaproject.org/downloads/pdfs/CMAM_Synthesis_Apr08_v2.pdf.
- 24 Deconinck H, Bahwere P, Diene SM, de Bernardo D, Adou P. Review of community-based management of acute malnutrition implementation in West Africa: summary report. Washington DC: FANTA-2 Bridge; 2011. http://www.fantaproject.org/downloads/pdfs/West Africa CMAM Synthesis Oct2011.pdf.
- 25 ENN. Conference on government experiences of community-based management of acute malnutrition and scaling up nutrition: conference report. Oxford: ENN; 2012. http://files.ennonline.net/attachments/1444/cmamconferencereport.pdf
- 26 UNICEF. Evaluation of community management of acute malnutrition CMAM: Global Synthesis Report. New York: UNICEF; 2012. http://www.unicef.org/evaldatabase/files/Final CMAM synthesis FINAL VERSION with ExSum translations.pdf.
- 27 Coverage Monitoring Network CMN. SQUEAC Report: Saptari District, Nepal. 2013 February-March. London: CMN; 2013. http://www.coverage-monitoring.org/wp-content/uploads/2013/04/Saptari-SQUEAC-Report.pdf;
- 28 CMN. Coverage assessment: Région de Batha, Tchad. 2013 April. London: CMN; 2013. http://www.coverage-monitoring.org/wp-content/uploads/2013/07/Rapport-SQUEAC Batha-TCH VF2.pdf.
- 29 CMN. Coverage assessment: Huambo Province, Angola. 2013 June. London: CMN; 2013.
 http://www.coverage-monitoring.org/wp-content/uploads/2013/09/SQUEAC-Report Huambo-ANG VF-26-07.pdf.
- 30 CMN. Coverage assessment: Matam, Senegal. 2013 March. London: CMN; 2013. http://www.coverage-monitoring.org/wp-content/uploads/2013/06/SQUEAC Rapport Matam Senegal US MT.pdf.
- 31 CMN. SQUEAC Report: Tando Mohammad Khan District, Sindh Province, Pakistan. 2013 January-February. London: CMN; 2013. http://www.coverage-monitoring.org/wp-content/uploads/2013/04/TMK Pakistan 02 2013.pdf
- 32 Puett C, Guerrero S. Access for all, Volume 2: What factors influence access to community- based treatment of severe acute malnutrition? London: CMN; 2013. http://www.cmamforum.org/Pool/Resources/Access-for-All,-Volume-2-Factors-influencing-access-CMN-2013.pdf.

- 33 MacQueen KM, McLellan E, Metzger DS, Kegeles S, Strauss RP, Scotti R, Blanchard L, Trotter RT. What is community? An evidence-based definition for participatory public health. *American Journal of Public Health*. 2001; **91**(12): 1929-38. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446907.
- 34 Mcleroy KR, Norton B, Sumaya CV. Community-based interventions Editorial. *American Journal of Public Health*. 2006; **93**:3. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447783.
- 35 Rosato M, Laverack G, Howard Grabman L, Tripathy P, Nair N, Mwansambo C, Azad K, Morrison J, Bhutta Z, Perry H, Rifkin S, Costello A. Community participation: lessons for maternal, newborn, and child health. *The Lancet.* 2008;37(9642):962-971. http://dx.doi.org/10.1016/S0140-67360861406-3.
- 36 FANTA. Training guide for community-based management of acute malnutrition: guide for trainers. Washington DC: FANTA; 2008. http://www.fantaproject.org/focus-areas/nutrition-emergencies-mam/cmam-training.
- 37 London School of Hygiene and Tropical Medicine LSHTM. Programming for nutrition outcomes [Online]. London: LSHTM; 2012. https://ble.lshtm.ac.uk/course/view.php?id=26.
- 38 World Health Organisation WHO. Declaration of Alma-Ata: International conference on primary health care. Geneva: WHO; 1978. http://www.who.int/publications/almaata_declaration_en.pdf.
- 39 Management Sciences for Health MSH. MDS 3: Managing access to medicines and health technologies. Chapter 31. In: MSH. Community based participation and initiatives. Arlington: MSH; 2012. http://www.msh.org/sites/msh.org/files/mds3-jan2014.pdf.
- 40 De Roodenbeke E, Lucas S, Rouzaut A, Bana F. Outreach services as a strategy to increase access to health workers in remote and rural areas. Increasing access to health workers in remote and rural areas. WHO. Technical report number: 2, 2011. http://whqlibdoc.who.int/publications/2011/9789241501514 eng.pdf?ua=1.
- 41 Strachan DL, Källander K, Ten Asbroek AH, Kirkwood B, Meek SR, Benton L, Conteh L, Tibenderana J, Hill Z. Interventions to improve motivation and retention of community health workers delivering integrated community case management iCCM: stakeholder perceptions and priorities. *American Journal of Tropical Medicine and Hygiene*. 2012;87(Suppl 5):111-119. http://dx.doi.org/10.4269/ajtmh.2012.12-0030.
