The CMAM Surge Approach:

An introduction and learning to date

CONCERN worldwide

This paper provides an overview of the CMAM Surge approach as developed by Concern in collaboration with government health staff in Uganda, Kenya and Niger and in consultation with other actors. It shares learning that has emerged during the first few years of implementation and future plans to further evaluate and develop the approach.

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Introduction

Building resilience to drought and other emergencies means ensuring essential services - particularly health and nutrition services - can scale up to meet demand quickly and efficiently and scale back down as demand diminishes. Supporting this 'accordion' approach to service provision is a critical element of Community Resilience, particularly in contexts where regular peaks in demand can be largely predicted. The *Community-based Management of Acute Malnutrition Surge Approach (CMAM Surge Approach)* was developed for this purpose. It provides as a smarter way to deliver services for the community-based management of acute malnutrition (CMAM) in contexts prone to periodic surges in caseloads of malnourished children, such as during the hunger gap in the Sahel and East Africa. The CMAM Surge Approach provides a stepped process and a set of practical tools to help government health managers and supporting agencies better anticipate, plan for and deliver life-saving services during these peak periods, precisely when the need is greatest.

This paper provides an overview of the CMAM Surge approach as developed by Concern in collaboration with government health staff in Uganda, Kenya and Niger and in consultation with other actors [i]. It shares learning that has emerged during the first few years of implementation and future plans to further evaluate and develop the approach.

What is Community-based Management of Acute Malnutrition (CMAM)?

CMAM itself is an approach designed to treat children with acute malnutrition as close to their homes as possible and has been in use since 2000. CMAM has revolutionized the management of acute malnutrition, particularly severe acute malnutrition, by simplifying protocols, emphasizing community involvement, and introducing a ready-to-use therapeutic food (RUTF), thus making it possible for most children to be treated on an outpatient basis at their local health facility [ii]. Since its introduction, CMAM has been endorsed as best practice for the management of severe acute malnutrition in children by the United Nations and has been recognised as one of the ten most cost-effective nutrition interventions [iii iv]. CMAM has now become an integrated component of routine health services in approximately 75 countries[v].

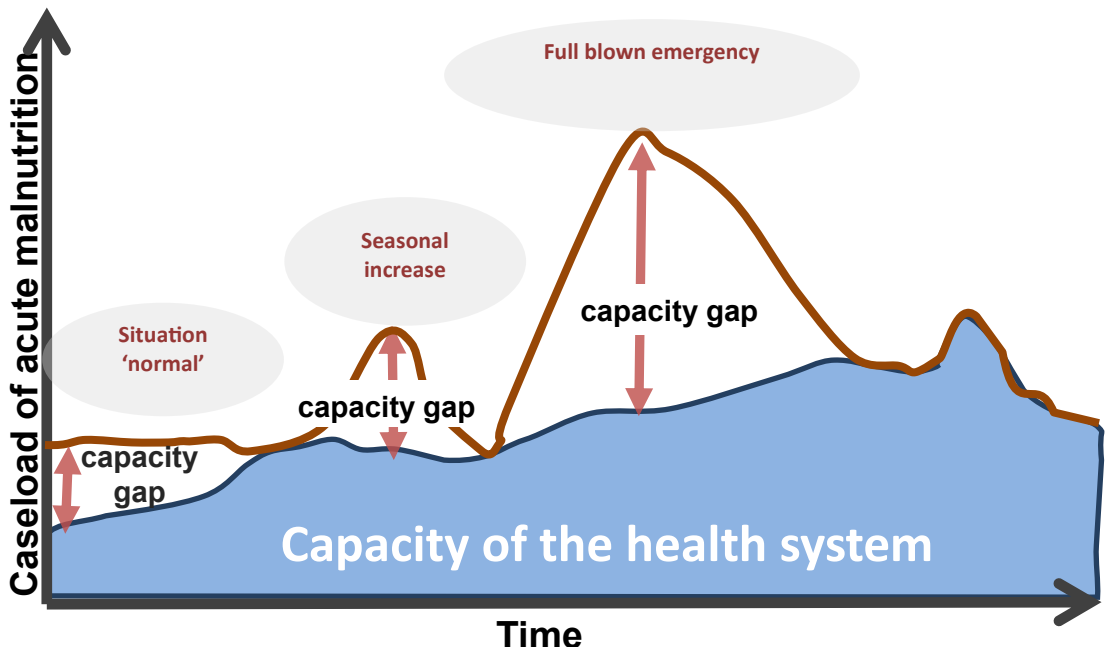
Despite CMAM's dramatic expansion over the last 16 years, treatment coverage remains unacceptably low with less than 20 percent of children with severe acute malnutrition currently accessing the treatment they need [vi]. Increasing treatment coverage will undoubtedly require concerted actions at community level. However, many of the leading access barriers still point to failures in

the health system, including distance to health facilities as well as unreliable and/or poor quality services [vii].

