

MINISTRY OF HEALTH



SURGE APPROACH FOR

INTEGRATED MANAGEMENT OF ACUTE
MALNUTRITION

OPERATIONAL GUIDELINES FOR HEALTH WORKERS

Volume 1, August 2016

PREFACE

The Integrated Management of Acute Malnutrition (IMAM) was endorsed by the Ministry of Health (MoH) in Kenya in 2009 to manage cases of acute malnutrition and is one of the 11 High Impact Nutrition Interventions (HINI)¹ that Kenya has adopted. The northern arid and semi-arid lands (ASAL) of Kenya are particularly vulnerable to a wide range of frequent stresses and shocks, in particular drought and its negative impact on livelihoods. ASAL areas were affected by severe droughts in 2010 and 2011, adding to pre-existing chronic and acute food insecurity, poor dietary diversity and generally poor health, hygiene and sanitation conditions. These areas have received many 'stop-start' episodes of external emergency aid and support over the years, triggering interest in a more sustainable approach.

The surge approach was first proposed in Kenya as an alternative way of working to strengthen services for IMAM². Concern Worldwide with MoH counterparts, developed the concept and approach and piloted it in some ASAL areas of Kenya and Uganda. The pilots have been internally and externally evaluated and have led to the development of this operational guide to facilitate expansion of the surge approach to other parts of Kenya. The guide will remain a living document for the next one year to encourage incorporation of learning and new developments as the approach expands to different contexts, counties and stakeholders.

The guide provides a toolkit which gives an introduction and overview to the surge approach, outlines the tools for implementing the surge approach and describes how to organise periodic reviews and adaptations of the approach. There are tools throughout the guide and these tools are also available electronically in a separate zip file. There is an associated Kenya IMAM Surge Approach – Facilitators' Manual to be used together to complement this guide during trainings.

The primary audience for the guide and its tools are the key health facility (HF) staff and health management teams (HMTs) at Sub-county and County level, who are responsible for overseeing the management of HF activities. Partners who support implementation of IMAM will also find this guide a good reference resource. In larger emergencies, links should be made to higher levels of health management at national level including the National Drought Management Authority (NDMA) who need to be aware of any planned or required surge activities that require their input.

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Director of Medical Services

¹HINI include: breastfeeding promotion, complementary feeding for infants after the age of six months, improved hygiene practices including hand washing, vitamin A supplementation, and zinc supplementation for diarrhoea management, de-worming, iron-folic acid supplementation for pregnant women, salt iodization, and iron fortification of staple foods, prevention of moderate under nutrition and treatment of acute malnutrition.

²Referred to as Community-based Management of Acute Malnutrition (CMAM) in the article

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Acronyms

ASAL	Arid and Semi-arid Lands
AWP	Annual Work Plan
CEC	County Executive Committee
CHEW	Community Health Extension Worker
CHMT	County Health Management Team
CHV/W	Community Health Volunteer/Worker
CMDRR	Community Managed Disaster Risk Reduction
DHIS	District Health Information System
DRR	Disaster Risk Reduction
ECHO	European Commission Humanitarian Aid Office
EWS	Early Warning System
HF	Health Facility
HFMC	Health Facility Management Committee
HMT	Health Management Team
HINI	High Impact Nutrition Interventions
HSS	Health System Strengthening
IMAM	Integrated Management of Acute Malnutrition
KRCS	Kenyan Red Cross Society
M&E	Monitoring and Evaluation
MAM	Moderate Acute Malnutrition
MoH	Ministry of Health
MOU	Memorandum of Understanding
NDMA	National Drought Management Authority
NGO	Nongovernmental Organisation
NHSSP	National Health Sector Strategic Plan
SAM	Severe Acute Malnutrition
SC	Sub-county
SCHMT	Sub-county Health Management Team
SCMOH	Sub-county Medical Officer of Health
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SWOT	Strengths, Weaknesses, Opportunities & Threats
VCI	Vegetation Condition Index

Glossary of Terms

Activate surge	The process to move into a higher surge phase or to start the process to scale up.
Caseload	The number of children receiving services for SAM or MAM at any point in time within a health facility.
Deactivate surge	The process to move into a lower surge phase or to start the process to scale down.
Functional community unit	This is a community unit that meets all the 6 criteria as per the MoH definitions: Monthly reporting, Holds meetings scheduled, Have dialogue days, Right number of CHVs, Has a committee in place and has supplies and reporting tools
Phase	A term that refers to the current status of a health facility, sub-county, county, etc. at any point in time in terms of their capacity to manage their duties, i.e. how overstretched the health facility (or sub-county, county, etc.) is based on thresholds set. The phases are called Normal, Alert, Alarm and Emergency - for descriptive definitions of each, refer to Table 1.
Resilience	The ability of a system that has undergone stress to either withstand/resist without negative effect or the ability to recover and return to its original state without external support.
Scale down	The process to move down to a lower phase when the monthly number of new admissions of SAM and MAM is lower than the thresholds set. Activities revert to those of the corresponding lower phase, eventually returning to normal functioning.
Scale up	The process to move into a higher phase when a threshold is surpassed and to put in place the surge package for the corresponding phase as agreed.
Surge Stakeholders	The combination of actors that are involved in surge and its set up. This includes the health facility, the SCHMT, community representatives, partners (UN, NGOs), etc. At higher levels, this will also include the CHMT, NDMA, national MOH, etc.
Surge Actions	An activity that has been defined in order to increase capacity when thresholds have been surpassed, including activities that are carried out by the actor themselves or by others to support them.
Surge Focal Point	The person within the MOH at the sub-county, county or national level that is responsible for managing and following the implementation of the surge approach. At the SCHMT level, this person is usually the person contacted when a threshold has been surpassed within a health facility.
Surge Package	The full list of surge actions that are put in place in order to increase capacity when crossing thresholds into higher phases. There are various different packages, depending on the level that it is referring to, i.e. HF or SCHMT Surge Package.
Surge Score	A composite score to indicate the SCHMT-level phase; this score is calculated from a number applied to each health facility in a sub-county on a monthly basis according to the phase it is in.
Thresholds	Thresholds reflect the boundary between one phase and another, at which point the health facility/sub-county/county, etc. is overstretched beyond their capacity and requires action in order to cope with the situation.
Trigger	A small device or event that sets off a mechanism that will result in subsequent larger action.
Volume- load:	This is the number of children newly admitted in to the nutrition program (OTP and SFP) in a facility. The load can be high or low. The cut off points

	used should be contextualised. However this guide has suggested some cut offs.
Workload	In the context of the health facility, this is the overall number of patients seen per day, including all services. For the district/regional/national MOH, this relates to the overall amount of work that they have to manage.

Part A: Introduction – The Surge Approach

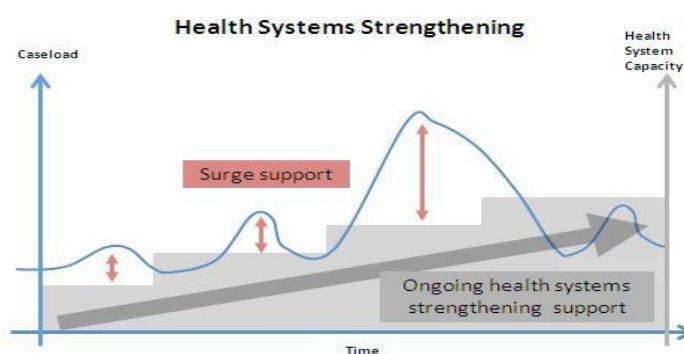
What is the Surge Approach?

The goal of the **IMAM surge approach** is to improve the resilience of health systems to better deliver services for treatment of acute malnutrition over time, particularly during periods of high demand when the potential to save lives is greatest, without undermining the capacity and accountability of government health actors. (Concern Worldwide, 2015).

Surge is an approach that can complement Health System Strengthening (HSS) efforts by helping to develop a health system that is more resilient to the changes in demand for IMAM services caused by the regular shocks and stresses experienced in the ASAL areas. Over the last 5 years, IMAM services in the ASAL regions have been integrated into health services and the nutrition sector is increasingly adapting its programmes to support the health system by contributing to the wider HSS agenda. During this transition process, it has been noted that the risk analysis and contingency components of HSS have often been weak. This weakness is of particular concern in the ASAL areas because of the environment of frequent shocks and the resulting increases in need and demand for health services. In the past, the health system has responded to these challenges by mobilising external resources, often leading to a disjointed approach that is inefficient and has the potential to have serious short and long term impacts on the quality, coverage and effectiveness of the services offered. An overdependence on external resources tends to undermine local capacity, accountability and may also damage ongoing HSS efforts.

The IMAM Surge Approach develops health system resilience through an 8-step process that links participatory analysis of context and health system capacity to a set of simple and practical tools that help government health teams to better respond to surges and mitigates the negative impacts of shocks on the health system. The approach uses a Government-led participatory assessment of risks, capacity and needs of each level of the health system to agree on activities and capacity support required from within and outside the Government. The analysis allows the setting of context specific facility level thresholds which, when surpassed, trigger pre-agreed actions and capacity support. The triggering process is based on real time analysis of health data. Action is triggered when the situation deteriorates and deactivated as the situation normalises. It should be noted that a higher phase is reached based on the HF's capacity to respond to increasing caseloads of acute malnutrition rather than the broader indicator of the prevalence of acute malnutrition. The surge approach has the ability to tailor this capacity support to local contexts and to develop local solutions to local problems and needs. Through this local ownership, the surge approach supports and protects the long term positive impacts of health system strengthening through a reduction in vulnerability and fragility of the health system. The health system becomes more adaptive and flexible. Figure 1 portrays the theory of the surge approach.

Figure 1: Theory of the surge approach

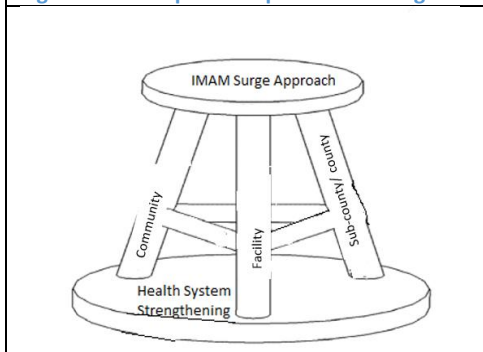


Surge – is it Health System Strengthening, Emergency Response or both?

A very large increase in prevalence of acute undernutrition and an accompanying surge in demand for IMAM services is classified as an emergency. In the past, this was often picked up when a sizable emergency occurred affecting a wide geographic area. This emergency would trigger a specific emergency response to handle the surge and stopped once it was determined that the prevalence and surge were below certain thresholds. This type of emergency approach has been much criticised for its inflexibility, frequent delays, lack of sustainability and the negative impacts it has on the existing health system. Consequently health and nutrition partners have made significant investments in developing local government capacity to manage emergencies and surges. It is clear that, in the last 5 years, Government health system capacity in the ASAL regions has significantly improved. The goal of the health and nutrition partners is that all health facilities have the capacity to respond to most emergencies, except the most extreme, major crises. At present, capacity to respond is very variable at community, HF, SCHMT, and CHMT levels and over time. Capacity gaps are evident in each of the health system building blocks. Therefore, the strengthening of government capacity to plan, manage and respond to surges in demand needs to be flexible, adapted to context and sustainably integrated into a government-led health system. Thus, the surge approach is designed to contribute to ensuring that health system strengthening efforts result in a stronger **AND** more resilient health system at all times while addressing both emergency surges and chronic long term needs in the integrated management of acute malnutrition.

At sub-county and county levels, the same principle is used to allow resilience of the broader public health system to be able to support the health facilities and communities. At these aggregated levels, threshold setting relies not only on the capacity to respond to increasing caseloads of acute malnutrition but also incorporates the consideration of early warning information to ensure that nutrition emergencies that affect many health facilities are picked up as soon as possible, using existing NDMA information. This is further explained in Part C.

Figure 2: Three pillars important for Surge



Although surge has been successfully piloted at facility level, the community systems as well as the sub-county and county management support is crucial for the sustainability of the surge approach for a successful, stronger health system as depicted by the 3 legged stool.

Underlying Principles

The surge approach is underpinned by the following guiding principles:

Government Led: Government are in the driving seat and determine if, when and how they require additional capacity support. Thereby strengthening local capacity and aligning with Government priorities.

Develops resilience: The health system is strengthened in such a way that the system develops greater resilience over the long term.

Adaptable and flexible: The surge approach thresholds, actions and capacity support, partnership modalities, and support to the health system are based on real time use of data and are regularly reviewed and adapted based on learning and changes in context. In this way, sustainability of the approach is built in.

Innovative: The Surge Approach will search out and use local solutions for local problems within an environment of limited resources.

Participatory: The Surge Approach is problem driven, tailored to the context, needs and capacities of each level of the health system based on regular participatory capacity assessment for effective response.

Transparent: Thresholds, capacity support activities and partnership modalities for support are agreed by all parties.

Health Systems Strengthening: The surge approach is embedded within health systems strengthening strategy and related existing activities and efforts and is not an emergency response.

Objectives of the Surge Approach

Main Objective

- To strengthen the capacity of government health systems to effectively manage increased and decreased demand for services for the management of acute malnutrition before, during and after shocks whilst protecting and supporting on-going health and nutrition system strengthening efforts.

Specific Objectives

- To ensure timely and adequate health system response to reduce excess mortality due to raised prevalence of acute malnutrition and associated demand on health services.
- To strengthen and build the capacity of the health system to manage periodic surges in demand for services to manage acute malnutrition.
- To increase system preparedness by supporting the health system to predict, plan for, detect and respond efficiently to periodic surges/spikes in demand for services to manage acute malnutrition.
- To develop the resilience of the health system by creating flexibility to meet the demand in service delivery.

How has the Surge Approach evolved?

After the 2011 drought in the Horn of Africa, the Kenya Nutrition Technical Forum began to contemplate how they could do things differently to avoid an inadequate response to another emergency in the future. Meanwhile, an article was published in the Field Exchange describing the surge approach as a way to avoid stop-start emergency support that used to be associated with operating “emergency” programmes, and instead to use and strengthen the capacity of the health system to respond to recurring problems of acute malnutrition. With the support of the European Commission Humanitarian Aid Office (ECHO) and later UNICEF, Concern Worldwide, the international nongovernmental organisation (NGO), began to develop the approach and initiated a pilot project in Kenya in collaboration with Sub-County Health Management Teams (SCHMT) and HF staff from May 2012. This pilot was conducted in 14 health facilities drawn from Chalbi, Moyale and Sololo (Moyale and North Horr Sub-Counties) in Marsabit County, in the ASAL part of Northern Kenya for a period of 29 months. Subsequently Concern Worldwide assisted Save the Children and Islamic Relief to support the MOH in Wajir in 2014 (within 12 health facilities), with further expansion in 2015 (additional 6 health facilities), and World Vision in Baringo County (6 health facilities in East Pokot) in 2014. Concern have also implemented surge in Karamoja, Uganda in 2009 and 2012 as well as done preparatory work in Niger.

When should you use the Surge Approach?

The IMAM Surge Approach is particularly suited for situations where there are frequent fluctuations in the prevalence of undernutrition and demand for services for the management of acute malnutrition, in more extreme cases often interpreted as being an 'emergency'. In reality, young children in these populations live in a chronic state of high and rapidly fluctuating poor nutrition status – this is often the case in the fragile areas of the ASAL region of Kenya.

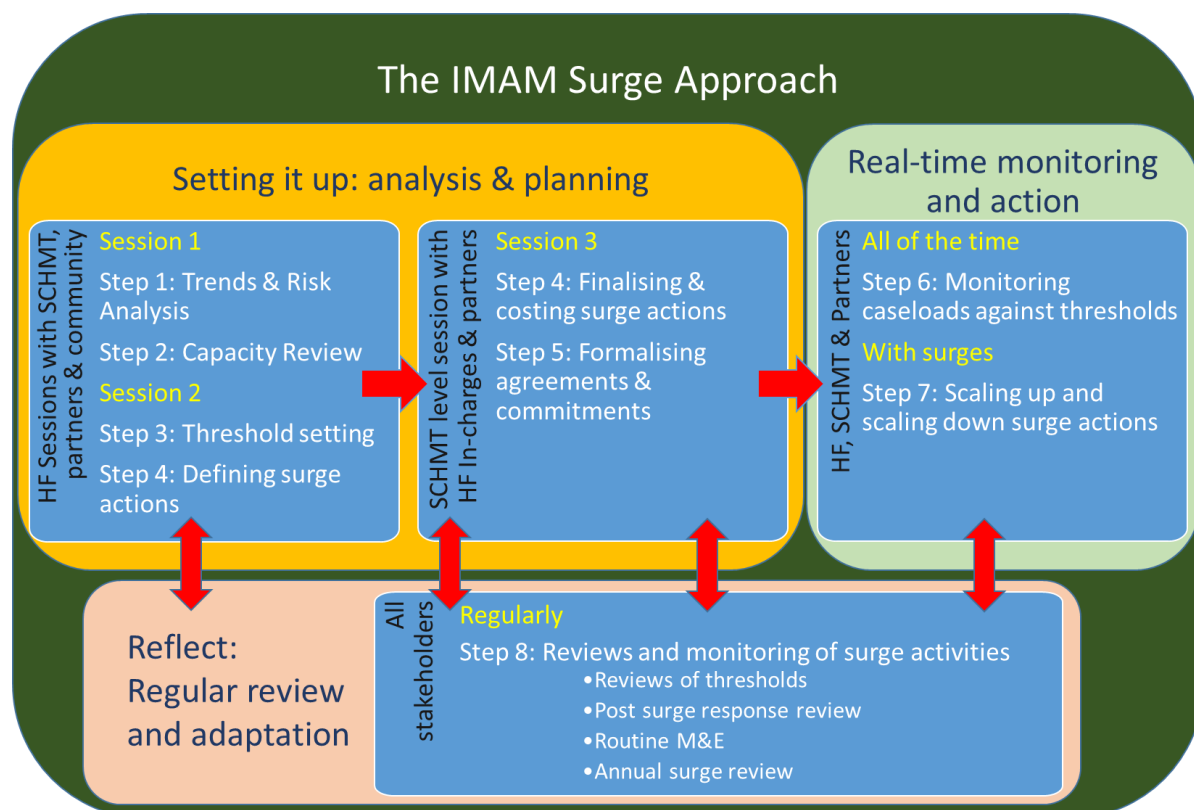
While the approach has only been piloted in a limited number of settings, the following contexts seem most appropriate for surge approach implementation. Contexts where there are:

- Recurring, often seasonal spikes in the prevalence of acute undernutrition and demand for services to manage undernutrition, with associated risks of significant increases in morbidity and mortality;
- Management of severe acute malnutrition (SAM) (and moderate acute malnutrition, MAM, if appropriate) has been introduced and is endorsed by the government as a standard health activity implemented primarily by the MoH;
- Government health systems function to a moderate standard during non-emergency times and on-going health system strengthening efforts are in place (if needed).