- 42 Ko-Ko-Zaw, Than-Tun-sein, Kyaw-Minn, Khin-Maung-Iwin, Ye-Htut, Yin-Thet-Nu-Oo, Theingi-Myint, San-Shwe, Khin-Pyone-Kyi. Dissemination of reproductive health knowledge by questions and answers through telephone hotline: a feasibility study in Myanmar. *Southeast Asian J Trop Med Public Health*. 2011;42(1):168-75. http://www.ncbi.nlm.nih.gov/pubmed/21323180.
- 43 Braun R, Catalina C, Wimbush J, Isrealski D. Community health workers and mobile technology: a systematic review of the literature. *PLoS ONE*. [Online] 2013;86: e65772. http://dx.doi.org/10.1371/journal.pone.0065772.
- 44 Sanghvi T, Martin L, Hajeebhoy N, Teweldebrhan Hailu A, Yewelsew A, Haque R, Tran HTT, Sumitro R. Strengthening systems to support mothers in infant and young child feeding at scale, *Food & Nutrition Bulletin*. 2013;**34**: 3. http://www.ncbi.nlm.nih.gov/pubmed/24261074.
- 45 ALIMA. Mother-driven detection of malnutrition in Niger as part of the "Mothers understand and can do it" study. Niamey: ALIMA; 2012.: http://www.alimaong.org/en/our-actions/niger/muac-study-mothers-understand-and-can-do-it/. Video overview available from: http://www.alimaong.org/en/malnutrition-screening-by-mothers-in-video-in-the-muac-study-mothers-understand-and-can-do-it/.
- 46 Valid International. Community-based therapeutic care CTC: a field manual. Oxford: Valid International; 2006. http://www.fantaproject.org/sites/default/files/resources/CTC-Field-Manual-Oct2006-508.pdf
- 47 CORE Group. Community-based integrated management of childhood illness policy guidance. Washington: CORE Group; 2009. http://www.coregroup.org/storage/documents/Workingpapers/C-IMCI Policy Guidance Jan%202009.pdf.
- 48 ENN. Integration of IYCF support into CMAM: facilitators guide. Oxford: ENN; 2009. http://www.ennonline.net/integrationiycfintocmam

- 49 CORE Group, Save the Children, BASICS, MCHIP. Community case management essentials: treating common childhood illnesses in the community. A guide for program managers. Washington D.C: CORE Group; 2010. http://www.coregroup.org/storage/documents/CCM/CCMbook-internet2.pdf.
- 50 FANTA. Generic guidelines and job aids for community-based management of acute malnutrition CMAM. [Online] Washington DC: FANTA; 2010. http://www.fantaproject.org/focus-areas/nutrition-emergencies-mam/generic-cmam-materials.
- 51 Global Nutrition Cluster GNC. Module 13: Management of SAM. In The Harmonised Training Package HTP: resource material for training on nutrition in emergencies. [Online] Geneva: GNC; 2011. http://nutritioncluster.net/training/module-13-management-of-severe-acute-malnutrition-ppt.
- 52 Infant and Young Child Nutrition Project IYCN. Mobilizing communities for improved nutrition: a guide for community leaders. Washington: IYCN; 2011. http://iycn.wpengine.netdna-cdn.com/files/IYCN Mobilizing-Communities-for-Improved-Nutrition-Training-Manual-and-Participant-Guide-for-Community-Leaders_0711.pdf.
- 53 The Global Fund to fight AIDS, malaria and tuberculosis. Community systems strengthening framework. 2014. http://www.theglobalfund.org/documents/core/framework/Core CSS Framework en.
- 54 Maternal and Child Health Integrated Program MCHIP. Developing and strengthening community health worker programs at scale. A reference guide for program managers and policy makers. Baltimore: Jhpiego Corporation; 2013. http://www.mchip.net/sites/default/files/mchipfiles/CHW ReferenceGuide https://www.mchip.net/sites/default/files/mchipfiles/CHW ReferenceGuide smp.net/sites/default/files/mchipfiles/CHW ReferenceGuide smp.net/sites/default/files/mchipfiles/CHW ReferenceGuide https://smp.net/sites/default/files/mchipfiles/CHW ReferenceGuide smp.net/sites/default/files/mchipfiles/chw ReferenceGuide smp.net/sites/default/files/mchipfiles/chw ReferenceGuide smp.net/sites/default/files/mchipfiles/chw ReferenceGuide smp.net/sites/chw ReferenceGuide smp.net/
- 55 Myatt M, Guerrero S. Why coverage is important: efficacy, effectiveness, coverage, and the impact of CMAM Interventions. *Field Exchange*. 2013;**45**:40. http://fex.ennonline.net/45/coverage.