The seasonality of acute malnutrition

The CMAM Surge approach is based on the observation that in many contexts acute malnutrition follows a highly seasonal - and, therefore, largely predictable - pattern. These peaks occur when the main drivers of acute malnutrition, namely food insecurity, illness, and poor caring practices, converge in time and in space. In much of the Sahel and East Africa, these peaks occur during the annual hunger gap when food is scarce and the risk of malaria and/or diarrhoea is also heightened due to the onset of the rainy season. Other seasonal factors such as livestock movements, flooding, or increased demand for women's time for weeding or water collection will also influence both the number of children suffering from acute malnutrition and the ability of parents and other caretakers to seek treatment for them. This, in turn, determines the number of children arriving at health facilities requiring services, also known as caseload. The aim of the CMAM Surge approach is to help health actors understand and take account of all these factors in their health service planning.

Figure 1, shows a typical trend in admissions or caseloads of acute malnutrition (the y axis) over time (the x axis) at a health facility or across a health district in contexts with seasonal trends. In 'situation normal' capacity can generally meet the demand for services, but many facilities and districts will experience a 'seasonal increase' for at least a few months in a normal year and potentially a 'full-blow emergency' in more exceptional years, during which service demand will often outstrip a facility or district's capacity to deliver.



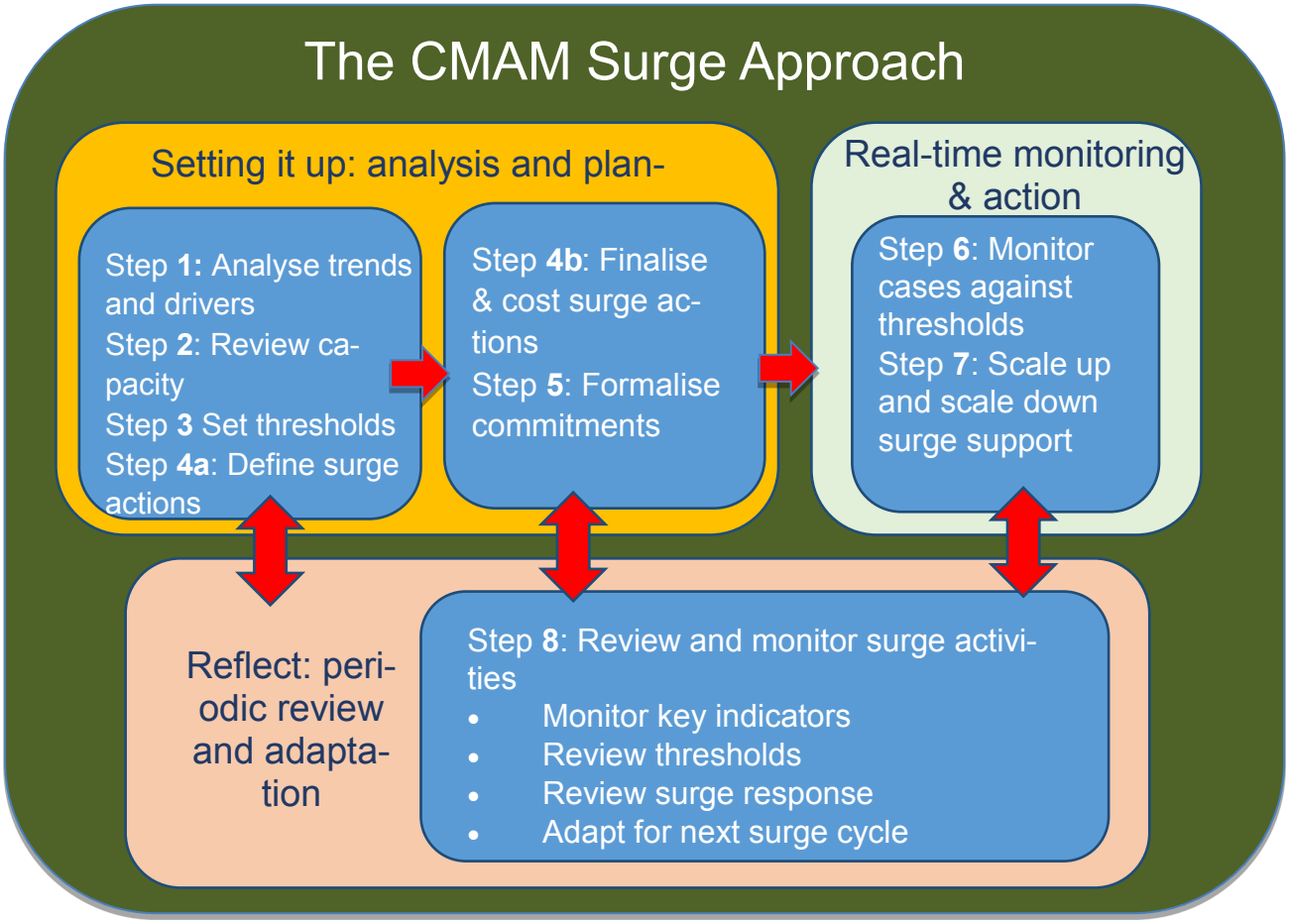
Adapted from P. Hailey and D. Tewoldeberha, ENN, 2010