Part B: Implementing the Surge Approach focusing on the Health Facility

The surge approach is made up of 8 steps that can be divided into 2 main stages – the set-up stage followed by a permanent stage of real-time monitoring and action, with regular periods of reflection and adaptation.

Figure 3: Overview of the Surge Approach focusing on the Health Facility



Main actors

The main actors involved in the facility level surge approach and its setup are HF staff members, the SCHMT, and key community representatives, with support from other actors and partners where appropriate. Each has an important role to play. In addition to the mentioned stakeholders, the county and sub-county level surge approach will require NDMA staff, CEC and CHMT as detailed in Part C of this document.

Note: For simplicity within the guide, the term ‘surge stakeholders’ or ‘stakeholders’ is used to refer to a combination of people that are pulled together for the setup within each HF.

HF Staff Members: The backbone of the facility level surge approach and in reducing morbidity and mortality from acute malnutrition is the HF staff members, as the key point for reducing morbidity and mortality from acute malnutrition. The surge approach aims to draw out their capacities and weaknesses and empower them to request support when needed in an effort to ensure that they are able to handle any increases in demand for IMAM services when they occur.

Therefore, all of the staff of the HF should be involved in the set-up process as each brings knowledge of the HF and the catchment area to this participatory process. This includes any Community Health Workers or Volunteers that are linked to the HF. During the set-up process, an appropriate time

should be agreed upon between the SCHMT and the HF staff when the HF is less busy, aiming for participation of all technical HF staff members, and a representative of the SCHMT.

SCHMT: The SCHMT has a critical role in the set-up and daily running of the surge approach in their sub-county – they facilitate the set-up process with all of the health facilities; they are the first point the HF contacts during any scale up and they are the hub for any support required. While this section focuses on the HF, it is only with the participation of the SCHMT that the surge approach becomes a reality that responds to needs of the population.

Community: The community has three key roles in the set-up of the surge approach into the health system:

- 1) As the central stakeholder in services, they have representatives who bring the community's concerns and perspective to the HF;
- 2) Their representatives ensure that information flows back to the communities i.e. feedback;
- 3) To respond to increases in acute malnutrition, through community-led actions as well as linking to the HF and raising the alarm for surge.

These roles help to empower the community to be active participants in the health system, improving communication between themselves and the HF, as well as to strengthen any actions taken in response to increases in demand for services.

The community should be represented in each step of the surge process; however, given the differences in community structures throughout Kenya, the community could be represented by a wide array of people. Each HF will need to work with the communities in their catchment area to determine the most relevant representatives to participate in this process, such as, representatives of the Community Health Committee, the Health Facility Management Committee, Mother Support Groups, NDMA field monitors, etc.

Partners (national and international) play a critical role in supporting the implementation and scale up of IMAM services, especially when caseloads are high or capacity is low. They should be actively involved in each step of the IMAM surge approach, according to the level they are supporting i.e. HF, community, SCHMT, CHMT, with the intention of encouraging the HF and the SCHMT to take an increasing and leading role in managing peaks in SAM.

Stage 1: Setting it up - analysing and planning

The set up stage is made up of 5 steps, outlined here. They can largely be conducted in three half-day sessions, two at the HF level and one at the sub-county health management team (SCHMT) level. This is summarised in Figure 3.

- Step 1. Trends and risk analysis
- Step 2. Capacity review
- Step 3. Threshold setting
- Step 4. Defining and costing of surge actions
- Step 5. Formalising commitments

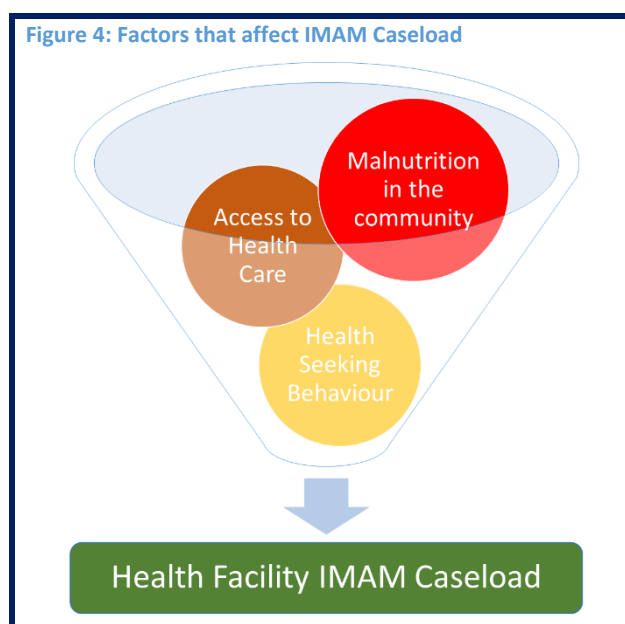
Note: It is possible that some steps may be a part of other health system activities, for example the trends and risk analysis or the capacity review. However, all steps are included here to ensure that the analysis is comprehensive; wherever possible, it is best to bring in these existing, complementary activities and efforts.

Step 1. Trends and Risk Analysis

<u>Step 1 Objectives</u>
<ul style="list-style-type: none">• To understand what factors affect demand for services for the population• To understand the previous trends in caseloads for the individual HF• To reflect on previous actions and how useful, timely and appropriate they were• To consider and anticipate how the situation will evolve in terms of caseload and the drivers of caseload
<u>Who is involved?</u>
Facilitators from the SCHMT, all staff members from the HF, HFMC, Community health workers and volunteers, NDMA monitors, key community representatives, key partners
<u>What is needed?</u>
<ul style="list-style-type: none">• Graphs drawn on two flip charts using a timeline for two full years in months written out along the bottom (Tools 1a and 1b)• Data for the number of new admissions for SAM, MAM, malaria*, diarrhoea, pneumonia for the last two years (the 24-month period up through last month).
<i>*Malaria – only in endemic areas</i>

1.1. What is this step?

This step first analyses the trends in the caseloads within a HF and then analyses factors that influence access to health care and health seeking behaviour. The focus is on the HF and its catchment area. During this step, stakeholders become more conscious of seasonal trends and risks as well as other factors that influence health care seeking behaviours, known as drivers of caseload or demand for services. This information is then used to look forward to anticipate how these factors are likely to evolve and may impact upon the caseload of IMAM in the months ahead.



1.2. How to do it?

Together at the HF, the surge stakeholders participate in a process to chart information on two flip charts – an events calendar and the trends in malnutrition and morbidity. The charts use a combination of data from HF registers, DHIS data as well as the stakeholders' own knowledge of what is happening in their area. The charts are each developed as follows:

A. Developing the charts

Chart 1, Events and seasonal calendar:

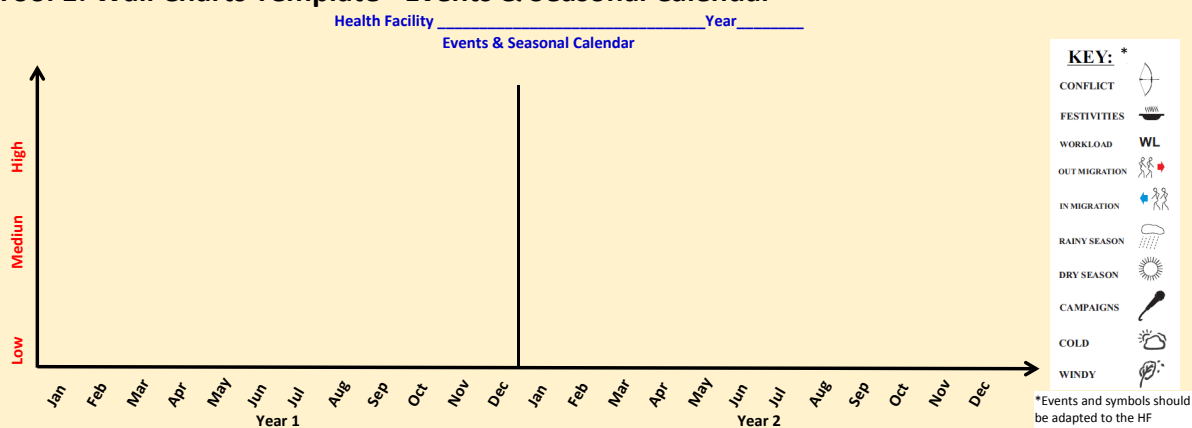
Stakeholders think through anything which has an effect on the HF's malnutrition caseloads. These could be factors that cause the cases of malnutrition to increase or decrease but also factors that impact on people's access to health care or their health seeking behaviour. While malnutrition might

spike in the community, the children may not arrive to the HF (as shown in Figure 4) – consideration should be given to the reasons for this. Some example factors are: rainfall, conflict, population movement, workload among household members, festivals, livestock condition, road conditions, etc. Not all of these factors will likely be important everywhere, but all important ones should be included on the graph for that facility and its catchment area according to when they have occurred during the past two years.

- First, the stakeholders list what these factors are.
- Second, these factors should be written onto the chart by the appropriate month, using the template provided in Tool 1.

The community representatives should also bring in learning on important risks for their community from the Community Managed Disaster Risk Reduction (CMDRR) process, if it has taken place in their area. All population groups and different livelihood zones within their catchment area of the HF should be considered individually since different factors will likely affect whether or not the population uses health services.

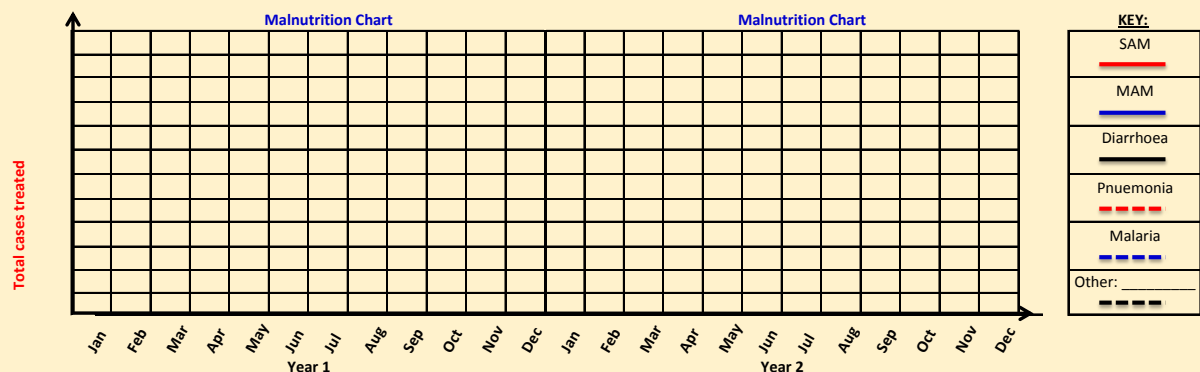
Tool 1: Wall Charts Template - Events & Seasonal Calendar



Nb. The work load plotted here refers to the workload of the children caretakers and not for health facility staffs. The campaigns also refer to political campaigns. Any symbols/ activities used to plot the graphs should not be clearly stated to avoid misinterpretations.

Chart 2, Malnutrition and morbidity trends: Using data either from the HF registers or from district health information system (DHIS), the stakeholders develop a graph of the recorded admissions of children seen at the HF with diarrhoea, pneumonia, malaria (if endemic in the area), SAM and MAM (if MAM activities operational). Tool 2 provides a template that can be used.

Tool 2: Wall Charts Template - Malnutrition and morbidity trends



B. Analysing the charts (past)

With the graphs created, the stakeholders are then taken through a process to analyse the information in them. They are guided by the following questions in the box below. The answers to these will form the foundation for discussions on surge actions in Step 4.

Guiding notes on analysing the charts

Analysing the charts
1. Was there an increase or decrease of SAM and MAM admissions at the time you expected it? a. How did different events (i.e. population/women workload, rain, population movement, festivals, conflict, etc.) impact on admissions for SAM and MAM? b. Were there any health system activities or events that took place during the period that might explain any increases or decreases seen in the graph? (i.e., ICCM, Malezi Bora, staff absences, shortage of key medical or nutritional items, etc.) c. Did MAM increase prior to an increase in SAM or vice versa, or is the pattern different? d. Did diarrhoea, pneumonia or malaria increase prior to an increase in SAM or is the pattern different?
2. Was the scale of the increase/ decrease as much as you expected it to be?
3. How did the increase/ decrease compare to the most recent worst recognised emergency e.g. 2012 drought.
4. Do you find anything unusual/ unexpected in your graphs?
5. Were there times when the health facility had difficulty to manage the SAM and MAM caseloads?

C. Considering the current and upcoming situation

Finally, the last component of the trend and risk analysis involves understanding the current situation. The stakeholders discuss the current situation and how they expect it to develop over the coming months, considering what they have learned from their analysis of the past two years. For example, if in May, June and July of the previous two years, a spike in diarrhoea has been seen that is followed by an increase in SAM cases, instead of waiting for this to happen again, the HF can plan prevention activities for the catchment area in an effort to reduce the number of people affected.

This forecasting should focus on the upcoming three months in order to anticipate and plan in advance for increases or surges that are likely to repeat themselves based on information from the last couple of years. Additionally, as a source of predictive information the SCHMT/CHMT representative should bring additional information available e.g. from NDMA pertaining to the facility catchment area for the food security and nutrition situation. This planning should take place on a monthly basis at the same time as the thresholds are monitored (explained in Step 6).

Step 2. Capacity Review

<u>Step 2 Objectives</u>
<ul style="list-style-type: none">• To reflect on the capacity of the HF to manage IMAM services and highlight strengths and weaknesses• To understand and quantify the HF's daily capacity to manage IMAM services• To provide the health staff with a basis upon which to define thresholds
<u>Who is involved?</u>
Facilitator from the SCHMT, all staff members from the HF, HFMC, Community health workers and volunteers, NDMA monitors, key community representatives, key partners
<u>What is needed?</u>
<ul style="list-style-type: none">• Capacity Review Guide (Tool 3: Health facility capacity assessment tool)• Patient registers

2.1. What is this step?

This step guides the HF staff to undertake a self-review of their capacity generally with an emphasis on IMAM services. The review is done to identify factors that affect appropriate service delivery during normal times with the lens that weaknesses identified will become more important in the event that IMAM caseloads increase. The review is undertaken in two parts, the first focusing on each of the health service building blocks and the second to establish the daily capacity of the HF to manage acute malnutrition.

As the review is carried out mostly by HF staff, it is subjective; however, the participation of the SCHMT and community representatives should add an element of objectivity and verification to the process. Additionally, the involvement of the SCHMT should help to make the review more comparable with the other HFs in the sub-county. These reviews will also be used during the SCHMT's capacity review of themselves to develop a consolidated picture of weaknesses in the sub-county (Part C, Section A, Capacity Review).

Note: The guidance in this section aims to promote the sub-county and HF joint understanding of the capacity of the HF to manage IMAM services and how prepared it is to respond if needs increase. However, this is not intended as a full IMAM capacity assessment e.g. to check if all protocols are implemented appropriately; tools for that purpose are available in the IMAM guidelines, etc.

The capacity review should take into account that IMAM services will likely continue to be provided in a resource constrained environment; therefore, with this in mind, identified capacity gaps and needs should be practical and realistic.

2.2. How to do it?

A. Capacity review by building block

Continuing on from the Trends and Risk Analysis, the stakeholders participate in a guided discussion about their capacity. As a group, the stakeholders should use the guide in Tool 3 (annex 2, pg 57) to debate and gain consensus over the facility's strengths and weaknesses, organised by the WHO building blocks. For this process, if there has been any capacity assessment undertaken at the facility level, such as the OJT assessment, relevant aspects should be brought into the discussion. Refer to annex 1 for a set of questions adapted from the capacity assessment tools of the Kenya Nutrition capacity Development Framework (KCNDF) Operational Guide, which are meant to be a guide to help assess any gaps at the HF in IMAM Service. They should be used to spark discussion and are not meant as an exhaustive tool. This process should be recorded so that the identified needs can be addressed.

The capacity review process should be finalised by summarising the key strengths and weaknesses that have been discussed. If a health facility considers it valuable to use an objective scoring system they should do so and share their experiences during the review process although in the long term integration of the capacity review with existing tools will be considered.

Step 3. Threshold Setting

Step 3 Objectives

- To analyse the daily capacity of health facilities to manage IMAM
- To establish thresholds for the number of new admissions of SAM and MAM cases to indicate four phases, normal, alert, alarm and emergency

Who is involved?

Facilitator from the SCHMT, all staff members from the HF, HFMC, Community Health Workers and Volunteers, NDMA monitors, key community representatives, key partners

What is needed?

- The flip charts developed in Step 1, including the data used to prepare them
- The results of the capacity review
- Any capacity assessments that have been carried out previously of the HF within the last 1 year.

3.1. What is this step?

Threshold setting is a process whereby the surge stakeholders of each individual HF bring together the information from the Trends and Risk Analysis (Step 1) as well as their capacity to handle the workload of patients that they have (Step 2) and consider when they may need help to respond to any increase in demand for IMAM services. Since the capacity of a HF can vary greatly, thresholds are defined by each facility individually with careful consideration of different factors that influence their capacity, i.e. staffing (number and qualification), equipment, the presence of community workers, etc.

Thresholds are set for four phases, starting from a normal situation and increasing to alert, alarm and emergency phase. Descriptive definitions for each phase are provided in Table 1. Given the main support planned is for IMAM, the thresholds are set according to the number of new admissions to the HF for SAM and MAM. The surpassing of thresholds into a higher phase will trigger action to ensure the HF can manage their caseload of SAM & MAM. On the contrary, when crossing a threshold into a lower phase, surge actions will be scaled down, whereby when there is a normal situation, the HF returns to their normal way of functioning. This approach, with action triggered based on the capacity of the HF, is a new perspective which is quite different from when action is triggered based on increased prevalence of malnutrition for the population in a wider geographic or administrative area; these approaches provide complementary information.