- 56 Guevarra E, Norris A, Guerrero S, Myatt M. Assessment of coverage of community-based management of acute malnutrition. CMAM Forum Technical Brief. 2012. http://www.cmamforum.org/Pool/Resources/Assessment-of-Coverage-of-CMAM-CMAM-Forum-TB-One-Oct-2012.pdf.
- 57 CMN. SQUEAC: Danane, République de Côte d'Ivoire. London: CMN; 2012 November. http://www.coverage-monitoring.org/wp-content/uploads/2013/02/Ivory Coats Danan%C3%A9 Nov 2012.pdf.
- 58 Lee J, Banda T, Sling K, Man Dalazi E, Paluku B. The nature, causes, and impact of defaulting from a CMAM program in Nigeria. In: CMN 2013: International SAM Conference. http://www.coverage-monitoring.org/wp-content/uploads/2013/11/C3-VALID.pdf.
- 59 Puett CL, Sadler K, Alderman H, Coates J, Fiedler JL, Myatt M. Cost-effectiveness of the community-based management of severe acute malnutrition by community health workers in southern Bangladesh. *Health Policy Plan.* 2013;**28**(4):386-99. http://dx.doi.org/10.1093/heapol/czs070.
- 60 Rifkin SB, Hewitt G, Draper AK. Community participation in nutrition programs for child survival and anemia. Washington DC: SPRING; 2007. http://www.spring-nutrition.org/sites/default/files/a2z materials/Community Participation Review October 1 09.pdf.
- 61 Cornwall A, Lucas H, Pasteur K. Accountability through participation: developing workable partnership models in the health sector. *IDS Bulletin*. 2000;**31**(1):1-13. http://dx.doi.org/10.1111/j.1759-5436.2000.mp31001001.x.
- 62 Fulton BD, Schleffer RM, Sparkes SP, Auh EY, Vujicic M, Soucat A. Health workforce skill mix and task shifting in low income countries: a review of recent evidence. *Human Resources for Health*. 2011;**9**:1. http://dx.doi.org/10.1186/1478-4491-9-1.
- 63 Dambisya YM, Matinhure S. Policy and programmatic implications of task shifting in Uganda: a case study. *BMC Health Services Research.* 2012;**12**:61. http://dx.doi.org/10.1186/1472-6963-12-61.
- 64 ENN. Special focus on government experiences of CMAM scale up. Field Exchange. 2012d43. Available from: http://www.cmamforum.org/Pool/Resources/fx-43-govt-experiences-with-CMAM-scale-up-part-1-2012(3).pdf.
- 65 Jaskiewicz W, Tulenkom K. Increasing community health worker productivity and effectiveness: a review of the influence of the work environment. *Human Resources for Health*. 2012;**10**:38. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3472248.

- 66 Sadler K, Puett C, Mothabbir G, Myatt M. Community case management of severe acute malnutrition in Southern Bangladesh. Medford: Feinstein International Center, Tufts University; 2011. http://dl.tufts.edu/file_assets/tufts:UA197.012.012.00023.
- 67 Alamo S, Wabwire-Mangen F, Kenneth E, Sunday P, Laga M, Colebunders RL. Task-shifting to community health workers: evaluation of the performance of a peer-led model in an antiretroviral program in Uganda. AIDS Patient Care and STDs. 2011;26:2. http://dx.doi.org/10.1089/apc.2011.0279.
- 68 Rifkin SB, Kangere M. What is participation? Community based rehabilitation CBR as a participatory strategy in Africa. Gladnet Collection: Cornell University ILR School; 2002. http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1059&context=gladnetcollect
- 69 Becart, E. Meta-analysis of barriers and boosters from 78 coverage assessments supported by the CMN. London: CMN; 2014. http://www.cmamforum.org/Pool/Resources/Meta-analysis-of-barriers-and-boosters-from-78-assessments-CMN-2014.pdf.
- 70 Nsona H, Mtimuni A, Daelmans B, et al. Scaling up integrated community case management of childhood illness: update from Malawi. *The American journal of tropical medicine and hygiene* 2012; **87**(5 Suppl): 54-60.
- 71 CDI Study Group. *Bulletin of the World Health Organization*. 2010; 887: 481-560. http://www.who.int/bulletin/volumes/88/7/09-069203/en/.
- 72 World Health Organisation WHO. Intersectoral collaboration on child nutrition in informal settlements in Mombasa: a Kenyan case study. Geneva: WHO. 2013. http://apps.who.int/iris/bitstream/10665/92866/1/9789290232384.pdf.
- 73 Government of Nepal GON. Multi-sector nutrition plan for accelerating the reduction of maternal and child under-nutrition in Nepal: 2013-2017 2023. Kathmandu: GON; 2012. http://scalingupnutrition.org/wp-content/uploads/2013/03/Nepal MSNP 2013-2017.pdf.