Figure 1: Caseload surges over time and capacity of health system to cope

The CMAM Surge Approach

The CMAM Surge approach aims to ultimately reduce child mortality and disability associated with malnutrition through a series of pathways focused on ensuring quality health and nutrition service delivery over time, as outlined in the theory of change in Annex 1. The approach is outlined in detail in Concern's CMAM Surge Operational Guide, toolkit and facilitators guide, available in English and French, and the key steps are summarised in Annex 2 [viii]. The guide leads health facility staff and district health managers through a series of steps (see Figure 2 below) beginning with an analysis of the local factors that drive caseloads and a review of caseload trends from previous years to identify in which months caseloads are expected to peak (Step 1) [ix]. Next, each health facility team assesses its own capacity to cope with these caseload surges and identify any gaps (Step 2). They then set their own caseload thresholds, above which the health facility's capacity to deliver quality services would be compromised (Step 3). The management team of the Health District and health facility staff prioritise preparatory actions to be taken before admissions begin to increase and agree a costed support package that the District team will deliver to the health facility if and when their caseload thresholds have been crossed (Steps 4 and 5).

Figure 2: Overview of the eight basic steps of the CMAM Surge approach



The next stage involves real-time monitoring of caseloads at each facility and the District delivering the agreed support as thresholds are passed (Step 6), and then scaling down that support gradually once caseloads return to normal (Steps 7). To complete the annual cycle, periodic reviews help staff reflect on what was done well and where improvement can be made to thresholds, surge activities, and support packages before the next surge cycle (Step 8). All of these steps can and should also be broadly followed as well by the Health District to determine thresholds and mechanisms for triggering support from higher levels of the government and humanitarian system when the District's own response capacity is exceeded, although this aspect of the approach remains less developed.

The eight steps outlined in the global Operational Guide should be seen as a starting point. Adaptation to specific country contexts is essential and through this, regular revisions to the global guide and tools are also very much expected over the coming years.

Experience to data

Most of Concern's experience with the approach to date has been in Kenya, Uganda, and Niger and to a lesser degree in Chad with plans to initiate the approach in Ethiopia, Pakistan, Burundi and Sudan in with our government partners in 2018. Other partners, meanwhile, have shown interest in the approach and we don't have full site of all those activities but would like to hear about them as much as possible.

Kenya

Marsabit County, situated in the drought-prone northeast of Kenya was the first place the CMAM Surge Approach was formally piloted [x]. In 2012, Concern, in partnership with government staff at the National, County, Sub-county and health facility level, adapted the basic approach to the Kenyan context and trialed it at a few health facilities. After some further refinements, a more comprehensive CMAM Surge approach was scaled up to 14 health facilities in the County in early 2014, and in November of that year an external evaluation was conducted by the Centre for Humanitarian Change [xi].

The evaluation found the approach to be effective, acceptable, relevant and largely sustainable, but it should be noted that no dramatic surges occurred during 2014 – or indeed in 2012 or 2013. Nonetheless, the evaluator saw significant potential in the approach and concluded that the pilot "has contributed to strengthening the health system to cope with increased caseloads of acute malnutrition during predictable emergencies without undermining ongoing health system strengthening efforts." [xii] It also observed that the approach's effectiveness lies as much in its ability to help health systems respond to more localised small to medium surges as it does in its support for large to extraordinary ones.