Table 1: Description of phases for the Health Facility

Phase	Description of phases for the Health Facility
Normal	When the HF staff can handle their workload and have adequate resources to meet the demand for services. During this phase, there is time to work towards strengthened service delivery, including staff training, as well as staff leave, etc.
Alert	When the HF staff begin to be overstretched due to an increased number of IMAM patients but they can mostly handle the situation by reorganising themselves to focus on key priorities with minimal support from the SCHMT or partners; this phase may entail a slight simplification of procedures aimed at being more efficient. During this phase, the HF should be able to access additional supplies easily from the SCHMT.
Alarm	When the HF staff is overstretched from the increased caseload and requires additional support from the SCHMT and partners in order to appropriately meet the additional demands; this is when reorganising within the HF and mobilisation of the HF's own resources are insufficient to handle the situation. The HF should be able to mobilise resources from the SCHMT for increased supplies, mentoring and communication as well as staff deployment.
Emergency	When the caseload and workload in the HF are beyond the capacity of the staff and they need substantial external support to ensure that a) the HF is functioning at full capacity and b) the population is able to access appropriate services in a timely manner. This is when significant additional human resource, supply chain, infrastructure and equipment is required to provide a quality service. Often this might mean very significant resource inputs from partners.

3.2. How to do it?

3.2.1 Daily capacity to manage IMAM

The stakeholders work through the questions below (Tool 4) to establish the HF's capacity to manage IMAM services. This is done in two ways – first as a calculation which is then verified by the HF's patient registers, demonstrating the reality of what happens on a daily basis.

Tool 4: Daily capacity to manage IMAM

Current level of staffing: How many staff does the facility have? What cadres? With what qualifications/training? Is this sufficient for the typical increased workload during a surge in demand?

Catchment population: What is the population of the catchment area of the HF? Is the level of staffing at the HF generally sufficient to service this size population?

Length of a medical consultation: How long does it take to see one patient on average? Is this the same for all patients or do some take longer? Keep in mind that all children in the IMAM programme receive a full medical check-up as well as an appetite test and any required medical treatment on each visit.

Number of patients that can be seen in a day: This number can be calculated using the above information (number of staff and the length of a medical consultation) combined with the number of consultation hours or pulled out from patient registers. This includes all patients regardless of the reason for the visit, not only those for SAM and MAM. Both methods are explained here.

By Calculation

$$\# \text{ of patients per day} = (\# \text{ of consultation hours less any breaks}^3 \div \text{length of consultation}) \times \# \text{ of staff doing consultations}$$

Example: 2 staff members do medical consultations in a HF where the consultation hours are from 8 am until 12 pm; each medical consultation takes an average of 10 minutes; normally there is a 20 minute break mid-morning from consultations
 $(\# \text{ of consultation hours less breaks} \div \text{length of consultation}) \times \# \text{ of staff doing consultations}$
 $= 3 \text{ hours } 40 \text{ minutes} \div 10 \text{ minutes per consultation} \times 2 \text{ staff}$
 $= 44 \text{ consultations per working day}$

With patient registers: Review the average number of consultations per day for the HF. Is this number consistent throughout the year? Are there months when this is usually higher or lower? How was the workload for the staff to handle during the busier months?

Comparison: Are the results between the patient registers and the calculation similar? If not, discuss why they are different – this will help to understand the facility workload better. The calculation method gives an idea of an ideal but attainable maximum number of patients per day with the HF's existing capacity; the actual number regularly seen is likely to be much lower.

Summary

Based on the review of capacity and the daily patient capacity, consider:

- What workload and IMAM caseload should the HF be able to handle?
- Can it do more than it currently is without being overstretched?
- When would the workload/caseload be **too** much?

3.2.1 Setting thresholds

The stakeholders work through the following topics in Tool 5 to set thresholds with the aim to find appropriate numbers to reflect the above definitions of each phase (Table 1). Some additional data should be prepared in advance of the session, to shorten how long the process takes.

Tool 5: Setting thresholds

A. Average number of new admissions for SAM and MAM per month:

What has been the range of number of new admissions per month over the past years? What has been the average? How has this level of caseload been for the staff to manage?

B. Agree on thresholds for new SAM & MAM admission for each phase:

At this stage, the staff should have a good understanding of the HF's capacity and what number of new admissions will cause them to be overstretched. The stakeholders should discuss and debate what they feel are appropriate thresholds for the HF for each phase – normal, alert, alarm and emergency – for the number of new admissions for SAM and for MAM. They should arrive at a consensus for each threshold.

³³ If you do the calculations in hours, maintain that throughout. And if converted in minutes, maintain that throughout the calculation for consistency and accurate calculations.

C. Validation of thresholds:

Finally, the stakeholders need to validate whether the agreed thresholds are appropriate compared to a standard and objective means of threshold setting. This objective method of calculating thresholds for the low volume load example is based on the findings from evaluation of the Surge Model pilot project, incorporating learning from 14 HFs over a period of 29 months. The evaluation suggested using an approach that is hybrid of the objective and subjective means to set thresholds. See annex 3 for details on how the validation of thresholds should be carried out, while taking note that the calculation should only be used as a guide for validation purposes and is not meant to be used to set thresholds on its own; it is important that threshold setting includes the component of the HF's capacity from Step 2.

Review of thresholds

Since thresholds are a function of HF capacity verses demand for services, that means that whenever there is a change in HF capacity, the set threshold should be reconsidered. Essentially, thresholds should reflect changes in circumstances at the HF level, with staffing changes being particularly important.

On an annual basis at a minimum (possibly as part of the more thorough Annual Surge Review explained in Step 8), thresholds should be reviewed and adjusted as considered appropriate. They should also be reviewed *whenever there is a change in staffing* or when the HF feels that there has been a significant change in their capacity. HF staff should feel confident to decide when they think a review of the thresholds is necessary.

To undertake this review, the HF staff should refresh their capacity review (Step 2) to reflect the current situation. Similarly, they should go through the whole threshold setting process again to adjust anything that has changed, deciding if they still feel that the current thresholds are relevant. If they have had changes, thresholds should be reconsidered and reset as they see appropriate.

While this process can be supported by the SCHMT, the HF In-charge should be able to lead this exercise. However, the SCHMT must be informed of any changes in thresholds.

Step 4. Defining and costing of the surge package

<u>Step 4 Objectives</u>
At all levels (HF, SCHMT, CHMT and above) <ul style="list-style-type: none">To establish actions to be carried out during a normal situation and alert, alarm and emergency phases to ensure that health facilities have the capacity to meet the IMAM needs of their catchment population at all times
At the sub-county level (and for higher levels, see Part C) <ul style="list-style-type: none">To estimate the cost of the surge package at each phase per HF in order for these costs to be budgeted and incorporated in annual and contingency planning processes for the SCHMT, CHMT, NDMA and non-governmental partners
<u>Who is involved?</u>
Facilitator from the SCHMT, all key technical health facility staff, HFMC, CHWS/ CHVs, NDM monitors, key community representatives, key implementing partners
<u>What is needed?</u>
At the health facility <ul style="list-style-type: none">Flip chart from Step 1,Capacity review from Step 2Post it notes or index cards

4.1. What is this step?

This step is a process to define what actions should be undertaken to ensure that the HF has the capacity to respond to the caseload of acute malnutrition at all times, whether during a normal situation or when thresholds are passed into the alert, alarm or emergency phase. The actions that are defined may consist of things that the HF can do themselves or that they need support from other actors, i.e. SCHMT or partners.

Actions are suggested by health facilities and then are finalised at the sub-county level in the form of guidance for actions for each phase. They should reflect the gaps highlighted in the capacity review in each of the building blocks of the health system.

Once guidance for actions has been established, costs for this package must be estimated. This is done for each phase and is estimated as a cost per HF. Many of these costs will be part of routine health and nutrition service delivery, especially IMAM services. Only additional activities should be highlighted for costing i.e. additional cars/fuel, mobile clinics, etc. Afterwards, these actions and costs must be incorporated into HF, SCHMT and CHMT work plans, contingency plans and budgets as well as NDMA contingency plans; these are discussed in Part C, Coordination and Linkages.

Box – Partners support to HSS – activities when the situation is normal

Surge actions listed for a normal situation are actually HSS activities and should be carried out as such. Where partners are supporting the MOH in HSS, the aim should be to put all of these actions in place when times are normal. Only if these are in place will a scale up with minimum external support be possible. The HF capacity review should be used to compare the actual capacity with the capacity required; on the job training (OJT), supportive supervision, training etc. should be designed to fill these gaps and provide ongoing support to the health facilities to reach this minimum standard. The normal period HSS activities should include support to the government health teams to set up, monitor, implement and review the surge component of their roles and responsibilities. In this way, the surge approach can become a sustainable and integral part of the work of the health teams.

4.2. How to do it

Tool 6. Defining surge actions

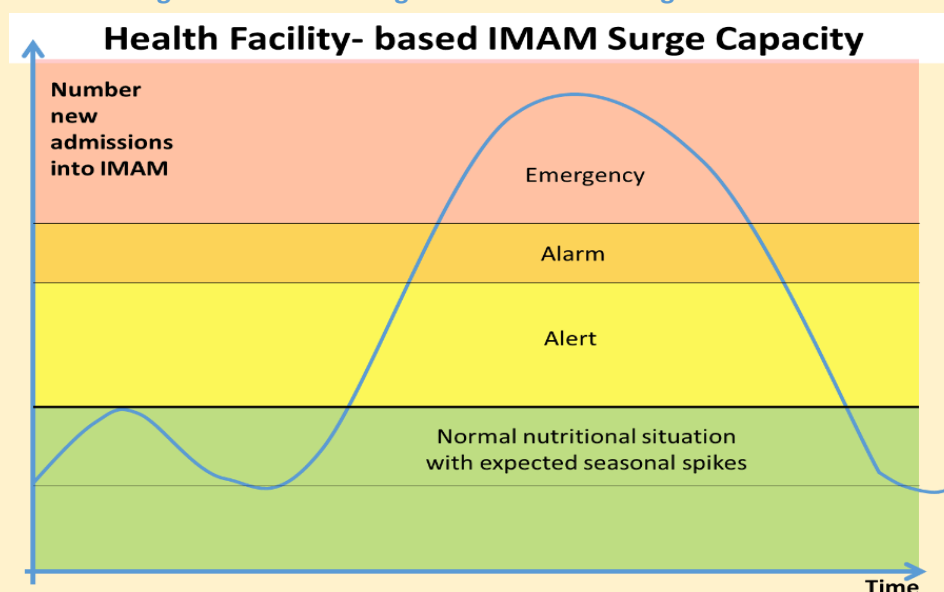
4.2.1. At the Health Facility Level

First, using the flip chart from the work that was carried out in Step 1, the stakeholders recap on what went right and what went wrong during the previous two years when they had increases in the number of SAM and MAM admissions (Step 1, B). They should also review the capacity gaps that were highlighted during Step 2. They then work through the guiding notes below:

Guiding notes for defining surge action

1. Think through and write on small cards the things that should be done to be able to adapt and manage both an increasing IMAM caseload and a deteriorating situation for health and nutrition. When writing these actions, stakeholders should consider:
 - All relevant health system functions (i.e. Service Delivery; Human Resources; Medicines, Supplies, Equipment and Infrastructure; Health Information; Leadership & Governance; Financing; and Community)
 - Specific community level actions
2. Go through these cards and indicate which actions the HF can do themselves and which will require additional funds and, therefore, resource mobilisation.
3. Draw a curve as shown in Figure 5 demonstrating spikes in IMAM admissions.

Figure 5: Curve of surges used to define surge actions



Then, using the action cards, decide which should be carried out in each phase (normal, alert, alarm, emergency), placing them into the respective phase to reflect when they should be carried out. Surge actions should be defined so that there is a trend from a strong capacity building focus during a normal phase towards a higher level of external involvement and support once the nutrition situation deteriorates. An example of a completed curve is shown in annex 3, figure 6 (Surge response curve with surge actions). These actions summarised in figure 7 as key surge actions carried out at different phases

4. The final activity is to summarize this graph into a simple table of the actions according to phase using the format below (Table 2). After the actions are listed out, consider which of them will have cost implications and place an asterisk next to it to indicate that.

Table 2: Summary of suggested actions agreed on according to phase

Phase	Actions
Normal	<ul style="list-style-type: none"> • •
Alert	<ul style="list-style-type: none"> • •
Alarm	<ul style="list-style-type: none"> • •
Emergency	<ul style="list-style-type: none"> • •

* This action has a cost implication

4.2.2: At the Sub-County Level

While all of the work up to this point has been at the HF level, this meeting is at the SCHMT level and brings together all of the HF In-Charges with the SCHMT. The role of this meeting is to agree on a package of surge actions for the sub-county and to cost that package. This package will be ‘activated’ when thresholds are crossed into higher phases and ‘deactivated’ when numbers once again decrease below the established thresholds. The summarised lists from health facilities should be used as the foundation for the HF package of surge actions that will be agreed upon.

Tool 7. Finalising and costing surge actions

1. Finalising the agreed package of surge actions for each phase:

Stakeholders should be split up into groups to discuss the following:

- a. Debate the necessity and merits of each action that the HFs have included; be sure to consider if they are realistic and feasible; also consider if they are placed in the appropriate phase, aiming for a trend from a stronger capacity building focus in a normal phase to more external involvement as the situation deteriorates.
- b. Consider whether additional actions are required.
 - Thinking should focus on each of the health system building blocks to ensure that needs are covered holistically. Table 3 below is a catalogue of examples of potential surge actions that could aid this process.
 - Preparation is often required in order to be able to carry out a surge action immediately when the phase is activated, therefore these activities also need to be planned, including in which phase they will occur.

Once each group has a consolidated and agreed list, these should be combined to come up with a final one – this will act as guidance for the whole sub-county. Since this list forms the package of surge actions, it should be shared with all HFs in the sub-county, preferably in laminated form.

Note: While it is important that this list is comprehensive, it is *more important* that it is realistic and only contains actions that will really be done; it should not be a wish list that keeps the important things from happening.

2. Costing the surge actions for each phase:

The stakeholders should go through the list and indicate with asterisks anything that has an additional cost involved for carrying out the activity; routine costs that are already budgeted for should not be included. For each item that has an additional cost implication, they should write what the costs involve for that activity.

Table 3. Catalogue of examples of potential surge actions for HF-level by building blocks

Catalogue of surge actions for the HF-level (non-exhaustive)	
WHO Health System Building Block	Surge actions (* indicates an additional cost)
Service delivery	<ul style="list-style-type: none"> - Review/redirect patient flow to speed up patient movement and efficiency - Move from weekly to daily outpatient therapeutic services - Give bi-weekly RUTF rations (i.e. fortnightly follow up) - Streamline weekly reporting and simplify weekly anthropometric measures - Ensure prompt referral between OTP, SFP and inpatient services to avoid overcrowding - Introduce ambulance/transport service to inpatient care (*) - Ensure discharge protocols are followed to avoid growing IMAM caseload - Simplify protocols (if reaches emergency phase, e.g. MUAC only admission/discharge)
Community	<ul style="list-style-type: none"> - Increase community volunteers or paid community staff (*) - Increase number of outreach sites/set up mobile clinics to improve access (*) - Increase frequency of follow up of absentees, defaulters, non-responders - Increase regularity of screening within the community
Human Resources	<ul style="list-style-type: none"> - Better plan/ shift staff leave - Extend working hours - Second/transfer staff from Sub-county, provide incentives (*) - Make temporary staff accommodation (partitions, tents, etc.) (*) - Recruit and train staff on temporary basis (*) or engage volunteers - Provide overtime compensation to current staff (*)
Medicines, Supplies, Equipment and Infrastructure	<ul style="list-style-type: none"> - More frequent inventories and stock requests - Use of text messages to facilitate communicating stock needs (*) - Pre-position buffer stocks of therapeutic/supplementary foods and drugs (*) - Expand working space within facility, repair where needed (*) - Transport of supplies (*)
Health Information	<ul style="list-style-type: none"> - Increase frequency of monitoring to fortnightly or weekly (according to phase) - Provide more mobile phone credit for increased communication (*) - On-the-job refresher training on use of reference materials - Produce additional reference materials & job aids (C) for new or temporary staff - Monitor thresholds and communicate when crossed (* – phone credit)
Leadership & governance	<ul style="list-style-type: none"> - Increased communication between HF and SCHMT (point above)

	<ul style="list-style-type: none"> - Conduct more frequent coordination meetings (*) - Increase joint supervision visits & on-the-job training by SCHTM staff (*)
Financing	<ul style="list-style-type: none"> - Additional budget for personnel, stocks, phone credit, transport - Cost each surge action for HF and sub-county (potential cost implication if training needed)

Costing matrix

Finally, with this list, the SCHMT will be able to work through the agreed surge actions and calculate the cost for the surge package per HF for each phase. A surge package costing matrix has been developed to aid with this process and is included Annex 5, with a small example below. In order to strengthen integration and linkages with existing systems, the costing matrix and budget format below was adopted from NDMA contingency plan budgets.

Table 4. Example of Surge package costing matrix

Phase	Proposed Intervention	Activity description	Item	Quantity	Unit cost	Total KShs	Notes
Normal							
Alert							
Alarm							
Emergency							
Grand Total							

These costs should later be incorporated into annual plans as well as sub-county, county and CMDRR contingency plans, as explained in Part C.

Step 5. Formalising Agreements and Commitments

Step 5 Objectives
<ul style="list-style-type: none"> • To ensure that there is confirmed commitment to the surge actions and that there is mutual agreement and understanding of who does what, when and how
Who is involved?
<p><u>SCHMT and Health facilities</u>: HF In-Charges, key focal point for surge for the SCHMT as well as the SCMOH</p> <p><u>CHMT and supporting partners (i.e. NGOs, donors, KRCS)</u>: key focal point for surge for the CHMT as well as CMOH; key focal point for surge from the partner organisation and possibly their senior local manager as well</p>
What is needed?
<ul style="list-style-type: none"> • Established thresholds for each of the health facilities included in the agreement • Agreed surge package for the sub-county

5.1. What is this step?

This step is meant to ensure that all key actors have the same understanding about the package of surge actions, when they will occur and who is responsible for each aspect. It is also to ensure that there is confirmed commitment to this support and that it is both budgeted and funded. The absence of this formalising agreements step can translate into delays in action when a higher phase is activated.