- 74 Sarker M, Joarder T. Intersectoral collaboration: a novel path to promote community health promotion editorial. *Global Health Promotion*. 2012;194:7-8. http://dx.doi.org/10.1177/1757975912464596.
- 75 Earth Institute. One million community health workers: technical taskforce report. Earth Institute. 2011. http://www.millenniumvillages.org/uploads/ReportPaper/1mCHW_TechnicalTaskForceReport.pdf.
- 76 Hermann K, Van Damme W, Pariyo GW. Community health workers for ART in sub-Saharan Africa: learning from experience capitalizing on new opportunities. *Human Resources for Health*. 2009;7:31. http://dx.doi.org/10.1186/1478-4491-7-31.
- 77 UNFPA Niger. Husbands' schools seek to get men actively involved in reproductive health. [Online] http://niger.unfpa.org/docs/SiteRep/Ecole des maris.pdf.
- 78 Catholic Relief Services CRS Ghana: "Encouraging Positive Practices for Improving Child Survival EPPICS Child Survival and Health Project" 2011-2015. [Online] http://www.mchip.net/sites/default/files/mchipfiles/Catholic%20Relief%20Services.pdf.
- 79 Hussain A, Ibrahim MI, Baber ZU. Using the potentials of community pharmacies to promote rational drug use in Pakistan: An opportunity exists or lost? *Journal of the Pakistan Medical Association*. 2012; **62**:11. http://www.ncbi.nlm.nih.gov/pubmed/23866415.
- 80 Hughes R, Chandler CR, Mangham-Jefferies LJ, Mbacham W. Medicine sellers' perspectives on their role in providing healthcare in North-West Cameroon: a qualitative study. *Health Policy and Planning*. 2013;**28**:636-646. http://dx.doi.org/10.1093/heapol/czs103.
- 81 Minh PH, Huong, DTM, Byrkit R, Murray M. Strengthening pharmacy practice in Vietnam: findings of a training intervention study. *Tropical Medicine and International Health*. 2013;**184**:426-434. http://dx.doi.org/10.1111/tmi.12062.
- 82 Colvin M, Gumede L, Grimwade K, Wilkinson D. Integrating tradition healers into a tuberculosis control programme in Hlabisa, South Africa. *MRC South Africa Policy Brief.* 2001;**4**. http://www.mrc.ac.za/policybriefs/tbtraditional.pdf/.

- 83 King R, Balaba D, Kaboru B, Kabatesi D, Pharris A, Homsy J. The role of traditional healers in comprehensive HIV/AIDS prevention and care in Africa: untapped opportunities. In: Marlink RG, Teitelman SJ, eds. From the ground up: building comprehensive HIV care programs in resource-limited settings, Elizabeth Glaser Pediatric AIDS Foundation. 2009.

 http://www.researchgate.net/publication/236330037 The Role of Traditional Healers in Comprehensive HIVAIDS AIDS AIDS Prevention and Care in Africa Untapped Opportunities/file/e0b49517a31e0cc344.pdf.
- 84 Audet CM, Salato J, Blevins M, Amsalem D, Vermund SH, Gaspar F. Educational intervention increased referrals to allopathic care by traditional healers in three high HIV-prevalence rural districts in Mozambique. *PLoS ONE.* [Online] 2013;88:e70326. http://dx.doi.org/10.1371/journal.pone.0070326.
- 85 Hillenbrand E. Improving traditional-conventional medicine collaboration: perspectives from Cameroonian traditional practitioners. *Nordic Journal of African Studies*. 2006;**151**:1-15. http://www.njas.helsinki.fi/pdf-files/vol15num1/hillenbrand.pdf.
- 86 Ngabo F, Nguimfack J, Nwaigwe F, Mugeni C, Muhoza D, Wilson DR, Kalach J, Gakuba R, Karema C, Binagwaho A. Designing and implementing an innovative SMS-based alert system RapidSMS-MCH to monitor pregnancy and reduce maternal and child deaths in Rwanda. *Pan-African Medical Journal*. 2012;**13**:31. http://www.panafrican-med-journal.com/content/article/13/31/full/.
- 87 DePue, JD, Rosen RK, Batts-Turner M, Bereolos N, House M, Held RF, Nu'usolia O, Tuitele J, Goldstein MG, McGarvey ST. Cultural translation of interventions: diabetes care in American Samoa. *American Journal of Public Health*. 2010;100(11):2085-2093. http://dx.doi.org/10.2105/AJPH.2009.170134.
- 88 Guerrero S, Mandalazi E. Local perceptions of malnutrition and factors affecting SFP recovery in the Concern CTC programme, Aweil West/North, South Sudan. Oxford: Valid International; 2005. Unpublished.