Key recommendations included 1) consolidating the tools used in Kenya into a comprehensive guide and training package 2) strengthening ownership of the approach at higher levels of government 3) exploring the potential for a broader health system surge approach not just restricted to acute malnutrition and 4) including cost-effectiveness analysis in the next implementation cycle.

Since the evaluation, the Kenyan government has largely embraced the CMAM Surge approach and, with the help of Concern and other partners, has acted on many of the evaluation's recommendations. By mid-2016, Kenya had developed its own CMAM Surge Operational Guide (which was developed in tandem with the Global Operational Guide) and had begun rolling it out.

Unfortunately, in late 2016, as the CMAM Surge rollout was underway, many of the target areas were hit by drought and an extremely poor harvest. This led to dramatic increases in CMAM caseloads as early as December – at least four months prior to the expected start of the surge period in May 2017. As the situation deteriorated, a full emergency response was launched which largely overshadowed efforts to establish the CMAM Surge approach. Nonetheless, CMAM Surge is now established in roughly 30 percent of the health facilities in the affected districts, and a recent review concluded that the analysis and preparedness measures taken under CMAM Surge helped guide the emergency response to a considerable degree [xiii]. The 2016/ 2017 drought experience has also strengthened the government's commitment to fully embed CMAM Surge across the area before the next emergency.

Uganda

Concern has implemented some elements of the CMAM Surge approach in the southern districts of the Karamoja sub-region of Uganda on and off since 2009. In 2015, Concern, in partnership with the Ugandan health authorities, began to pilot a more comprehensive version of the CMAM Surge approach (known in Uganda also as IMAM Surge) in Karamoja with longer term funding. The full pilot was implemented under the leadership of the sub-regional, national and district health authorities in 51 health facilities across the districts of Amudat, Moroto, Nakapiripirit, and Napak.

A scoping exercise carried out in 2016 found that the CMAM Surge approach was highly acceptable to most actors in Uganda, particularly the government, and was seen as an important contribution to health system strengthening [xiv]. Key recommendations were similar to the Kenya evaluation and included involving communities and the District and Regional level more directly in all steps; clarifying the mechanism for triggering a response; and securing longer term funding for the approach to allow the preparedness steps to take place. In 2016, the CMAM Surge approach was included in the revised national CMAM guidelines [xv]. This has paved the way for the potential scale up of CMAM Surge in Uganda beyond Karamoja. Unfortunately, Concern is now closing its operations in Uganda but the government has now taken on responsibility for CMAM Surge scale

up [xvi].

Niger

Concern began using a simplified version of the CMAM Surge Approach in Tahoua Health Department in Niger in 2011, following the nutritional crisis that saw more than 10,000 children with SAM admitted for treatment in the Department in 2010 alone. Since that time, Concern has been gradually phasing in aspects of the approach, and after hosting a CMAM Surge workshop in Niamey in May 2016, Concern and the Tahoua Health Department began to introduce a more comprehensive CMAM Surge approach using the global CMAM Surge Operational Guide in French as a basis. By the start of the 2017 surge period in June, CMAM Surge had been established at 21 health facilities across the Department and it will be extended to Tahoua's remaining 13 health facilities by early 2018.

There has been enormous interest in the approach from partners in Niger and neighbouring countries. A critical adaptation to the approach in Niger has been the inclusion of support for malaria treatment of children alongside CMAM services, given that malaria is a known driver of malnutrition and annual spikes in malaria and acute malnutrition caseloads in Niger closely mirror each other. Concern is planning a strong evaluation of the CMAM Surge approach in 2018 with lessons relevant for a large number of countries across the Sahel.

Emerging lessons

- **Adapt the global guide to each country context and plan to update the global guide itself regularly as experience grows**. The global guide was never meant to be an off-the-shelf toolkit but a starting point for adaptation to the health systems of different countries. Tools such as the one provided for capacity assessment for health facilities should be kept simple and build on what already exists in each country. Concern encourages such adaptations and will work to better consolidate learning across countries and actors in the near future (see below).

- **Move beyond exclusively 'CMAM' Surge.** The approach is already showing significant potential for application to predictable surges in other illnesses alongside acute malnutrition. This has always been Concern's vision, and links to wider public health approaches to disease surveillance and control. Learning from Niger's experience incorporating surge support for malaria treatment into the approach will be shared in 2018 as part of the planned evaluation.