HF Surge actions are:

- Defined for the sub-county
- Agreed in advance
- Formalised action plans
- Budgeted
- Funded

While formalising agreements can take many forms, Standard Operating Procedures (SOP) are normally used for this purpose within the MOH between its various levels (SCHMT/CHMT/National) as well as the contingency plan component of the Annual Work Plan and Budget; between the MOH and NDMA, the NDMA contingency plan is the appropriate mechanism; between the MOH and supporting partners, Memorandum of Understanding (MOU) are usually used and typically at the County level. While some of these may seem unnecessary, it is important that the agreements are captured in writing and are institutionalised so that they do not depend on individuals, particularly in environments where staff turn-over is prevalent.

Within this step, the focus is on the SOP within the MOH system while the NDMA contingency plan as well as that of the MOH Annual Work Plan is discussed in Part C. While support from partners is invaluable and shouldn't be forgotten, the MOU will not be covered within this guide from an HSS perspective – as part of the MOH's role in leadership and governance, they are responsible for the surge approach, that includes deciding what they need support for, arranging that support and incorporating that support into MOUs or partnership agreements. In addition, the content of an MOU would largely be the same as the content covered here for the SOP.

5.2. How to do it?

Since the process to develop and authorise SOPs are part of standard MOH functions, this will not be explained here. This section will only highlight the content that should be included within the SOP to formalise the commitments and agreements that all stakeholders have decided upon.

Content of Standard Operating Procedure

1. Description of surge approach (purpose, objectives)
2. HFs involved
3. Package of surge actions for each phase
4. Roles and responsibilities for each surge action
5. Process of scaling up or scaling down surge actions
6. Mechanisms of communication (for activation/deactivation, reporting, etc.), including the communication tree
7. Time for approval of surge actions
8. Time for fulfilling each surge action once approved and activated
9. Process of revising surge package when required e.g. during the annual review and when there are changes in capacity within a HF
10. Process of how additional funds or resources (e.g. seconded personnel, stock, transport, fuel) will be channelled, who will be in charge of these, how they will be transferred, monitored and audited
11. Process to capture surge package within HF/SCHMT/CHMT/NDMA work plans, annual plans and contingency plans

As annex:

- HF defined thresholds (as annex for ease of updating)
- Monitoring and evaluation framework

Stage 2: The surge approach on a daily basis – real-time monitoring & action

Step 6. Monitoring caseloads against thresholds

<i>Step 6 Objectives</i>
<ul style="list-style-type: none">• To trigger a response in real time as soon as set thresholds are crossed for the number of new admissions for SAM and MAM• To routinely forecast and plan for expected surges over the next few months
<i>Who is involved?</i>
HF staff and the SCHMT Surge Focal Point (to be agreed on e.g. the Sub county nutritionist)
<i>What is needed?</i>
At the health facility <ul style="list-style-type: none">• Current year wall charts• Previous years wall charts (seasonal/events calendar and malnutrition and morbidity chart) At the Sub-county and County level <ul style="list-style-type: none">• Dashboard

6.1. What is this step?

This step is the heart of the surge approach and takes very little time. It involves monitoring the demand for services in real time and paying attention to whether thresholds that have been set are crossed. Staff of the HF keep track and visualise their actual workload/caseload for diarrhoea, pneumonia, malaria (if relevant), MAM and SAM using the data that they report to the HMIS. This data is plotted on a wall chart with the thresholds indicated, enabling them to compare immediately. They also use this opportunity on a monthly basis to review their charts from the previous years to see if they should anticipate any surges in the coming three months and plan for them.

Similarly, the SCHMT and the CHMT keep an eye on the current status of all health facilities a in relation to their thresholds. This serves three purposes:

- a) To allow the SCHMT to have an overall perspective of the situation in the sub-county,
- b) It acts as a check to ensure that action is triggered when thresholds are crossed, and
- c) It guides the SCHMT on where it needs to support and focus its attention.

6.2. How to do it?

A. At the Health Facility Level

There are three key activities for surge that should be done routinely within the HF:

- 1) Monitoring of the thresholds – through the IMAM registers as new admissions arrive and through the wall charts on a monthly basis;
- 2) Monthly planning for the upcoming three months, based on the knowledge of the previous years;
- 3) Reporting of data and/or surge phase.

As a final session during the set up at the HF level, stakeholders should learn how to use both of these methods to monitor the IMAM caseload, plan for the coming period, and what to do when a threshold is crossed (in Step 7) and the guiding notes below will aid this process.

Guiding notes on Monitoring against thresholds - guide

1. Monitoring caseloads against thresholds

Real-time monitoring – IMAM Registration book

As new cases of SAM and MAM are admitted and registered, the person who registers them should compare the number for that child for the month to the thresholds. For this, the thresholds should be visible within the current page of the registration book, possibly as a bookmark. (Alternately, at the start of each new month, a mark could be placed at the rows that would correspond to the thresholds.) As soon as a threshold is crossed for either SAM or MAM, it will be obvious to the HF staff and they will activate surge (Step 7).

Monthly monitoring

The wall charts in Tool 12 are used to monitor the situation on a monthly basis and they should be kept on a wall in a visible location. Note that the symbols used in the key can be changed and should be contextualized.

- Seasonal/events calendar – this is filled in the same way as in Step 1
- Morbidity and Malnutrition graph:
 - A scale must be put on the graph to reflect a range that covers more than the maximum admissions for the illness with highest number of new cases
 - Thresholds should be entered into the table
 - At the end of each month, data for newly admitted children with MAM and SAM, diarrhoea, pneumonia and malaria (if relevant) are entered into the graph.
 - The monthly number of new admissions for SAM and MAM should be compared to the thresholds to see if any have been crossed.
 - As soon as a threshold is crossed for either SAM or MAM, staff members will activate surge, if this has not already been done based on the real-time monitoring with the registration book.

2. Forecasting and Planning for the coming three months

Each month, plotting on the wall chart should be used as an opportunity to review charts from the previous years to see if any surges can be anticipated in the coming three months and planned for. For example, if in May, June and July of the previous two years, a spike in diarrhoea has been seen that is followed by an increase in SAM cases, instead of waiting for this to happen again, the HF staff can plan prevention activities for the catchment area in an effort to reduce the number of people affected.

The forecasting and planning chart at the bottom of Tool 12 should be used for this purpose:

- Forecasting and Planning Chart:
 - HF staff review previous years' charts to look for any recurring patterns of illness
 - Plans are developed for any predicted surges and these activities are written onto the chart during the month when they should be carried out
 - Once the activities are carried out, these can be marked as done on the chart

3. Reporting of Monthly Data and/or Surge Phase

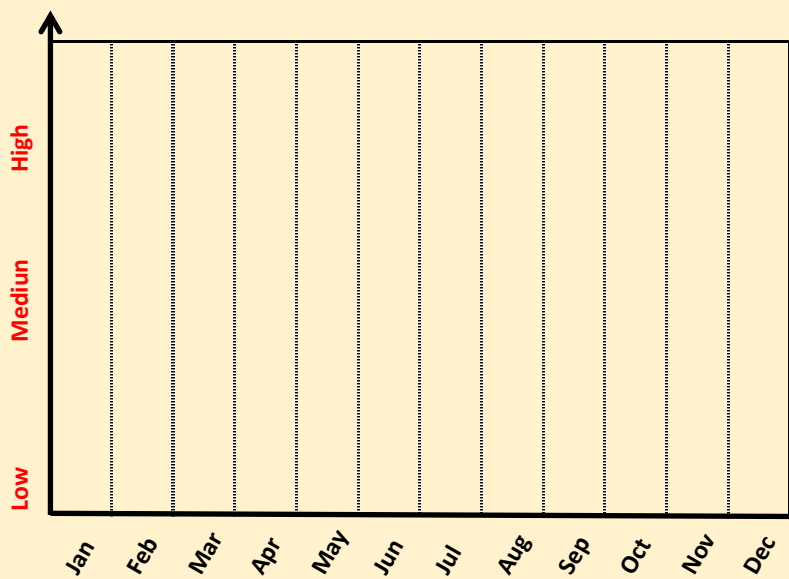
The normal procedure for reporting monthly surge data is the same as the normal IMAM reporting procedures – nothing is different **unless a threshold has been surpassed**. In this case, as explained above, the HF staff will activate surge, which is explain in Step 7.

Tool 8: Monthly monitoring charts



Health Facility _____ Year _____

Seasonal/Events Calendar

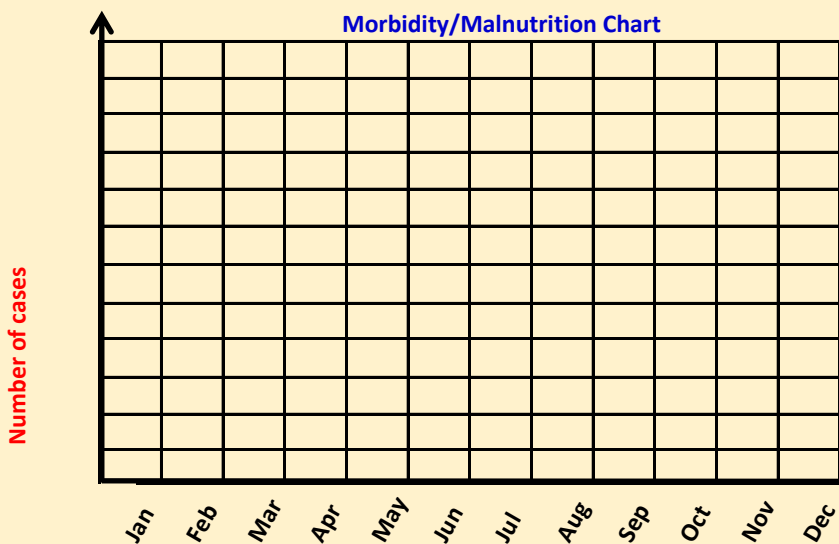


KEY: *

- CONFLICT
- FESTIVITIES
- WORKLOAD **WL**
- OUT MIGRATION
- IN MIGRATION
- RAINY SEASON
- DRY SEASON
- CAMPAIGNS
- COLD
- WINDY

*Events and symbols should be adapted to the HF context.

Morbidity/Malnutrition Chart



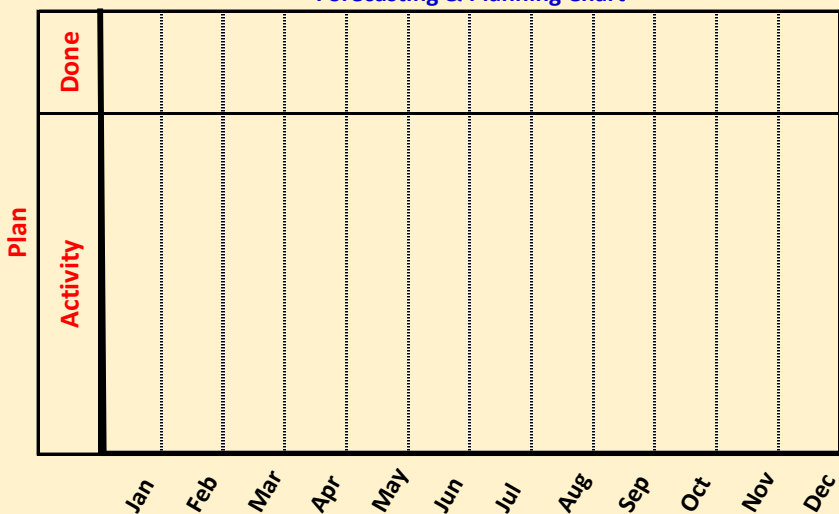
Thresholds

	SAM	MAM
Normal		
Alert		
Alarm		
Emergency		

KEY:

SAM		Pnuemonia	
MAM		Malaria	
Diarrhoea		Kala Azar	

Forecasting & Planning Chart



Step 7. Scaling up & scaling down surge actions

<i>Step 7 Objectives</i>
<ul style="list-style-type: none">• To trigger and scale up the package of surge actions to cope with an increasing number of malnourished children without compromising the quality of the health services for these or any other patients• To deactivate surge actions and systematic phase of down activities as the situation normalises based on thresholds and needs
<i>Who is involved?</i>
HF staff, SCHMT and possibly supporting partners, the CHMT, national MOH, or NDMA depending on the phase triggered
<i>What is needed?</i>
<ul style="list-style-type: none">• Means of communication• HF data on new admissions and information on the situation

7.1. What is this step?

This step encompasses the process to activate and scale up the package of surge actions when admissions for SAM or MAM exceed thresholds as well as to deactivate and scale down the package when the situation normalises. Figure 6 and Figure 7 summarise these processes.

7.2. How to do it?

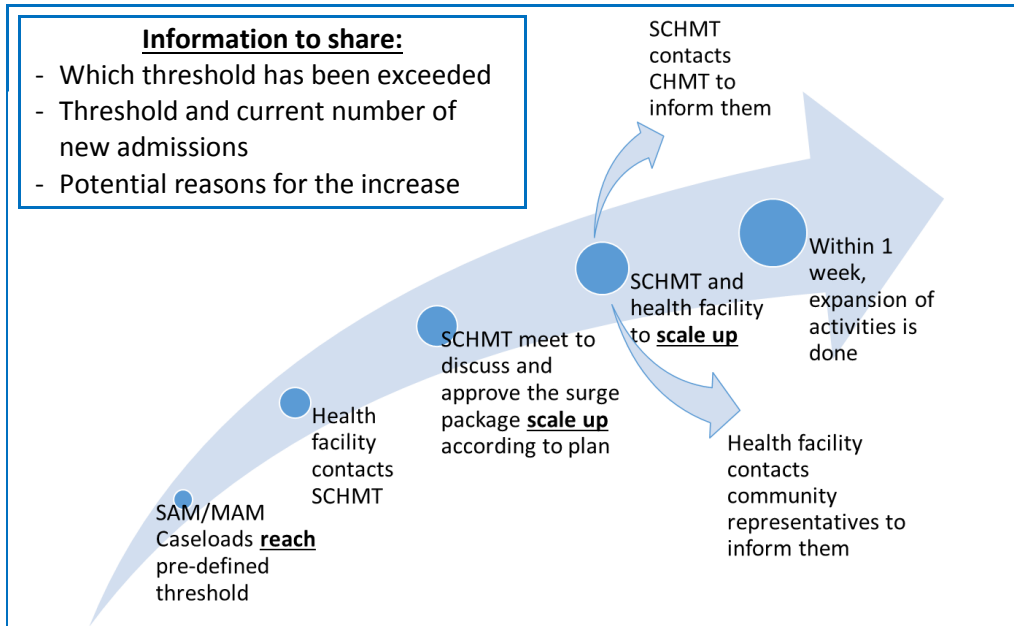
A. At the Health Facility Level

- **Scaling up**

As soon as the health staff notice that a threshold has been crossed for either MAM or SAM, the HF In-Charge should be informed. At this point, the HF staff review the situation quickly and consider potential reasons why there has been an increase in the number of admissions and any immediate steps to respond. The HF In-Charge should then call the SCHMT Focal Point to inform them of the situation and brief them on what is happening, as detailed in Figure 6. Once a decision to scale up has been agreed, the HF will also inform key community representatives.

Communication from the HF to the SCHMT should use the most efficient means available, whether that be via telephone call, SMS or even WhatsApp.

Figure 6: Scaling up mechanism



- **Carrying out surge actions**

With the activation of a higher surge phase, all stakeholders – HF staff, SCHMT, communities, and any supporting partners – should work towards putting in place all of the agreed surge actions for that phase within one week. Everyone’s aim is to cope with an increasing number of IMAM patients without compromising the quality of the health service for these or any other patients.

- **Scaling down**

Whenever the number of new IMAM admissions decreases again and passes into a lower phase, consider the workload of the HFs before taking actions to scale down using the same mechanism as explained for scale up; this is depicted in Figure 7.

During the monthly monitoring of thresholds, the health staff notice that the number of admissions has decreased and has crossed back into a lower phase. At this point, the HF In-Charge should be informed and the HF staff review the situation and consider the following:

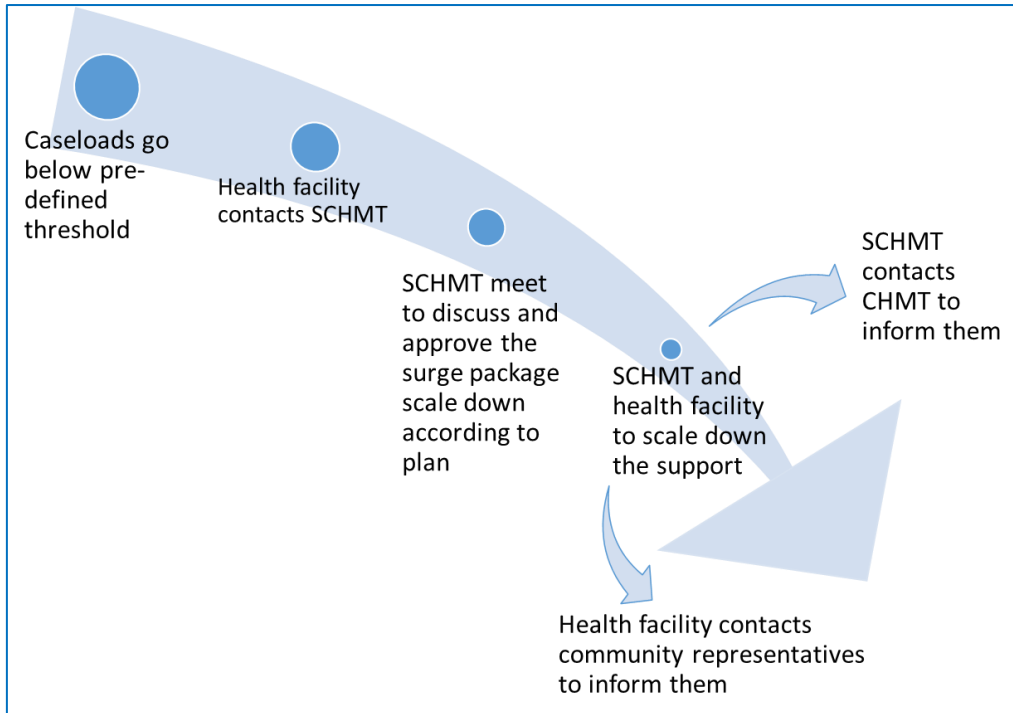
- Is the situation normalizing again? Or could there be obstacles that are impeding the population’s access to the HF, reducing the number of new admissions although acutely malnourished children remain in their communities?
- Is the IMAM *caseload* still higher than the capacity of the HF staff? While the number of new admissions may have reduced, it can take longer before the caseload also returns to normal.