- **Incorporate more community mobilisation and referral into the approach.** Maximising access and coverage is fundamental to CMAM and good coverage is a pre-requisite for the CMAM Surge approach to be effective. To date, however, the CMAM Surge approach has

not explicitly prioritised increasing coverage. Instead, it has focused on ensuring the health system can cope with the cases actually arriving at health facilities, thereby contributing to coverage by motivating users to return. In Kenya, however, stakeholders concluded that the CMAM Surge approach should include a stronger set of community mobilisation activities and are currently defining what these will be.

- **Establishing alert thresholds for entire districts and linking with national emergency bodies to trigger support is proving feasible**. During the 2017 emergency in Kenya, two districts were able to trigger support from the government's National Drought Management Authority when the number of health facilities at alert level had passed agreed thresholds. These promising results bode well for the sustainability of the approach and the Kenyan government's commitment to bring early response systems to scale and improve links between CMAM Surge and national early warning systems.

- **Review and update thresholds more regularly and whenever there is a significant change to a health facility's capacity.** This recommendation arose from both Uganda and Kenya. As thresholds are based in part on the assessed capacity of a given health facility, it is critical that they are reviewed at least quarterly and any time there is a sudden change to the facility's capacity, as even the loss of a single staff for an extended period can greatly affect service quality. Kenya has also suggested that while thresholds to trigger scale up of surge support should continue to be based on new admissions, thresholds for scaling down should be based on total children still receiving treatment to promote a more gradual scaling down process, given children stay in the programme for an average of two months.

- **Engage District-level partners from the beginning and budget for regular exchange visits and learning events**. While it may be tempting for NGOs to work directly with health facilities, the evaluation and reviews in Kenya and Uganda underscored the surge support function directly within the government's health district management structure is critical for the approach to be sustained year on year. Exchange visits between facilities, Districts and National stakeholders have also proven to be extremely valuable as the approach evolves in each context.

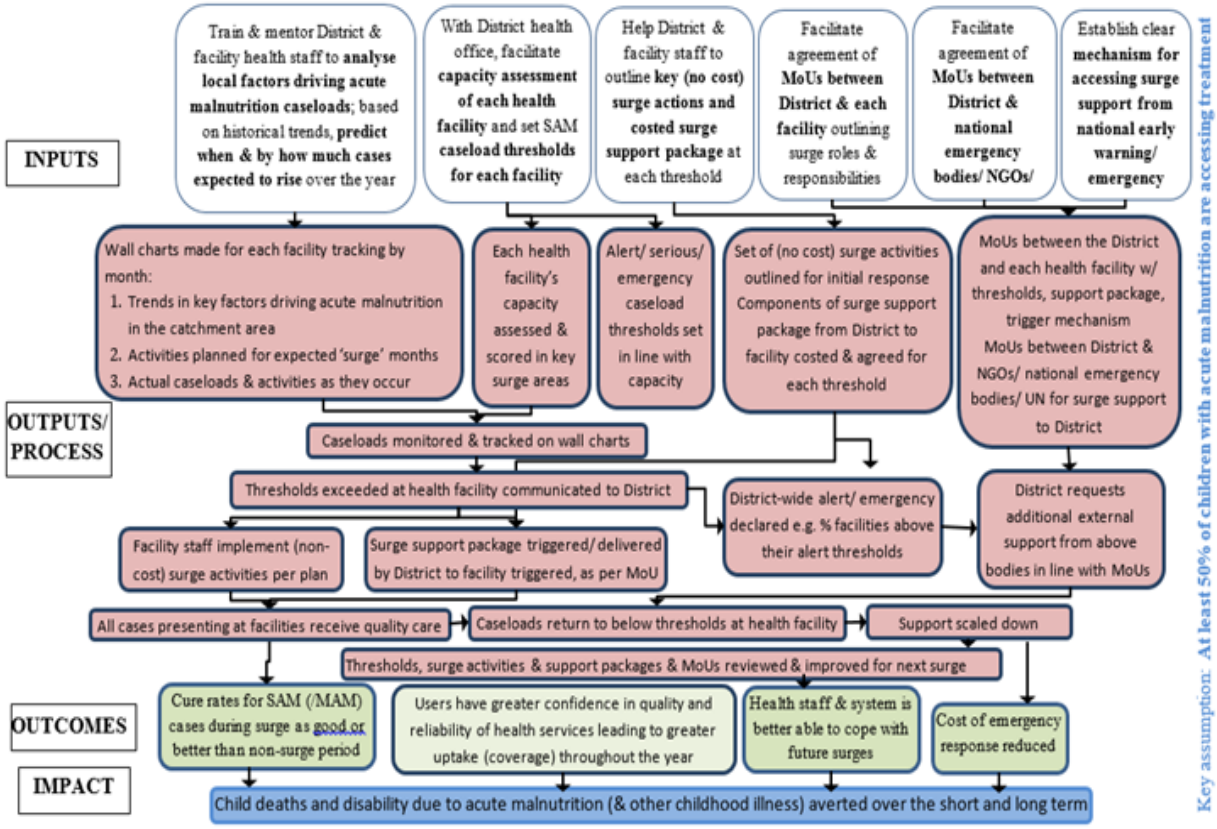
- **Cost-effectiveness is likely to be a key metric to assess the value of CMAM Surge over the traditional emergency approach and therefore a priority for future evaluations**. There is a strong economic argument for supporting early action that is based on real-time analysis and builds existing local capacity if an equal or larger number of lives can be saved at a lower cost than the more traditional, often delayed, emergency nutrition response. Cost effectiveness analysis is therefore being included in the impact evaluation of Concern's CMAM Surge programmes in Ethiopia and Niger in 2018 [xvii].

Conclusions and next steps

The CMAM Surge approach has been largely embraced by governments and practitioners in Kenya, Uganda and Niger and interest is growing among stakeholders in Ethiopia, Chad, Burundi, Pakistan, Mali and Sudan, among other countries [xviii]. Its appeal lies mostly in its simplicity, its commitment to working within government health systems, and its emphasis on learning from past experience to build resilience within the health system and prevent it from reaching breaking point year after year. The approach has demonstrated its significant potential to improve the management of acute malnutrition in contexts where nutritional risk factors follow a reasonably predictable pattern, making it highly relevant for much of East Africa and the Sahel where the burden of malnutrition is high and health systems are chronically overstretched.

More work, however, is needed to evaluate the impact of the approach, including its cost effectiveness, and to capture, share and apply learning from the experience of different partners as scale up continues in Kenya, Niger, Uganda, Ethiopia and elsewhere. Concern is collaborating with several partners to conduct an impact evaluation of the CMAM Surge approach in Ethiopia and Niger in 2018 and to conduct an experience-sharing workshop in 2018. Concern is eager to engage with any partners thinking of implementing the approach, and we are working to expand our capacity to provide technical assistance and coordinate learning on the CMAM Surge approach across contexts and implementers.

Annex 1: CMAM Surge approach theory of change



Annex 2: CMAM Surge Steps

Stage 1: Setting it up - Analyzing and planning for the health facility level

Step1. Trends and situational analysis. The aim is to establish what the common drivers of acute malnutrition in their catchment area are and when and to what degree surges in caseloads occur throughout the year. General patterns in these factors driving acute malnutrition and affecting health-seeking behaviours are first plotted on a monthly seasonal calendar wall chart.

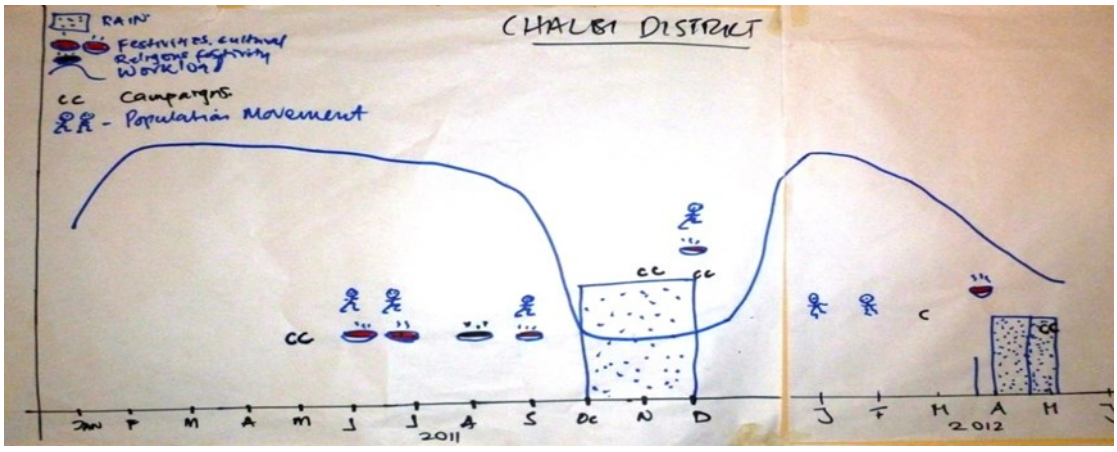


Figure 3:Seasonal calendar of factors affecting SAM caseloads

The same teams then plot to total SAM cases admitted to the programme and total children treated for other illnesses month by month on a similar wall chart. Teams then review how and when the causal factors coincide together with the actual case load for the previous year and determine when caseloads are most likely to peak in the coming year.