These factors should be considered before automatically scaling down actions taken to cope with the increases.

When the situation has improved, the HF In-Charge should then call the SCHMT Focal Point to inform them of the improving situation and discuss a scale down of the phase. Together, based on the situation, they may decide that a gradual scale down of the surge package is more appropriate. Once there has been a decision to scale down, the community representatives should be informed as well.

Ideally on scale down, if the thresholds were defined well, when the phase returns to normal, any external support should return to an HSS approach.

Figure 7: Scaling down mechanism



Step 8. Reflect – regular review and adaptation of surge activities at the Health Facility

Step 8 Objectives

- To ensure that the surge approach is functioning appropriately and is achieving its purpose to improve the HF's' capacity to manage periodic increases in admissions of acute malnutrition without undermining health services for other illnesses
- To adapt and improve the surge approach, activities and actions to ensure they are responsive to the needs of the population and the capacity of the health system

Who is involved?

HF staff, SCHMT members, any key partners, community representatives and health service users
Other actors potentially involved: CHMT, national MOH, NDMA and KRCS

8.1. What is this step?

This section describes several opportunities to step back and reflect on how the surge approach is going generally in order to make adjustments that will help make sure that the health facility is better able to respond to fluctuations in demand for IMAM services. Reviews ensure that learning is **regularly** incorporated and put into action.

There are 4 main reviews that should take place in order to continuously improve the approach within each facility:

- Routine monitoring
- Annual/ periodic surge review
- Post surge response review
- Review of thresholds – included in Step 3

The first three reviews are covered in this section, while the last one is discussed within Step 3.

8.2. How to do it?

A. Routine monitoring

With the approach still in its early stages, routine monitoring will allow substantial learning and adapting so that the health facility can better handle periods of high demand for IMAM services without undermining its capacity. At this level, the number of time surge response is triggered by a facility should be reviewed.

B. Annual / periodic surge review

As the premise behind the surge approach is that HSS should be the backdrop upon which surge is implemented – in principle, from these HSS efforts, general capacity should be continuously increasing at all levels of the health system, which in turn increase the capacity to respond to surges in caseload. (Refer back to Figure 1: Theory of the surge approach.) These improvements should/could be visible on a yearly basis and they mean that surge thresholds and actions should also evolve accordingly. Annual/ periodic review aims to ensure that this evolution and increasing capacity feeds back into the health facility itself to continually make the system stronger and more resilient.

The annual surge review will take stock of how the surge implementation is progressing – it is a holistic review at each level of the system looking at what has worked and what has not. It should include all key surge aspects, such as: the responses that have taken place, the thresholds and whether they are still appropriate, the linkages and communication with SCHMT. As much as possible this health facility review should be integrated with the standard MoH review process.

C. Post surge response review

After there has been a surge with both scale up and scale down, it is important to take time to review how the response went. This can be done simply as a brief 30-minute meeting held by affected HFs or at a larger meeting involving the SCHMT and CHMT focal points with HF in-charges. The depth of the review can be based on the scale of the situation and the response. It is key that both community representatives (reflect community satisfaction) and any supporting partners are involved.

The following questions in Tool 9 can be used to guide the discussion:

Tool 9: Post surge response review – Key informant interview guide for health facility
<i>General</i>
Consider the following questions in terms of <u>access to IMAM services</u> , <u>quality of care</u> , and <u>coverage</u> to guide the review discussion.
<ol style="list-style-type: none">1. What went well in the scale up and scale down? Which surge actions really helped?2. What did not go well in the scale up and scale down?3. Was the HF able to manage the caseload and workload? Was there any negative impact on other services?4. Did all pre-planned actions that should have taken place actually take place? If not, why not?5. Were thresholds set appropriately or were they too high or too low or too close together?6. Was there appropriate communication and involvement of key stakeholders (HF staff, SCHMT, supporting partners, etc.?)7. Was the community adequately involved and informed?8. Does it seem that most cases of malnourished children received services? Were families satisfied with the services that they received?9. Recommendations of what should be improved before the next surge?
Any key lesson learning should be recorded and used to adapt future surge preparation and response.

Part C: The Surge Approach at the Sub-County and County level

Part B of the operational guideline focuses on the Surge Approach at the Health Facility level. It looks at the HF's ability to manage workload, ensuring that in the event of spikes in the demand for services, there is a system in place to support continuation of service delivery without compromising the quality of services offered.

In Part C, the focus is on the sub-county and county administrative units, with the emphasis on MoH and partners understanding their roles in conducting or supporting the implementation of the 8 steps of the surge approach. Setting up the surge approach at the sub-county and county level has two main aims:

- a. To ensure that the systems at the sub-county and county levels are well prepared to respond to deteriorating nutrition situations and to avoid interruptions in the functioning of the health system.
- b. To integrate surge with other emergency systems, drought contingency planning and disaster risk reduction, including surveillance in place at sub-county and county levels using aggregated information.

Points to consider when setting up surge:

The process of setting up the surge approach at the sub-county and county levels entails thinking through the following:

- a. What it means for sub-county and/or the county to manage and support the health facilities under their jurisdiction (Capacity Review).
- b. How to classify the nutrition situation in the Sub-County and when the response is required (Threshold Setting).
- c. What support would be needed at the sub-county level to manage an increased IMAM caseload (Defining and costing surge actions and linked to contingency plans)?

While adjustment in capacity of individual HF could be supported using real time analysis of admission trends, such approach could quickly prove to be ineffective if large number of health facilities within a county reach alarm or emergency phase at the same time. A county can only be able to timely mobilize adequate supplies or human resource to cope with the demand when large number of facilities are affected if it has a system to anticipate in advance the likelihood of occurrence of such an emergency through analysis and triangulation of early warning information.

Specific objectives

- To help counties and sub-counties review their existing capacity to effectively manage any IMAM surges particularly during periods of high demand, without undermining the capacity and accountability of the health system.
- To link population level early warning information with the facility level surge information to verify the nutrition situation.
- To establish IMAM thresholds at the sub-county level, defining the normal, alert, alarm and emergency surge phases.
- To define surge actions to be carried out in each phase and the costs involved during alarm and emergency phases and the actions linked to their county drought contingency plans.

As the nutrition situation changes, the health management teams and partners change the nature and intensity of support they provide to the health system. As earlier outlined in part B, part C adopts a similar step by step approach in defining the process.

Stage 1: Setting it up - analysing and planning

- Step 1. Trends and risk analysis
- Step 2. Capacity review
- Step 3. Threshold setting
- Step 4. Defining & costing of surge actions
- Step 5. Defining communication arrangements

Stage 2: Real-time monitoring & action

- Step 6. Monitoring against threshold (phases)
- Step 7. Scaling up & scaling down surge actions
- Step 8. Monitoring and evaluation

It is important to note that the workload and workforce at facility level informs the capacity of the HF to manage IMAM caseloads and are the key variables of analysis for Surge. In part C that is not the case, as the HMT is not involved in direct management of IMAM cases (caseloads) as they are at sub-county and county levels.

Step 1: Trends and risk analysis

Step 1 Objectives

- To understand what factors affect demand for services for the population at the SC/ County level
- To understand the previous trends in the prevalence of malnutrition and the respective surges for the sub-county and county
- To reflect on previous actions and how useful, timely and appropriate they were
- To consider and anticipate how the situation will evolve in terms of prevalence of malnutrition and the drivers at the sub-county and county.

Who is involved?

SCHMT, NDMA staff, key partners implementing partners

What is needed?

- Graphs drawn on two flip charts using a timeline for two full years in months written out along the bottom (Tools 1a and 1b)
- Data/ reports on prevalence of acute malnutrition, NDMA surveillance data, DHIS data

1.1. What is this step?

The objective of this step is to analyse the risk factors and trends at the sub-county that will point to a deterioration of nutrition situation using a variety of indicators. This step involves:

- 1) An analysis of admission trends in the context of SAM and MAM caseload reported in the sub-county as from the DHIS records;
- 2) Analysis of drought early warning information such as VCI, MUAC, and milk consumption that are collected, analysed and reported on a monthly basis by NDMA.
- 3) Analysis of prevalence of acute malnutrition using SMART surveys and rapid nutrition assessments, if available.

Deterioration in the vegetation cover, food security and market situation often come months before the actual large scale increase in admissions of malnourished children. Therefore, at the sub-county/county level, the surge approach goes beyond the sum total of facility level surge thresholds to include population level data from surveys, NDMA assessments, as well as other relevant information like meteorological data and other drivers of malnutrition such as conflict and population movements. Such a comprehensive analysis of risks and trends will allow the county to prepare in advance to cope with the predictable increased demand from several facilities.

1.2. How to do it?

At the sub-county/county level, a discussion of the major trends and risk analysis is done once a year, unless the situation demands it to be carried out more often. However, the sub-county could delegate one focal person who updates the risk analysis tables and charts for real time analysis and use on a monthly basis. The trend analysis will identify when malnutrition caseloads are likely to increase due to predictable risk factors. Below is a sample of questions for consideration when doing the risk and trend analysis.

A. RISK ANALYSIS

The SCHMT should identify key risk factors and hazards that contribute to the deterioration of the food security and nutrition situation of the sub-county. Historically, these hazards occur at a specific season of the year. The team should identify what to look for in each month throughout the year as a potential risk that would result in deterioration of the nutrition situation of the sub-county.

Examples of risks and hazards to be considered by SCHMT during risk analysis (non-exhaustive)

- Drought
- Conflict
- Floods
- Epidemics (measles, cholera, malaria, and other epidemics)
- Mass migration/population movement
- Landslide
- Refugee influx affecting access to resources

During the planning exercise, the SCHMT should review the above and other relevant risks. In addition to mentioning the occurrence of the risk, it is important to discuss the likelihood of occurrence as well as the possible months when it is likely to occur. For example, if an area is likely to flood in May, the sub-county should indicate that, so that supplies can be pre-positioned in advance in case roads are closed.

B. TREND ANALYSIS

During the trend analysis, indicators which have an impact at scale are the ones to be monitored including: drought, rainfall (actual county/sub-county measure), proportion of population not having access to health due to various reasons, general food security situation (mainly from an access point), general animal body condition. More contextualised indicators can be added based on the specific county/sub-county situation.

Sample indicators and questions for use in trend analysis⁴

Food security:

- i. Drought status e.g. using Vegetation condition index (VCI) and rainfall patterns.
- ii. What is the general food security situation in terms of availability and access (e.g. pricing for staple foods, milk consumption)?

Health care:

- iii. Proportion of population not having access to health due to either flooding,

⁴ Using the UNICEF conceptual framework on causes of malnutrition, could help inform partners the macro level analysis, although a number of indicators in the framework have been left out in this guideline as getting their trends would be a challenge.

iv. Proportion of population suffering from major outbreaks. E.g. diarrhoea, measles

Note: This list is not exhaustive. More contextualised questions should be added based on the specific county/sub-county situation.

Example of question for trend analysis:

1. Is the trend of the indicators reflected in the number of admissions?
2. Which indicators have the greatest impact on IMAM admissions into the nutrition program?
3. Does the VCI indicator point in the same direction as the other indicators used in risk analysis?
4. Does the VCI indicator point in the same direction as the admission trends?
5. What has been the trend in the last two years and what is the likely situation in the next coming months?

The contextual information above will help in understanding the trends tabulated below. These indicators are tabulated and a graph plotted showing trends, and compared with the total sub-county admissions (total OTP and SFP) into the IMAM program. The total numbers of new admissions for the acutely malnourished children admitted in the IMAM programs are added in the sub-county to capture the situation of the entire sub-county. Information from VCI should also be compared with these trends. The format of the table used below has been proposed for standardised monitoring and comparisons across various sub-counties and counties.

Note: VCI is one of the remotely sensed indicators which reflect early deterioration of environmental condition, offering a three-month lead-time before the nutrition indicators which are described as “late” indicators start to show change upwards or downwards. Thus VCI, which is collected and reported monthly in NDMA surveillance bulletins allows for timely planning and intervention, and can reliably be used for decision making for predictable, drought related surges. See example below for analysis using VCI data from Marsabit County.

Table 5. Example of VCI trend for Marsabit County

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2016												
2015												
2014												
2013												

Key for interpreting VCI

<10:	Extreme vegetation deficit	35-50:	Normal vegetation greenness
10-20:	Severe vegetation deficit	>50:	vegetation greenness above normal
20-35:	moderate vegetation deficit		

The data above show that the last time Marsabit County had a reasonably normal vegetation cover was in 2014 in March to May and in October and November of the same year. The first months of 2015 was characterised by severe and extreme vegetation deficit, followed by moderate vegetation deficit from May all through to December. The highest number of OTP admission was also reported in the first 4 months of 2015, when VCI was at its worst. See Annex 7, for more proposed formats for collecting other recommended indicators.

In trend and risk analysis at the health facility, one looks at facility catchment area, and makes use of admission trends of the past year. However at the SC, one concentrates at the whole sub-county, using admission trends for the sub-county, VCI data and other early warning information

Step 2: Capacity Review

Step 2 Objectives
<ul style="list-style-type: none"> To reflect on the capacity of the capacity of the SC and county to adequately manage IMAM surges, highlighting their strengths and weaknesses To provide the SC/ County with a basis upon which to define thresholds
Who is involved?
SCHMT, NDMA officers, key partners, may be a representative from CHMT
What is needed?
<ul style="list-style-type: none"> Capacity Review guiding notes

2.1. What is this step?

The objective of this step is to reflect on the ability of the sub-county and county to adequately manage IMAM surges. At the county/sub-county level, it is important to think through the capacity required during surges. This review will help the county/sub-county, and the partners, under the leadership of the HMTs to plan how the county will meet the gaps in capacity to deliver services effectively during surges, especially in terms of HR, service delivery, therapeutic supplies and financing options, in order to support the health facilities to respond to IMAM surges. Partners should be part of the capacity review process.

2.2. How to do it:

The capacity review should be done once a year, and linked to the capacity development framework and/or the SWOT analysis which is a standard part of the contingency planning process and updated as necessary for this surge purpose. This is best done during normal, non-emergency phase. It is important that for effective sub-county scale up, the IMAM surge activities are streamlined. Generally the main activities are within the following responsibilities:

- Quality assurance through supervision, monitoring and technical support for HFs
- Training of HF staff
- Provision/distribution of supplies and equipment to HFs
- Planning (quarterly and annual activities, including budgeting) and management of these activities.

Tool 10: capacity review of the SCHMT/CHMT by WHO building blocks

Consider whether the county (or sub-county) has the following in relation to IMAM services:

Supplies:

- Number/proportion of HFs with sufficient protocols, job aids and reporting materials in place, or the availability of these at the county level for immediate distribution when needed.
- The availability of nutrition equipment and materials needed in good working condition.
- The availability and accessibility of adequate medical and therapeutic supplies.

Human Resource:

- What is the proportion of facilities that are under-staffed?
- Proportion of MoH staff at HF, sub county and county (and partners) with experience and training required for providing IMAM services.

Service delivery:

- What are obstacles to better services? Are these obstacles linked to bottlenecks at the county level or elsewhere?
- What proportions of facilities or communities are not reached because facilities are constrained by therapeutic supplies/ access or transport/ CHV extension services/ equipment?
- What proportion of health facilities have adequate space and infrastructure (storage, treatment space, sanitation etc.) necessary to handle the current caseload as well as any potential surges?
- Do the HFs have good linkages with communities in their catchment area?

Financing:

- How easy is it to mobilise resources for the sub-county? I.e. staff, vehicles, medications and supplies, materials, etc.

Information:

- Frequency and clear communication channels with the SCHMT, CHMT and the national bodies?
- Analysis/use of data coming from the HFs during normal times - is it done? Does the SCHMT/CHMT have the technical capacity or time for this?
- Proportion of HFs at sub-county/county prone to significant increases in SAM and MAM admissions.

Leadership and Governance:

- Who are partners working in nutrition in the sub-county that the MoH can collaborate with and what is their capacity?
- Can the HFs and HMTs access support when needed urgently?
- How is the staffing of the CHMT/SCHMT? Do they have sufficient to do their normal work? Would it be sufficient when there are many HFs experiencing surges?
- Coordination mechanisms already in place or need to be set up? Leadership skills to do this? Finances (or mechanism) for this?
- Does the CHMT/SCHMT have appropriate infrastructure/logistics to support many 'surging' HFs? i.e. space to preposition supplies (particularly if areas get cut off), vehicles (fuel) to go more regularly to HFs

Summary of HFs' capacity and Implications for the SCHMT and key partners

SCHMT to list all of the HFs within the sub-county, giving a summary of each one in terms of their ability to manage IMAM during normal times as well as their likelihood of surges. This information should be brought in from the HF capacity review in Part B. Applying an overall score to each HF (from 1 to 10, with 1=Not operational/major gaps through to 10=Operating well/no gaps), can be useful, but only if it the team finds it helpful. The purpose of bringing in the HF capacity review during the SCHMT review is to understand the common issues arising from the facilities within the sub-county. The weaknesses identified are factors that require strengthening during normal, non-emergency phases through HSS activities or else they could hinder effective scale up during surges.

NB: Capacity review at the health facility, mainly focuses on workload of the health workforce, in addition other HSS building blocks needed to manage increased caseload: However the focuses is on the overall capacity of the sub-county to handle the increased demand in part B.

Step 3: Threshold Setting

Step 3: Objectives
<ul style="list-style-type: none"> To reflect on the capacity of the sub county to manage IMAM services, highlighting their strengths and weaknesses To understand and quantify the Sub county capacity to manage IMAM surges To provide the health management staff, NDMA and partners with a basis upon which to define thresholds
Who is involved?
SCHMT, NDMA county information officers at sub county, key implementing partners
What is needed?
<ul style="list-style-type: none"> Capacity Review from step 2 Any capacity assessments of the health sector that have been carried out previously of the SC, County, or partners like NDMA

3.1. What is this step?

The objective of this step is to establish sub-county level thresholds based on the proportion of health facilities that have surpassed their ability to manage their surge as per the respective four phases: normal, alert, alarm and emergency. Although in Part B, threshold setting is based on capacity and workload of health facilities, at sub-county level, threshold setting goes beyond workload as the health management teams are not directly managing malnutrition cases and define to the extent to which the sub-county are stretched and need county level support. At this level, setting of thresholds considers sub-county level admission numbers, and other early warning information from NDMA for triangulation and verification to indicate whether the nutrition situation at the population level is deteriorating or improving. This will improve on the timely prediction and response to predictable surges.

3.2. How to do it?

When a significant proportion of health facilities within a sub-county or county are noted to be scaling up, this is likely to be an indication of a deteriorating nutrition situation for the population, one that may require a greater, more coordinated response. It will be important that each sub-county and county pre-define and agree on what significant proportion increase is. For this guideline, <25% increase is suggested to be normal, and these ranges will be tested and adopted with experience. Therefore, when a sub-county crosses its own thresholds, or likewise the county, there are procedures already defined to verify the situation using external (by other stakeholders) surveillance information such as VCI, MUAC, and SMART surveys (if available).

Table 6 below defines the Surge phase classification as described in Part B of this guideline. On a monthly basis, the HMT should plot how many HFs are in certain phases and the percentage calculated to get the overall phase classification where the sub-county falls in column B.

Table 6: Description of phases for sub-county and county level

Phase	Proportion of facilities reporting to be in alarm or/ and emergency phase	PLUS	VCI	NDMA drought phase	SMART Survey GAM rates
A	B		C	D	E
Normal	<25% of Health Facilities	PLUS	>35	Normal	<10%
Alert	25 – 49 % of Health facilities		20 - 35	Alert	10 – 15%
Alarm	50 - 69% of Health facilities		10 - 19	Alarm	>15%
Emergency	≥70 % of Health facilities		<10	Emergency	≥20%

Decision rule for classifying county/sub-counties surge thresholds:

Scenario 1: If sub-county falls in the alarm or emergency phase according to column B, then the sub-county in question is overwhelmed and needs additional support to manage the increased caseload in the sub-county. This also shows a widespread deterioration of the nutrition situation in the sub-county. In such cases, column B can be used as standalone criteria to classify the situation of the sub-county even if the other variables in the rest of the columns are not yet showing alarm or emergency.

Scenario 2: When the sub-county is either at normal or alert level according to column B, yet columns C, and D are either at alarm or emergency, the decision for overall classification should be classified as alert. This might indicate two things; the coverage of services are low and the facility data doesn't reflect the real situation or the situation is deteriorating but has not resulted in an increased caseload and early action is required. Sub-county wide "Alert" classification should trigger mass screening in catchment of facilities which reported alarm or emergency. If there are communities far from access to services, outreach should also be supported. These enhanced community activities are expected to change column B to a higher level if the reason it remained low is because of poor access and utilization of services.

Scenario 3: if there is a recent nutrition survey within the last 3 months, it can be used as standalone criteria. In this case, review the status of column B and E, and decide the overall classification to be the worse of the two. For example, if column B is in Alarm and column E is in emergency, the overall score is emergency.

Note:

- 1) The SCHMT may review and adjust thresholds set for column B depending on the context of the sub-county and the number of facilities using surge approach. The SCHMT should aim to roll out Surge Approach to all facilities so that the approach is used to monitor and support all facilities equitably.
- 2) Drought contingency fund is usually accessed when a county is at Alarm or Emergency phase. However, with this guideline, sub-counties should be able to access the funds within 48 hours if scenario 1 is met.
- 3) In addition to biophysical indicators, (VCI) and nutrition indicators (MUAC), NDMA drought phases uses a wide range of social economic indicators that affect food availability, access and utilisation, including milk production and consumption, households accessing water, livestock migration patterns, livestock body conditions, livestock deaths, percent of crop area planted as well as coping strategy index. Therefore using the NDMA phase classification, column D, is an important, holistic approach for threshold monitoring and verification.
- 4) SMART surveys should not be a compulsory requirement where surge is implemented, but prioritised in the high intensity counties which are characterised with frequent, predictable drought cycles. The SMART surveys used for phase classification in this table should be those done within three months as the situation can significantly change with a longer duration.

As mentioned above, the process of setting thresholds should be contextualised, reflecting when the sub-counties (and county) are overstretched. Each SCHMT, working in liaison with the CHMT and the county nutrition technical forum (CHNT) will need to pilot thresholds that they have set to assess their appropriateness. Therefore, it is important that this step and process is regularly reviewed and adjusted before the SCHMT can feel confident of the thresholds set for the sub county.

Threshold setting at the health facility is based on the capacity of the health facility to manage caseload at health facility. However at the sub county, it is based on combination of additional population based indicators such as Proportion of facilities surpassing alarm or emergency phase, VCI, NDMA drought phase and SMART surveys if done in the preceding three months

Step 4: Defining and costing Surge Actions

<i>Step 4 Objectives</i>
<p>At all levels (SCHMT and CHMT)</p> <ul style="list-style-type: none"> To establish actions to be carried out during a normal situation and alert, alarm and emergency phases to ensure that the sub county and county have the capacity to meet the IMAM needs of their catchment population at all times To estimate the cost of the surge package at each phase per HF in order for these costs to be budgeted and incorporated in annual and contingency planning processes for the SCHMT, CHMT, NDMA and non-governmental partners
<i>Who is involved?</i>
All SCHMT members, HF in charge, a representative from CHMT for Sub county costing, key implementing partners
<i>What is needed?</i>
<ul style="list-style-type: none"> Flip chart from Step 1 Capacity review from Step 2 Post it notes or index cards Sheet to explain each of the health system building blocks (Annex 1) HF summary sheets of suggested surge package

4.1. What is this step?

The objective of step 4 is to establish actions to be carried out during each of the phases and the costs of additional actions linked to IMAM scale up and to ensure that sub-county and counties have the capacity to meet the surge needs. To define surge actions, the HMT and county/sub-county stakeholders must refer back to their capacity reviews in step 2. The HMT leads the consultative discussions to define and cost actions (the latter being done mainly by SCHMT) to be carried out during the normal, alert, alarm and emergency phases. The team should discuss and agree what actions will be carried out in each phase, structuring the actions around each of the Health System Building Blocks for a holistic approach. The list of actions is also called the Surge Package.

4.2. How to do it?

Tool 11. Guiding notes for defining & costing Surge Actions for the SCHMT/CHMT
<p><i>1. Define actions for a normal situation</i></p> <p>Considering the strengths, weaknesses and opportunities highlighted in the capacity review, the partners should clearly outline what actions should be carried out during a normal situation to ensure that the county/sub-county is in the strongest position possible before any increase in IMAM cases. Any weaknesses that were highlighted should be addressed during normal times. Some of the key areas that should be in place during normal times are directly related, but not limited to surge.</p>
<p><i>2. Define surge actions for Alert, Alarm and Emergency Phases</i></p> <p>Using both the work done in the capacity review as well as the defined surge package example below, consider the following questions to define actions that should be carried out at each phase:</p> <ol style="list-style-type: none"> What will be the additional requirements from the county and sub-county when many HFs are either in Alarm or Emergency phase? What are the financial options available to counties/sub-counties during alarm and emergency phases? Is the process of mobilising and accessing these resources, especially funds, during emergency from the Drought Contingency Fund (DCF), NGO and UN partners efficient? <p>An example of defined sub county surge actions for each phase has been included in the box below</p>

An example of defined surge actions: Surge Package at each surge/drought Phases has been included in Annex 9.

Costing of the surge actions

Facility level surge costing is done at sub-county level, and sub-county level surge costing is done by the county. The county-level surge costs should be linked with the MOH AWP, and the county contingency planning process.

With the list of surge actions per phase in place, the team should go through and decide which actions have an additional cost involved to undertake them. These are the additional costs which are needed in scaling up IMAM services, especially in Alarm and Emergency phases. The costed actions should be marked in the list by an asterisk. A surge package costing matrix has been developed to aid with this process and is included in Annex 5.

Defining and costing surge actions for health facilities is done at sub-county level for all facility surge plans in discussion with facilities while the one done at county level for all sub-counties in discussion with sub-counties, and linked with the county contingency plan and NDMA is the SC level surge.

Step 5: Defining communication arrangements and commitments to trigger scale up/down response

<u>Step 5 Objectives</u>
<ul style="list-style-type: none"> To ensure that there is confirmed commitment to the surge actions and that there is mutual agreement and understanding of who does what, when and how
<u>Who is involved?</u>
<p><u>SCHMT and Health facilities:</u> HF In-Charges, key focal point for surge for the SCHMT as well as the SCMOH</p> <p><u>CHMT and supporting partners (i.e. NGOs, donors, KRCS):</u> key focal point for surge for the CHMT as well as CMOH; key focal point for surge from the partner organisation and possibly their senior local manager as well</p>
<u>What is needed?</u>
<ul style="list-style-type: none"> Established thresholds for each of the health facilities included in the agreement Agreed surge package for the sub-county

5.1. What is this step?

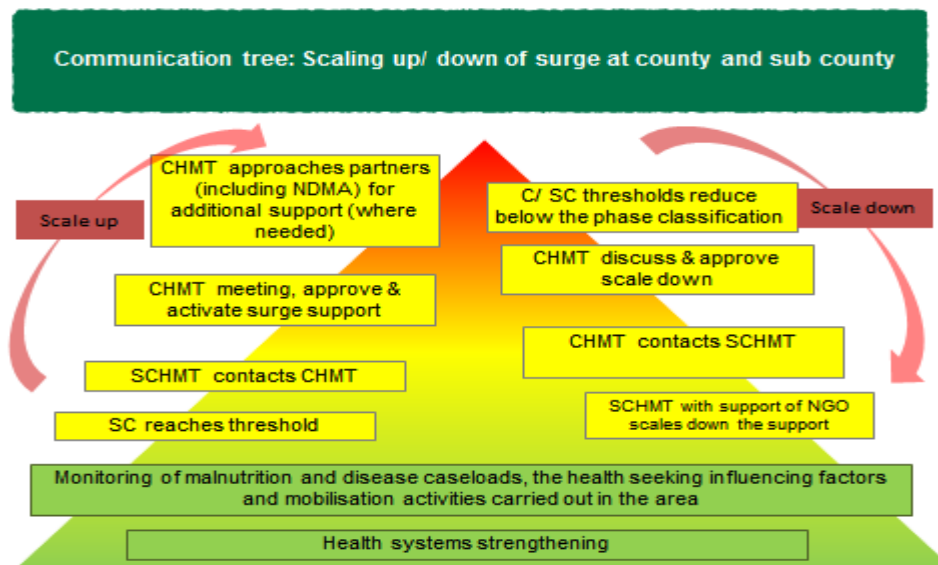
The objective of step 5 is to ensure that there is a clear communication channel and mutual, formal, (where applicable), agreement and understanding of who does what, when and how, by all the stakeholders involved in the surge at all levels. During the normal phase, communication is mainly between sub-county and health facilities on surpassing thresholds, while during alert, alarm and emergency phase, there is intensified communication between the facilities and SCHMT as well as additional communications between sub-county, county, NDMA and other stakeholders.

5.2. How to do it?

The sub-county should delegate one focal person who on a monthly basis updates the dashboard as well as the risk analysis. Once they surpass the thresholds, the focal person communicates to the whole SCHMT team who convenes a meeting to discuss the situation; the SCMOH would then communicate to the county focal person who then informs the CHMT of the development that sits to

trigger the support. The communication goes back in the same channel to the SCHMT. This is the case again when the situation goes back to normal. This has been presented in the flow chart below.

Figure 8: Communication tree during scale up and scale down



It is important that commitments and communication channels with partners are formally clarified and documented to ensure each party has the same, clear understanding of their expected roles and responsibilities for the various surge phases. At the county level, formalising commitments with NGOs will be in the form of MoUs with the county CHMT, signed with the county executive committee member for health. At sub-county level, no formal agreements are envisioned as the operations are within different inter-governmental functions but Standard Operating Procedures, SOPs (which are within the approved work plan) are essential. These SOPs are necessary for commitments between:

- i. HF & SCHMT
- ii. SCHMT & CHMT
- iii. CHMT & National level
- iv. National level & NDMA

Defining communication arrangements at the health centre means defining communication between health facilities and SCHMT. However at the higher level, it translates to clarifying communication channels between sub-county and county

Step 6: Monitoring the nutrition situation (phases) at the sub-county and county level against the threshold

<i>Step 6 Objectives</i>
<ul style="list-style-type: none">• To trigger a response in real time as soon as set thresholds are crossed for the nutrition situation• To routinely forecast and plan for expected surges over the next few months
<i>Who is involved?</i>
<ul style="list-style-type: none">• SCHMT Surge Focal Point (e.g. the Sub county nutritionist) , Key implementing partners
<i>What is needed?</i>
<ul style="list-style-type: none">• Dashboard

6.1. What is this step?

The objective of step 6 is to monitor the evolving nutrition situation and phase classification based on Table 8 so as to trigger the correct response in real time at county and sub-county level. As partners continue with the interventions, the situation is monitored on a continuous basis. At this point, the phase monitoring should reflect and contextualise all that is happening in the entire sub-county on a continuous basis and intensified when the phase is at alarm or emergency. Both Surge and the NDMA phase classification are important components of monitoring the evolving nutrition situation, offering an opportunity for continuous monitoring of the situation and appropriate timely actions, hence minimising opportunities for future regrets.

6.2. How to do it?

CHMT and SCHMT will monitor the IMAM admission trends in order to calculate the proportion of health facilities that have surpassed the county/sub-county phase classification to enable the management teams to verify the changes in phases. Data will be entered into a dashboard on a monthly basis for real time decision making. This dashboard is used for two main reasons:

- To help visually and quickly identify the proportion of health facilities, (as well as sub-counties and counties) with deteriorating nutrition situation (i.e. in alert, alarm or in emergency phase).
- To provide stakeholders with quantitative basis upon which to define and verify sub-county (or county) level phase classification by analysing months or/and geographical areas with the greatest risks of surges.

At the Sub county level, threshold monitoring is done using a dashboard – an excel matrix that allows the SCHMT to monitor the phases of each of the HFs in their sub-county as well as their own thresholds (the latter is explained in Part C). On a monthly basis, as soon as the SCHMT enters the data from HFs into the matrix, the dashboard automatically compares the monthly admissions to the HFs' set thresholds and highlights each HF's phase in colour.

The electronic dashboard is included in Tool 13 (Annex 6), while an example of the dashboard and monthly monitoring is included in Table 7.

Table 7: Example Electronic Dashboard

Health Facility		Alert Threshold	Alarm Threshold	Emergency Threshold	# new admissions	Jan Phase for SAM & MAM	HF IMAM Phase
Name of HF 1	SAM	10	15	20	10	Alert	1
	MAM	20	30	36	16	Normal	
Name of HF 2	SAM	8	13	18	7	Normal	0
	MAM	16	26	36	4	Normal	
Name of HF 3	SAM	11	16	21	9	Normal	0
	MAM	21	26	31	13	Normal	
Name of HF 4	SAM	6	11	16	8	Alert	1
	MAM	11	16	26	12	Alert	
Name of HF 5	SAM	11	16	26	17	Alarm	2
	MAM	21	31	36	27	Alert	

In analysing the number of health facilities, and sub-counties surpassing the set phases for alarm or emergency, the SCHMT will plot the numbers by month in the colour coded dashboard.

Table 8: Sub-county dashboard by month

Phase of Nutrition situation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
% of facilities in Normal												
% of facilities in Alert												
% of facilities in Alarm												
% of facilities in Emergency												

Monitoring the nutrition situation against threshold at health facility level means monitor changes in caseload to see if it reaches any of the set thresholds. At the SC level, monitoring involves a combination of indicators in the threshold setting step to see if the sub-county surpasses any threshold

Step 7: Scaling down surge actions

Step 7 Objectives

- To trigger and implement a scale up or scale down response in real time as soon as set Sub county thresholds are surpassed.
- To routinely forecast and plan for expected scale up and/ or scale down

Who is involved?

SCHMT, CHMT, NDMA, relevant implementing partners

What is needed?

- Figure 8 drawn on a flipchart or in their Operation guide.

7.1 What is this step?

This step outlines when to scale down surge actions due to the improving nutrition situation as reflected by decreasing number of health facilities in elevated phases. It is the process of deactivating

surge actions and systematically phasing down activities as the situation normalises based on the set phases. When the county/sub-county crosses a phase either during scaling up or scaling down, the process is the same as it is for the HF level for this step, only that the HFs will contact the SCHMT, who then contact the CHMT for the sub-county and county level respectively. Refer to Figure 8 which illustrates the scaling up, scaling down mechanisms and communication tree in step 5 above.

7.2 How to do it?

At the Sub-County Level, When the SCHMT Focal Point receives a call from the HF, either for scale up or scale down, the SCHMT discusses the issue during routine or a specially called SCHMT meeting.

- For scale up, they discuss the situation, confirm activation of the surge package and establish next steps to put in place the actions that have been agreed in Step 4. Actions should happen quickly – within one week of activation.
- For deactivation, the SCHMT similarly meets to approve the systematic scale down and plans accordingly to revert back to the activities for the lower phase. Depending on the situation, together with the HF In-Charge, they may decide that the scale down will be a gradual process.
- The SCHMT should also ensure that the CHMT is informed of either a surge activation or deactivation.