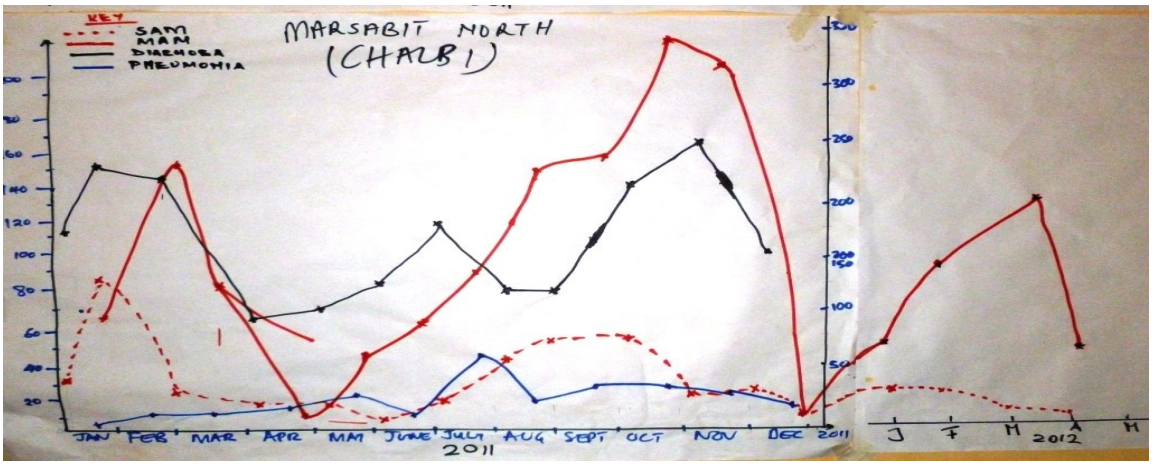


Figure 4: Example of a wall chart

Step 2. Capacity review. A basic capacity assessment in key areas required for CMAM services is undertaken for each facility. Each health facility is gives themselves a score across the five WHO health system building blocks (service delivery, health workforce, information, medical products, vaccines & technologies, financing, leadership and governance). The DHMT will use this capacity assessment to rank the different health facilities, identifying those who will require the most support during the surge period and ensuring the surge support packages agreed match the needs. Where tools exist in country to assess capacity, they should be used. If not, a tool is provided in the guide.

Step 3. Threshold setting. The capacity assessment and a review of previous experience during caseload surges is used to determine what a 'normal' (i.e. manageable) caseload is in terms of total SAM admissions per month. The health facility team then establishes SAM admission thresholds that represent crossing into an 'alert', 'serious' or 'emergency' phase. The thresholds once crossed trigger the pre-agreed changes in the work routines of the health facility staff and delivery of agreed support from the District Health Management Team (and potentially external partners such as NGOs or the UN via the DHMT or in rare circumstances directly to the health facility).

Step 4. Defining and costing of surge actions. Identify and prioritise actions to be carried out during the normal situation (preparedness activities), alert, serious, and emergency phases to ensure that HFs have the capacity to manage SAM services for their catchment population at all times. Some actions will have no cost, but where there are cost implications, these should be estimated so the DHMT can consolidate and ensure they are included and budgeted for in annual planning processes at district, regional and national level.

Step 5. Formalising commitments. Commitments on the surge actions and surge support linked to each threshold are formalised between health facilities and the DHMT in MoUs (or the equivalent) and between the DHMT and regional and national health or emergency bodies and external actors. This ensures mutual agreement and understanding of who does what, when and how, with appropriate budgeting and avoids enables prompt action once thresholds are crossed.

Stage 2: Real-Time Monitoring and Action

Step 6. Monitoring thresholds. This step involves regular monitoring of SAM admissions against set thresholds at both the HF (their own admissions) and District Health Management Team (DHMT) levels (admissions across all HFs). Once thresholds are crossed, this is communicated to the DHMT through agreed channels.

Step 7. Scaling-up and scaling-down Surge actions As thresholds are passed, activation of the surge actions and provision of the surge package is triggered. As caseloads return to a lower phase operating procedures and support levels return to normal.

Step 8. Reflect – regular review and adaptation This is a reflection period for health facility and District health staff after the 'surge period' has passed. Teams review how the scale up of support worked; how the actual caseload trends differed from the trends predicted; whether thresholds were appropriate; and how surge actions or surge support should be revised.