Main differences between facility level surge and Sub county level surge

The table below summarises the differences which have already been highlighted in each of the steps below:

Table 9: Comparison process steps and their differences among facility and community level surge

Factor	Facility level surge	Sub-county/county level surge
Trend and risk analysis	Looks at facility catchment area, makes use of admission trends of the past year	Looks at the whole sub-county; admission trends for the sub-county; uses VCI and other early warning information
Capacity review	Mainly focuses on workload of the health workforce at health facility, in addition other HSS building blocks needed to manage increased caseload: financial capacity to support surge needs of facility, therapeutic supplies, information system & service delivery	Focuses on the overall capacity of the sub-county to handle the increased demand: including analysis of staffing levels by facility, financial capacity to support surge needs of facility, warehousing capacity, information system; and SCHMT capacity to lead and coordinate surge response effectively
Threshold setting	Based on capacity to manage caseload at health facility	Based on combination of: <ul style="list-style-type: none"> • Proportion of facilities surpassing alarm or emergency phase • VCI • NDMA drought phase • SMART surveys if done in the preceding three months
Defining and costing surge actions	Done at sub-county level for all facility surge plans in discussion with facilities	Done at county level for all sub-counties in discussion with sub-counties, and linked with the county contingency plan and NDMA
Defining communication arrangements	Defines communication between health facilities and SCHMT	Defines communication between sub-county and county
Monitoring against threshold	Monitor changes in caseload to see if it reaches any of the set thresholds	Monitor a combination of indicators in the threshold setting step to see if the sub-county surpasses any threshold

Step 8: Evaluating the Surge at sub-county, county, and national level

Step 8 Objectives

- To ensure that the surge approach is functioning appropriately and is achieving its purpose to improve the sub county, county and national capacity to manage periodic IMAM surges
- To adapt and improve the surge approach, activities and actions to ensure they are responsive to the needs of the population and the capacity of the health system

Who is involved?

HMT members t sub county, county and national levels, any key partners at all levels, community representatives and health service users

Other actors potentially involved: CHMT, national MOH, NDMA, KRCS and independent consultants

8.1. What is this step?

The objective of county and national level monitoring and evaluating surge is to compare and learn from the experiences of different counties and partners for purposes of strengthening the approach. Although the effectiveness of the surge approach has been shown in a number of pilot projects based on both internal and external evaluations, it is important that continuous, periodic evaluations are planned to strengthen regular monitoring and for continued learning with the rolling out of the surge scale. Such evaluations could be done by the health system itself if these will not undermine ongoing health system strengthening efforts; in addition, whenever possible more holistic, external evaluations are recommended. The M&E of the surge approach should also minimize collecting standalone indicators. Use of existing DHIS and NDMA data sources is important and will strengthen the routine monitoring processes at the facility and higher administrative levels.

8.2. How to do it?

Several opportunities to step back and review on how the surge approach is being implemented in the country exist.

There are 3 main reviews that should take place in order to continuously improve the approach:

- Routine monitoring and periodic evaluation
- Annual surge review
- Post surge response review

A. Routine monitoring and periodic evaluation

A surge monitoring and evaluation framework has been developed in which there are two separate components, one lays out specific indicators for routine monitoring while the other focuses on indicators for periodic, in depth evaluation. With the approach still in its early stages, together these tools will allow substantial learning and adapting so that the health system can better handle periods of high demand for IMAM services without undermining its capacity. This framework is included in Tool 14 (Annex 7), while the list of indicators is included in table 10.

Note: The intention of monitoring and evaluating surge is to **complement** the M&E of IMAM services, not to duplicate these efforts. Similarly, indicators should come as much as possible from existing sources.

Tool 14: Monitoring & Evaluating Surge at the sub-county/ county

Table 10: Overall Surge Monitoring & Evaluation Indicators

Monitoring Indicators	
1	Number of facilities in a sub county/ county
2	Number of facilities implementing surge
3	Number of facilities that have surpassed threshold
4	Number of facilities that have triggered surge response
5	Number of sub-counties that have surpassed threshold
6	Number of sub-counties that have triggered surge response
7	Number of time surge response is triggered
8	Number (& proportion) of functional community units
Evaluation Indicators	
1	
2	

B. Annual surge review

As the premise behind the surge approach is that HSS should be the backdrop upon which surge is implemented – in principle, from these HSS efforts, general capacity should continuously increase at all levels of the health system, which in turn increases the capacity to respond to surges in caseload. (Refer back to Figure 1: Theory of the surge approach.) These improvements should/could be visible on a yearly basis and they mean that surge thresholds and actions should also evolve accordingly. This review aims to ensure that this evolution and increasing capacity feeds back into the system itself to continually make the system stronger and more resilient.

The annual surge review will take stock of how the surge implementation is progressing – it is a holistic review at each level of the system looking at what has worked and what has not. It should include all key surge aspects, such as: the responses that have taken place, the thresholds and whether they are still appropriate, the linkages and communication between levels, etc. Since the process of doing annual reviews is part of standard MOH functions, this will not be explained here; aspects to include in this review are highlighted within the monitoring and evaluation framework.

C. Post surge response review

After there has been a surge with both scale up and scale down, it is important to take time to review how the response went. This can be done simply as a brief 30-minute meeting held by affected HFs or at a larger meeting involving the SCHMT and CHMT focal points with HF in-charges. The depth of the review can be based on the scale of the situation and the response. It is key that both community representatives (reflect community satisfaction) and any supporting partners are involved.

The following questions in Tool 12 can be used to guide the discussion:

Tool 12: Post surge response review – Key informant interview guide for SCHMT and key implementing partners

General

Consider the following questions in terms of access to IMAM services, quality of care, and coverage to guide the review discussion.

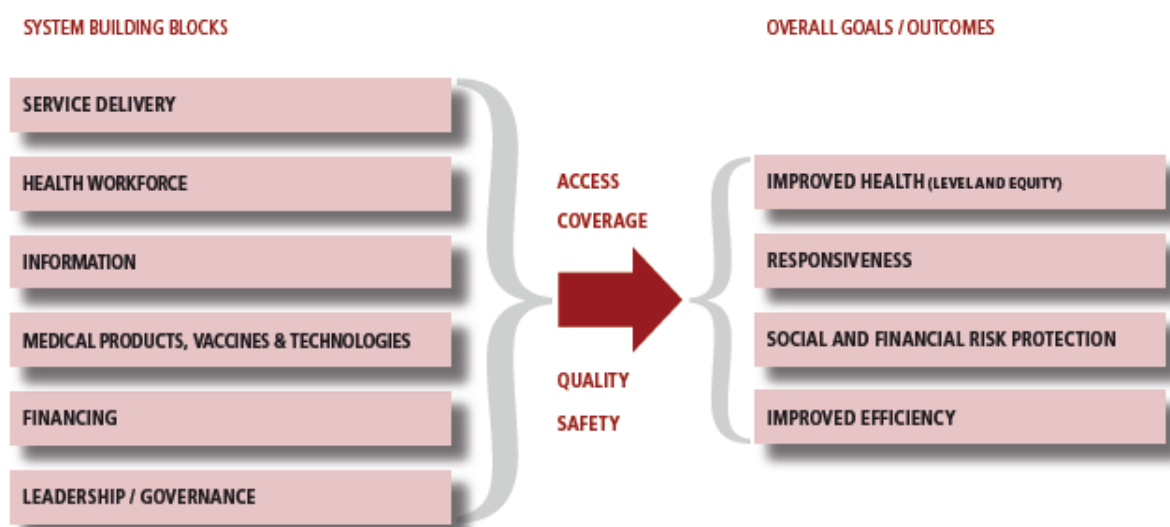
1. What went well in the scale up and scale down in this sub county? Which surge actions really helped?
2. What did not go well in the scale up and scale down?
3. Was the Sub county able to manage the surge? Was there any negative impact on other services?
4. Did all pre-planned actions that should have taken place actually take place? If not, why not?
5. Were thresholds set appropriately or were they too high or too low or too close together?
6. Was there appropriate communication and involvement of key stakeholders (HF staff, SCHMT, CHMT, supporting partners, etc.?)
7. Was the community adequately involved and informed?
8. Does it seem that most cases of malnourished children received services throughout the sub county? Were families satisfied with the services that they received?
9. Recommendations of what should be improved before the next surge?

Any key lesson learning should be recorded and used to adapt future surge preparation and response.

Annexes

Annex 1: WHO Health System building blocks explanation sheet

THE WHO HEALTH SYSTEM FRAMEWORK



THE SIX BUILDING BLOCKS OF A HEALTH SYSTEM: AIMS AND DESIRABLE ATTRIBUTES

- Good **health services** are those which **deliver** effective, safe, quality personal and non-personal health interventions to those who need them, when and where needed, with minimum waste of resources.
- A well-performing **health workforce** is one which works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances. I.e. There are sufficient numbers and mix of staff, fairly distributed; they are competent, responsive and productive.
- A well-functioning **health information system** is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health systems performance and health status.
- A well-functioning health system ensures equitable access to essential **medical products, vaccines and technologies** of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.
- A good **health financing** system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them.
- **Leadership and governance** involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, the provision of appropriate regulations and incentives, attention to system-design, and accountability.

Extracted from: Everybody business: strengthening health systems to improve health outcomes: WHO's framework for action. WHO, 2007.

Annex 2: Tool 3: Health Facility Capacity Assessment Tool

1		Assessment of Service Delivery Pillar
	Question	Response
A	Does the facility offer the IMAM or nutrition services? <i>(Check for service even if there are currently no stocks)</i> Yes-1 No-0	
B	If yes to A, which cadre of staff provides the service <i>(multiple response possible)</i> Nutritionists– 1 Nurses– 2 Clinical officers – 3 Doctors – 4 Public Health officers – 5 Others <i>(Specify)</i> - 6	
C	If yes to A, Do you do target setting for IMAM? Yes-1 No-0 <i>(If No skip to F)</i> <i>Verify targets if displayed in the Facility)</i>	
D	If No to C, why?	
E	If Yes to A, is the Facility offering IMAM Surge Yes-1, No-0	
F	If No to G why?	
G	Is this facility linked to any Community Units (both functional or non-functional) Yes-1 No-0	
H	If no to G, Why?	
I	How many Functional Community Units (CUs) are attached to these facilities?	
Overall comments on service delivery <i>(comment on the overall strengths, weaknesses, opportunities and threats.)</i>		
2		Assessment of Human Resource Pillar
	Question	Response

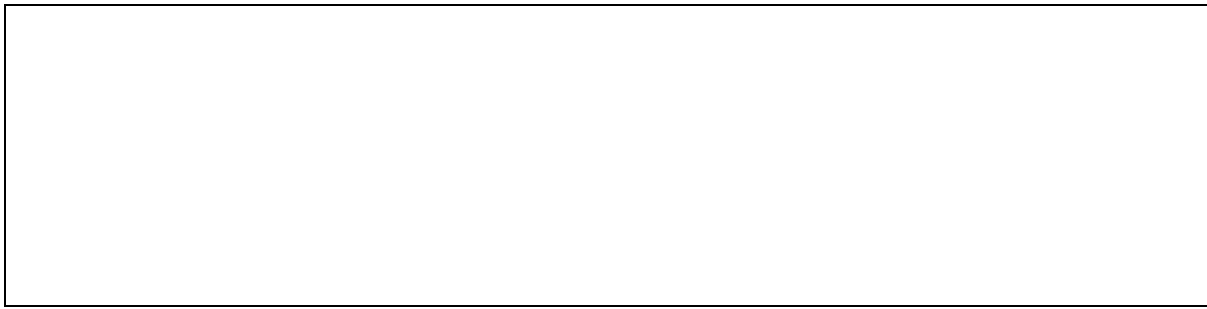
A	How many Health workers does the facility	Cadre	Permanent	Temporary	Casual	How many offering IMAM services
		Medical Doctors				
		Nurses				
		Clinical Officers				
		Nutritionists				
		Public health officer				
		Health records officer				
		Community Health Extension Workers				
		Community Health Volunteers <i>(attached to CUs)</i>				
		Others – Specify				
B	How many Health professional staff have been trained	Cadre	How many have been trained on IMAM	How many have been trained on IMAM surge		
		Medical Doctors				
		Nurses				
		Clinical Officers				
		Nutritionists				
		Public Health Officer				
		Health records officer				
		Community Health Extension Workers				
		Community Health Volunteers <i>(Attached to CUS)</i>				
Others - Specify						
Overall comments on Human Resource Pillar (<i>comment on the overall strengths, weaknesses, opportunities and threats.</i>)						

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3 Assessment of Medicines, Supplies, Equipment and Infrastructure Pillar									
	Question	Response							
A	Does the facility have the following equipment, guidelines and reporting tools? (Fill table)	Equipment		Available (How many)		Functional/ in use (How Many)			
		Mother and Child Electronic scales							
		Salter Scales							
		Beam scale							
		Adult MUAC tapes							
		Child MUAC tapes							
		Job Aids/Guidelines							
		IMAM Wall Charts							
		IMAM guideline							
		Reporting Tools		Available (How many)		Functional/ in use (Yes/ No)			
		Child Welfare Clinic (CWC) Registers – MoH 511							
		Nutrition monthly report - MOH 713							
		CHANIS tally sheet - MOH 704							
		Immunization and Vitamin A - MOH 710							
		Consumption Data Report and Request (CDRR) for nutrition commodities – MoH 734B							
B	Check on availability of commodities and storage conditions (Yes/ No response applies)	Check for:	RUTF	RUSF	F100	F75	Resomal	Remarks	
		Availability for commodity							
		Any Stock Outs in the past 3 months							
		Space available							
		Space available to hold how many months of stock?							

		(Indicate period))							
		Well Ventilated							
		Secure							
		Has shelves, racks, cup boards							
		Bin Cards							
		Stock control cards							
		Delivery Notes							
		S11							
C	Is the facility well organized and operational in case of increased numbers?	Areas	Operational (Yes/No)				Adequate in case of increased IMAM numbers (Yes/No)		
		Waiting Area							
		Consultation Areas							
		latrines							
		Storage areas							
Overall comments on Medicines, Supplies, Equipment and Infrastructure Pillar (<i>comment on the overall strengths, weaknesses, opportunities and threats.</i>)									

4	Assessment of Health Information Pillar		
A		Response	Comments
	In the last 1 year (Jan –Dec) how many reports were submitted against the required reports?)		
	In the last 1 year (Jan –Dec) how many reports were complete?)		
	In the last 1 year (Jan –Dec) how many timely?)		
Overall comments on Health Information Pillar (<i>comment on the overall strengths, weaknesses, opportunities and threats.</i>)			



5		Assessment of leadership & Governance Pillar				
A	Asses key areas including coordination, support supervision	Meeting 	Attend meeting <i>Yes – 1,</i> <i>No - 0</i>	If No Why?	Frequency of meetings <i>Weekly – 1</i> <i>Twice a month - 2</i> <i>Monthly - 3</i> <i>Quarterly - 4</i> <i>Bi Annually - 5</i> <i>Annually – 6</i> <i>Other (Specify)- 7</i>	Comments
		In Charges Meetings				
		Staff meetings				
		Facility Committee Meetings				
		Community Health Committee Meetings				

B	Asses if support supervision is available	Frequency of Support supervision			
			Frequency (Circle one response)	Does the support supervision cover nutrition issues? Yes-1 No-0	Comments
		County to Health facility Support Supervision	Monthly – 4 Quarterly – 3 Bi annually – 2 Annually – 1 Others, specify;		
	Subcounty to Health facilities Support Supervision	Monthly – 4 Quarterly – 3 Bi annually – 2 Annually – 1 Others, specify;			

Overall comments on leadership & Governance Pillar (*comment on the overall strengths, weaknesses, opportunities and threats.*)

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6 Assessment of Financing Pillar					
A	Asses availability of resources	What are the sources of funding for the facility? (list sources)	Is the funding adequate to cover increase cases in the facility	How fast can the funding be accessed in case of need to scale up response (indicate period)	Comments

Overall comments on financing Pillar (*comment on the overall strengths, weaknesses, opportunities and threats.*)

Annex 3: Validation of thresholds:

Stakeholders need to validate whether the agreed thresholds are appropriate compared to a standard and objective means of threshold setting. This objective method of calculating thresholds for the low-volume load example is based on the findings from evaluation of the Surge Model pilot project, incorporating learning from 14 HFs over a period of 29 months. The evaluation suggested using an approach that mixed objective and subjective means to set thresholds. The figures for the high-volume load example come from the method Uganda has used for their surge implementation. After more experience using these objective threshold levels, they should be reviewed and adjusted as appropriate.

The numbers used in the examples below should be substituted with the average number of new admissions from the HF. The example thresholds given here are for both low and high caseload examples.

Setting thresholds by calculation & example for Low⁵ volume load

Phase	Examples thresholds	
	# of SAM new admissions	# of MAM new admissions
	Low volume-load (e.g. 10/month)	Low volume load (e.g. 40/month)
Normal	Low Caseload: Up to 3 x average # of new admissions	
	From: 0 To: 30	From: 0 To: 120
Alert	Low Caseload: 3-5 x average # of new admissions	
	From: 31 To: 50	From: 121 To: 200
Alarm	Low Caseload: 5-7 x average # of new admissions	
	From: 51 To: 70	From: 201 To: 280
Emergency	Low Caseload: 7 x average # of new admissions and up	
	From: 71 To: and up	From: 281 To: and up

Setting thresholds by calculation & example for high⁶ volume load

Phase	Examples thresholds	
	# of SAM new admissions	# of MAM new admissions
	High volume-load (e.g. 100/month)	High volume-load (e.g. 200/month)
Normal	High Caseload: Up to 1.5 x average # of new admissions	
	From: 0 To: 150	From: 0 To: 300
Alert	High Caseload: 1.5-2 x average # of new admissions	
	From: 151 To: 200	From: 301 To: 400
Alarm	High Caseload: 2-3 x average # of new admissions	
	From: 201 To: 300	From: 401 To: 600
Emergency	High Caseload: 3 x average # of new admissions and up	
	From: 301 To: and up	From: 601 To: and up

Looking at these calculated thresholds, the stakeholders should compare to the agreed thresholds from the step B above.

- How do the calculated thresholds compare to the agreed thresholds?
- Do the stakeholders still feel their thresholds are appropriately set or do they want to adjust them at all?
- Are any big differences justifiable based on the HF's capacity?

While it is okay to have differences, the reasons for having much higher or lower thresholds should be discussed and documented.

Note: This calculation should only be used as a guide for validation purposes and is not meant to be used to set thresholds on its own; it is important that threshold setting includes the component of the HF's capacity from Step 2.

Figure 6: Example of a surge response curve with surge actions

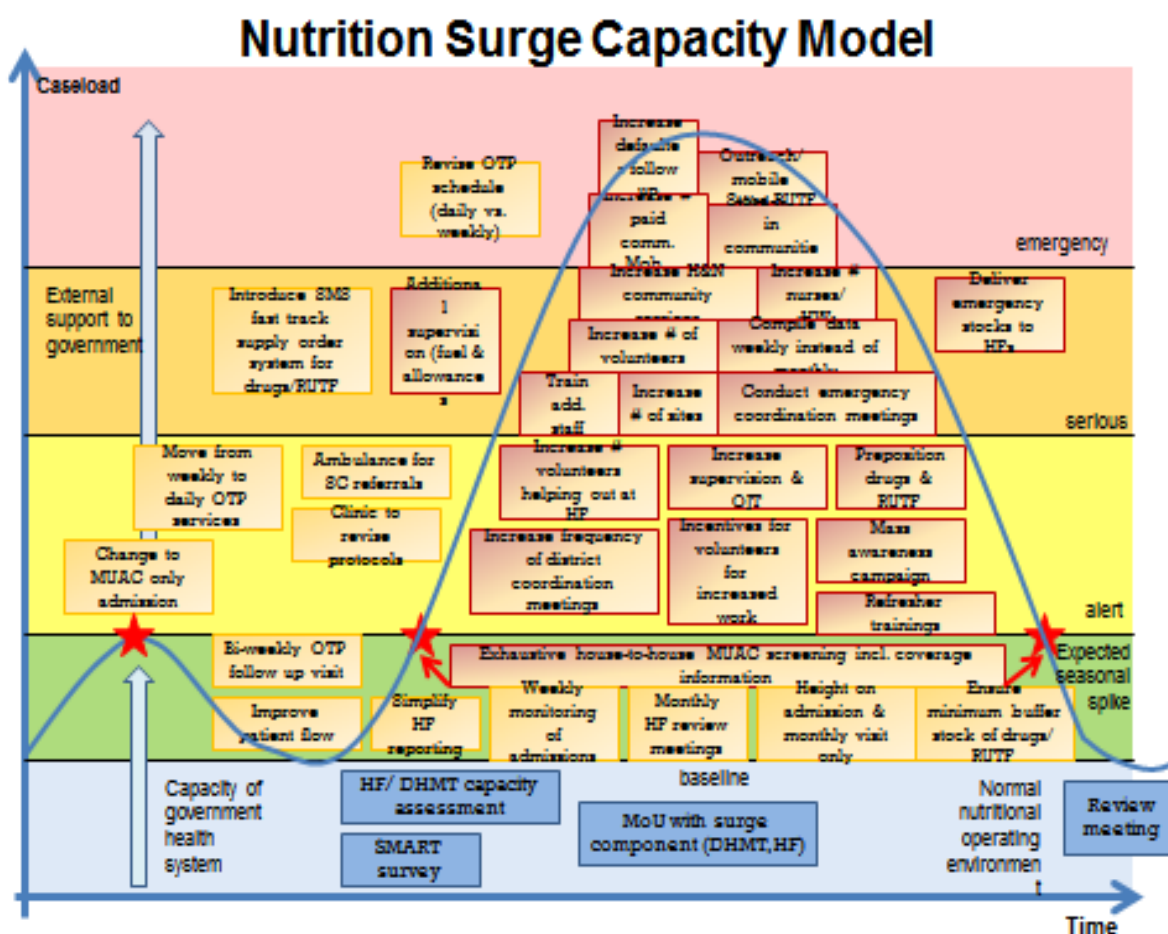
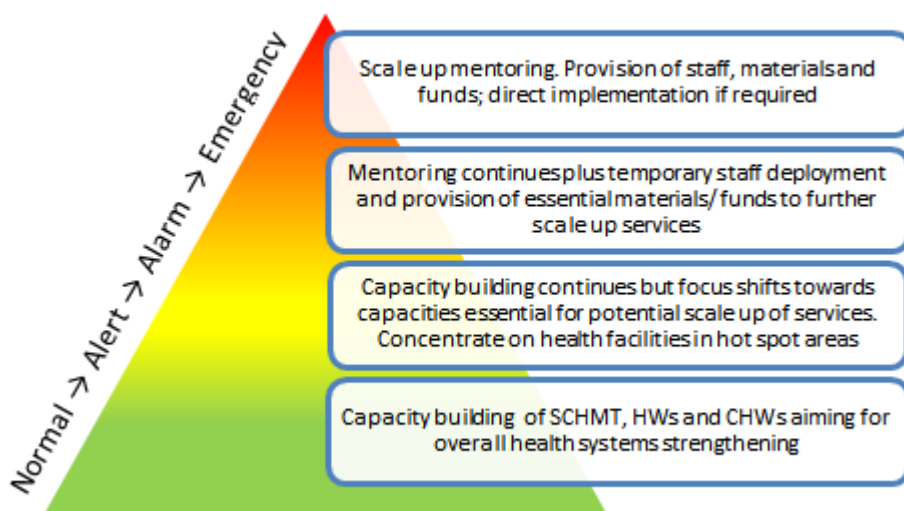


Figure 7: Example of key surge actions carried out at different phases



⁵ The cut off points used should be contextualised. However this guide suggests Low volume load should be < High volume load is at 20 new admissions for OTP and <70 new admissions for SFP

⁶ Low volume load should be < 20 new admissions for OTP and <70 new admissions for SFP

Annex 5: Costing matrix

Phase	Proposed Intervention	Activity description	Item	Quantity	Unit cost	Total KShs	Notes
Normal							
Alert							
Alarm							
Emergency							
Grand Total							

Annex 6: SCHMT Dashboard

Tool 13: SCHMT Dashboard



Kenya IMAM Surge
SCHMT Dashboard.xl

Annex 7: M&E framework

Tool 14: Monitoring & Evaluation framework					
	What will be measured? (Indicator)	How will the indicator be used? (Forum or Report that will use it)	What does this information tell us about the implementation of surge?	What tools/ methods are used to collect the information?	When will the information be collected? How frequently? By whom?
Monitoring Indicators					
1	Number of facilities that have surpassed threshold				
2	Number of facilities that have triggered surge response				
3	Number of sub-counties that have surpassed threshold				
4	Number of sub-counties that have triggered surge response				
5	Number of time surge response is triggered				
Evaluation Indicators					
1					
2					

Annex 8: Additional table formats for trends and risk analysis

Table 11: Milk consumption or pricing of staple foods plotted by month

VCI												
Milk consumption/ or pricing of staple food												
MAM (DHIS)												
SAM (DHIS)												
Year (2015)	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Table 12: Diseases that easily affect the nutritional status of children plotted by month

Diarrhea												
Year (2015)	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Note: Using the data in the two tables above, charts should be drawn to visualize the trends.

Annex 9: Example of defined surge actions: Surge Package at each surge/drought Phases

Building block	'Normal' phase:	Alert phase	Alarm	Emergency
	<i>NB: In the Normal & Alert phases, the HF and systems at sub-counties are functionally normally.</i>		<i>NB: In Alarm & Emergency phases, the health facilities are overstretched and need additional support.</i>	
Health work force (Human resource)	<ul style="list-style-type: none"> - Capacity assessments & development of relevant government systems/ organs e.g. NDMA, HF/ DHMTs. -Mentoring of HMT, HWs and CHWs aiming for overall health systems strengthening -Annual capacity review done using the capacity development framework tool and NDMA SWOT analysis. - Mapping and analysis of MoH clinical staff capacity in terms of skills and size. -Formalize the pre- arranged agreement between UNICEF and KRCS on how to support identified HR needs during upscaling and down scaling surges at alarm and emergency phases. - The HMT to ensure that adequate numbers of health workers receive timely training on basic nutrition in emergencies, including surge & IMAM. -Integrate the treatment of SAM as part of training for health workers both for in-service and pre-service courses. -MoH to invest in developing, maintaining & updating a Rapid 	<ul style="list-style-type: none"> - Refresher trainings and mentoring continues with focus on preparations for potential deterioration of nutrition situation and scale up. -Recalling staffs on leave / moving staffs in between facilities within the facility. - Start identifying potential extra CHVs 	<ul style="list-style-type: none"> - Mentoring strengthened with partners being more focused and intentional. - Temporary staff recruitment from KRCS and train them on basic protocols for OTP and SC -Increase number of CHVs based on population of catchment of area, vis a vi the severity of the deteriorating of the nutritional status -Identification and training of clinical/ emergency staffs for potential scale up. -Recalling staffs on leave / moving staffs from adjacent, outside the sub county. 	<ul style="list-style-type: none"> Secondment of health workers from other sub-counties -Rapid deployment from KRCS

	Response databases Roster of trained clinical staff.			
Service delivery:	<ul style="list-style-type: none"> -Functional CHUs are put in place. -CHVs conduct routine screening at HF for all patients seeking vaccination &/ or treatment. - Train CHVs on screening, referral and management of MAM & SAM. -Health workers carry out household follow-up on a bi weekly/ monthly basis to monitor progress. -CHVs conduct monthly community mobilization & sensitization. - Ensure policies on CHV payments and incentives are in place and implemented. - Weekly or biweekly distribution and monitoring of SAM children at the HFs 	<ul style="list-style-type: none"> -Mapping/ identification of possible additional outreach sites (hot spots). -Refresher training for CHVs on procedures and protocols for IMAM (screening and referral). - Increase support supervision to CHVs from CHEWs 	<ul style="list-style-type: none"> -Increase # of mobile OTP outreach sites - Increased active case finding of SAM & MAM cases by CHVs. -Conduct mass awareness/ sensitization & screening campaigns. -Intensified household follow-up for OTP cases. - Simplify procedures i.e. use either MUAC or W/H as an admission criteria - Increased supportive supervision - Establish SC sites at the Health centres in addition to hospitals. 	<ul style="list-style-type: none"> -Set up community treatment sites for communities that are far. -Intensify active case findings (door to door). -Increase frequency of OTP to daily. -Intensify door to door defaulter follow up - Facilitate referrals to SC where necessary
Supplies	<ul style="list-style-type: none"> -Develop Standardize inventory management in terms of the ordering and management of therapeutic supplies -Train supply chain actors on the standardized processes to ensure an efficient supply chain and real time monitoring of the pipeline - BCC & IYCMN materials developed, replicated & distributed to HFs - In recovery phase, redistribution of any surplus stocks. 	<ul style="list-style-type: none"> -Place a request for additional supplies in anticipation for a possible surge. - Prepositioning therapeutic supplies (RUTF, F-100, F-75) & drugs according to the predictions made both at HF and c/sub-county level. 	<ul style="list-style-type: none"> -Fast track the turn-around time between request for supplies and deliveries. -Establish temporary decentralized system of storage at c/sub-county level 	Scale up supplies to all affected health facilities.
Information: and M & E	<ul style="list-style-type: none"> Establish an effective information & communication system between HFs, SCHMT, CHMT and nutrition partners. -Annually conduct the risk trends & risk analysis. -Establish a strong, reliable M & E and surveillance systems, with real time updating of DHIS and sharing updates with NDMA and NDU - Regular CHMT meeting to review IMAM performance indicators & take corrective actions. -Monthly/ bi weekly reports submitted to UNICEF - Strengthen analysis of DHIS data, conducting monthly data audits and follow-up on missing data and non-reporting HFs. - In recovery, estimate impact of scale-up and document findings and key learnings. 	<ul style="list-style-type: none"> -Conduct SMART surveys if possible. -Closely monitor & analyse DHIS, and EW surveillance data for decision making. 	<ul style="list-style-type: none"> - Increase frequency of reporting to weekly (situation reports). -Increased monitoring of IMAM activities at sub-county and HF level - Conduct rapid assessments 	Daily reporting of the situation/ admissions numbers/ death cases. -Use of SMS to transmit urgent situation information.
Governance & leadership	<ul style="list-style-type: none"> -Strengthen regular monthly coordination & review meetings with key stakeholders at 	Strengthen coordination meetings, CHMT	- Increased frequency of coordination meetings to	Increased frequency of coordination

	<p>national, county & sub-county levels.</p> <ul style="list-style-type: none"> -Identify and map Nutrition partners in terms of what and where they work. -Proper coordination mechanism with partners under the leadership of HMT, with technical support from NTF/ NIWG. - Planning and inclusion of IMAM surge activities in the contingency plans. - Monthly Nutrition coordination meetings. - MoUs with partners at county and national level done. -SOPs within relevant government authorities are put in place. 	SCHMT and CNTF.	<p>weekly at county and sub county levels.</p> <ul style="list-style-type: none"> -Inter cluster (e.g. with WASH) and multi-sectoral coordination meetings. 	meetings to weekly at county and sub county levels.
Financing	<p>Strengthening of the NDMA fund management to enhance donor confidence and willingness to provide up-front grant commitments to the fund.</p> <ul style="list-style-type: none"> -MoH and partners to allocate of emergency resources for emergency resources. 	<p>Mobilize funds from the contingency kitty and partners.</p> <ul style="list-style-type: none"> -Partners develop concept notes and proposals for additional funding in preparation for a possible surge scale up. 	<ul style="list-style-type: none"> - CHMT to source for additional funds to fill in identified gap. - Requisition of emergency contingency funds from NDMA and partners. 	CHMT requests for additional funding from the national level to bridge gaps in funding.

Annex 10: The colour coded dash board for sub-county/county Phase monitoring

Table 13: Example of County level monitoring and classification

Name of sub-county	% of H. Facilities in Normal	% of H. Facilities in Alert	% of H. Facilities in Alarm	% of H. Facilities in Emergency
1. Marsabit Central: Saku				
2. Laisamis: Marsabit South				
3. Laisamis: Loiyangalani				
4. North Horr: Marsabit North				
5. North Horr: Chalbi				
6. Moyale: Moyale				
7. Moyale: Sololo				

Annex 11: Roles and responsibilities of various IMAM surge stakeholders

For proper coordination of the surge, a proper communication and follow up system must also be put in place during the normal phase and intensified as needed during scale up surges. A systematic, formalised approach during scale up/down necessitates formalisation and awareness of clear roles and responsibilities amongst partners. At sub-county, county and national level, 7 stakeholders were identified with the following key roles and responsibilities:

1. Roles of MoH at sub-county and county level

- I. **Health workforce:** Monitor the capacity of the Health facilities, ensuring there is adequate numbers of clinical staff in order to cope with the increase/decrease of the caseloads during scale up/scale down. The MoH at county level will be responsible to coordinate the Human Resources needs including staff secondment in response to surges and ensuring mechanisms for financing staff secondments and any other arrangements that are more clearly defined and agreed with the National MoH.
- II. **Service delivery:** The awareness and implementation of policies such as community strategy that will ensure successful surge implementation and scalability at all phases of drought cycle, including the normal, non-emergency seasons. The MoH will ensure there is an enabling environment for implementation and the coordination framework of surge.
- III. **M & E:** Support the implementation, monitoring and supervision of IMAM surge during the normal and elevated phases to ensure that quality of treatment does not deteriorate, and the health system is not undermined when the demand is high.
- IV. **Products and supplies:** Strengthen the supply chain, ensuring that supply of therapeutic products does not breakdown during scalability.
- V. **Information:** The MoH will be a link of communication with the CHMT, INGO and the national government. A focal person for SURGE may be identified and sometimes may not be nutritionists given that not all counties/sub-counties have nutritionists.

2. Roles of the Health Management Teams: (SCHMT & CHMT)

- I. **Leadership and governance:** Enhance scale up/down of the surge approach by providing leadership, resource persons and financial resources when needed.
- II. **Information:** Analyse and use data from health facilities (DHIS) and use it in their decision making process.
- III. Liaise with the CHRIO in addressing the challenges facing data collection, management and utilization during the normal, non-emergency phase as a base to build upon during surge scale up.
- IV. Sharing information and coordinating the surge approach, especially during scale up and when higher thresholds are reported in a significant number of health facilities.

3. Roles of the CNTF (County Nutrition Technical Forum)

- i. Discuss technical issues that are related to nutrition interventions in their administrative units and advice HMTs.
- ii. Select subcommittee (e.g. CRCF- County Response Coordination Forum/ committee in Marsbit) to meet on a frequent/ agreed basis to coordinate emergencies.

4. Roles of Emergency Nutrition Advisory Committee (ENAC)

- I. Provide technical support to counties on the implementation of IMAM surge
- II. Build capacities of counties implementing Surge
- III. Review of the IMAM toolkit when necessary

5. Roles of KEMSA

- I. **Products and supplies:** Quality and affordable essential medical commodities to the health system, including therapeutic nutrition products
- II. In liaison with Nutrition and Dietetics Unit (NDU), UNICEF, other key stakeholders manage stocks available to respond to surges.

6. Roles of Kenya Red Cross Society (KRCS)

- I. **Workforce:** First line responders, having trained volunteers (probably even technical, clinical or nutrition staff), and ready for surges that are beyond the capacity of health staff.
- II. **Products and supplies:** Pre-positioning of stock in strategic places, ensuring buffer stocks are available and accessible to avoid stock-outs.

7. Roles of NDMA

- I. **Information:** Provide timely and relevant drought information, on a monthly basis, including the collection and analysis of credible nutrition surveillance data and correlations of VCI and milk consumption data.
- II. Coordinate drought related surges.
- III. **Financing:** Resource mobilization and management of the contingency fund. NDMA should also continually advocate for flexible funding with various donors required to implement the agreed actions. The mechanism by which this funding is released also needs to be agreed in advance, and tied to both the trigger, in this case the surges, and the action.
- IV. **Workforce:** To build the capacities of National, county and communities on disaster preparedness
- V. **Leadership:** Facilitates review and updates of drought contingency plans, during which IMAM Surge activities should be included.

8. Roles of NGOs (International, national or local) and partners at sub-county and county level

- I. **Financial and technical support** to MoH during regular planning, review and consultation meetings with the HMT including being represented in many of the regular HMT meetings at county, sub-county and national level.
- II. **Service delivery:** Support the HMT staff with transportation of therapeutic supplies and staff going for supportive supervision especially during the alarm and emergency phases.
- III. Support some of the costs of HMT staff being involved in outreach, screening monitoring and supervision at the emergency phase.
- IV. Mentorship of HF staff during the emergency phase.
- V. Support the collection and analysis of credible nutrition data that will be used for further analysis and correlations with VCI data

9. Roles of UN (UNICEF, UNOCHA, WFP) and other Donors

- I. **Financial and service delivery** support: Project costs and facilitate procurement of therapeutic products at least 3 months before the Alarm phase is heightened, including an additional buffer stock of 10% of the total requirement at county and national level.
- II. Work with MoH and partners to ensure policies and structures that advocate for surge implementation are in place.

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