References and Content Notes

[i]Regional consultation workshops held in Nairobi and Niamey in 2016 included more than 50 government health, NGO and UN staff from 11 countries. Concern is particularly grateful to the UK Government's Department for International Development (DFID) for funding the workshops and Operational Guide; to the European Civil Protection and Humanitarian Aid Operations (ECHO), the Office of US Foreign Disaster Assistance (OFDA) and Irish Aid for supporting the approach in several countries, and to the Centre for Humanitarian Change, Action Contre La Faim and Save the Children International for support. Please see the Operational Guide for a full list of acknowledgements.

iiNote CMAM was developed to address both moderate and severe acute malnutrition, which follow different protocols and use different nutritional supplements to bring a child to recovery. However, the degree to which moderate acute malnutrition is addressed, particularly when CMAM services are integrated into the health system, varies by context.

iiiWHO, UNSCN, UNICEF. Community-based management of severe acute malnutrition. A joint statement by the World Health Organization, the World Food Programme, the UN System Standing Committee on Nutrition 2007. http://www.unicef.org/publications/files/Community_Based_Management_of_Sever_Acute__Malnutirtion.pdf

ivEvidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?; Bhutta, Zulfiqar A et al.; The Lancet , Volume 382 , Issue 9890 , 452 - 477 http://dx.doi.org/10.1016/S0140-6736(13)60996-4

vUNICEF. Nutridash 2013: Global report on the pilot year. New York: UNICEF, 2014. http://www.sightandlife.org/fileadmin/data/News/2015/2_Feb/UNICEF_Global_NutriDash_report_2013.pdf

viIbid.

viiPuett, C., Hauenstein Swan, S. & Guerrero, S. Access for All, Vol 2: What factors influence access to community-based treatment of severe acute malnutrition? Coverage Monitoring Network, London, Nov 2013 http://www.coverage-monitoring.org/wp-content/uploads/2013/11/Access-for-All-Volume-2.pdf

viiiCMAM Surge Operational Guide by Concern Worldwide 2016. https://www.concern.net/resources/cmam-surge-toolkit

ixThere are currently eight steps in the global CMAM Surge Guidelines, but these should be and are already being adapted at country level to fit with existing processes.

xIn Kenya, CMAM is referred to as the Integrated Management of Acute Malnutrition (IMAM) and the term 'IMAM-Surge' is used, but for simplicity in this paper, we continue to call it CMAM Surge.

xiCentre for Humanitarian Change is an independent consultancy firm http://www.whatworks.co.ke/ . Full evaluation report can be found on Concern's website: https://www.concern.net/insights/evaluation-cmam-model-surge-pilot

xiiHailey P Evaluation of the CMAM Surge Approach in Kenya 2014

xiiiA Synthesis of lessons from: Kenyan IMAM Surge Approach Review Workshop. August, 2017. MoH of Kenya, UNICEF, Concern. Full report available from the MoH, UNICEF or Concern.

xivSurge Programme Review for Karamoja: Consultancy report, Centre for Humanitarian Change, 2016

xvGuidelines for Integrated Management of Acute Malnutrition Guidelines in Uganda, Government of Uganda, January 2016

xviPlease see the detailed report on Uganda IMAM Surge learning based partly on a national stakeholders' workshop hosted in March 2017 will be available soon at https://www.concern.net/resources/cmam-surge-toolkit

xviiThe Ethiopia programme and the impact evaluation in both countries is being funded by OFDA

xviiiIn collaboration with Concern, ACF has included a Surge aspect in its new Health System Strengthening Guide http://www.actioncontrelafaim.org/sites/default/files/publications/fichiers/aah_hss_guide_2017.compressed.pdf

CONCERN worldwide

www.concern.net

Republic of Ireland

52-55 Lower Camden Street, Dublin 2

00 353 1 417 77 00 info@concern.net

Northern Ireland

47 Frederick Street Belfast, BT1 2LW

00 44 28 9033 1100 belfastinfo@concern.net

England and Wales

13/14 Calico House Clove Hitch Quay London, SW11 3TN

00 44 207 801 1850 londoninfo@concern.net

Republic of Korea

Chunji Building, 2F, 374 1 Seogyo-dong, Mapo-Gu Seoul, 121 894

T 00 82 324 3900 **W** www.concern.kr

USA

355 Lexington Avenue 19th Floor New York, NY

10017 00 1 212 5578 000 info.usa@concern.net

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