



Enhanced
Responses to
Nutrition
Emergencies

CONCERN
worldwide



Funded by
the European Union

JUNE 2020 – MAY 2023

PILOT PROGRAMMATIC PARTNERSHIP

HEALTH SURGE LEARNING PAPER #1: AN INTRODUCTION TO THE HEALTH SURGE APPROACH

NOVEMBER 2021



Mohamed Roufai from Concern at a CMAM Surge training session at the Health Centre in Koweit, Tahoua, Niger in May 2021

1. Background

The evolution of CMAM Surge to a broader Health Surge approach is in its early stages. Based on the eight steps of Concern's CMAM Surge model¹, pilots are underway to see if this approach could support the management of other childhood illnesses, particularly in response to seasonal changes and shocks. In early 2021, a series of articles were published on the CMAM Surge approach in the Emergency Nutrition Network's (ENN) Field Exchange journal. One of the seven articles explored the emerging Health Surge approach². The Health Surge approach aims to strengthen health facilities management capacity and contribute to reinforcing health systems. Health Surge supports the real-time monitoring by Ministry of Health (MoH) staff of their health facility data of key illnesses and capacity changes so that the planning and allocation of resources to address caseload and capacity fluctuations can be flexible and occur before a health facility is overwhelmed.

BOX 1: KEY TAKEAWAYS

- CMAM Surge tools have been **adapted** so that the same eight steps can be applied to other child morbidities;
- The 'Health Surge' model is being **tried in 6 countries**;
- Health Surge **should not duplicate** or replace other health system processes or functions (e.g. HMIS, IDSR);
- CMAM and Health Surge should **align with** and **contribute to reinforcing** national and local health systems.

Concern Worldwide (Concern) via its Enhanced Responses to Nutrition Emergencies (ERNE)³ programme aims to support and capture learning on the Health Surge model, while strongly promoting the further integration and adaptation of the CMAM and Health Surge approaches into the health system. Through the ERNE programme, Concern aims to increase the scale, efficiency and effectiveness of its nutrition emergency responses by working with local services and communities to implement proven and innovative solutions in fragile, conflict affected and disaster-prone countries. The programme combines lifesaving emergency nutrition treatment, prevention and preparedness activities, such as the CMAM Surge approach, to build community resilience to malnutrition in the longer term.

This learning paper is the first of a series of three and aims to set the scene by outlining where Health Surge projects are taking place, the adaptations which have been made to the eight CMAM Surge steps and the plan for capturing learning on the Health Surge model.

1. Amanda Yourchuck and Kate Golden. The 'CMAM Surge' approach: setting the scene. Field Exchange 64, January 2021. p19. www.ennonline.net/fex/64/cmamsurgesettingscene
2. Erin McCloskey, Kate Golden and Amanda Yourchuck. Expanding CMAM Surge beyond nutrition – towards a broader Health Surge approach. Field Exchange 64, January 2021. p35. www.ennonline.net/fex/64/cmamsurgehealthsurge
3. The ERNE programme is a three-year programme (2020–2023) covering DRC, Ethiopia, Niger, Sudan and South Sudan funded by ECHO through a Pilot Programmatic Partnership with Concern.

2. What is the aim of Health Surge approach?

The aim of the Health Surge approach is to support the health system and empower health workers to better anticipate, prepare for, and manage fluctuations in the demand for essential nutrition and child health services. The focus is largely on managing caseloads of child wasting, malaria, diarrhoea, and acute respiratory infection (ARI), as these tend to fluctuate most throughout and between years. Preparing for and responding to these predictable seasonal fluctuations is the main aim of the approach. The added value of Surge in contexts that experience sudden shocks is still being explored.

Evaluations and documented experience from countries implementing CMAM Surge have also shown more general secondary benefits, which are expected for the Health Surge approach, including health workers feeling more skilled and empowered to use their health facility data to make decisions and plan their work even outside of peak periods.

3. In which contexts is Health Surge most appropriate?

Similarly to CMAM Surge, a baseline of functionality and degree of government ownership of the health system is required before the Health Surge approach is introduced (e.g. some MoH staff are in place, supply chain is established, patients are using the service). Introducing CMAM or Health Surge during the peak of an emergency is unlikely to yield the intended benefits. In these contexts, other critical lifesaving activities should be prioritised.

As mentioned above, it is expected that Health Surge will add the most value in contexts that experience largely predictable, seasonal fluctuations in caseloads of child illnesses and wasting. These seasonal fluctuations are often, but not exclusively, driven by the occurrence of the annual lean season / hunger gap; peak periods of malaria or diarrhoea due to rainfall patterns; and seasonal migration or workload patterns, particularly for women.

It is essential that the Health Surge approach is grounded in national and local health systems and is embedded within or reinforces other health system strengthening or quality improvement efforts.

BOX 2: QUALITY FUNDING FOR HEALTH SYSTEMS STRENGTHENING

- The sustainability and effectiveness of both CMAM and Health Surge is dependent on multi-annual, predictable funding via government, likely with support from external donors. This will ensure that the approach is embedded into national and local health systems, and also supported for at least one seasonal cycle post set-up.
- Funding for health system strengthening in fragile contexts is often short term and fragmented. At the World Humanitarian Summit in 2016 humanitarian donors, including ECHO, committed to enhancing quality funding by providing flexible, predictable funding and increasing multi-year funding instruments.
- The ECHO Pilot Programmatic Partnership enables the ERNE programme to implement health systems strengthening approaches such as CMAM and Health Surge in fragile contexts and assess its added value through the provision of multi-annual, flexible funding.

4. Where is the Health Surge approach being implemented?

The first attempt to apply the CMAM Surge model to other morbidities was in Sierra Leone in 2017. A project implemented by Concern in collaboration with the Sierra Leone Health Authorities, focusing on treating and preventing malaria, adapted the tools from the eight CMAM Surge steps to support health facilities in the management of malaria during surges in caseloads⁴. Since 2018, other stakeholders – largely non-governmental organisations (NGOs) and MoH - have been innovating and adapting CMAM Surge to address broader child health outcomes. Initial mapping indicates that Health Surge was initiated or continued in at least six countries in 2021, with the support of eight different NGOs (Table 1).

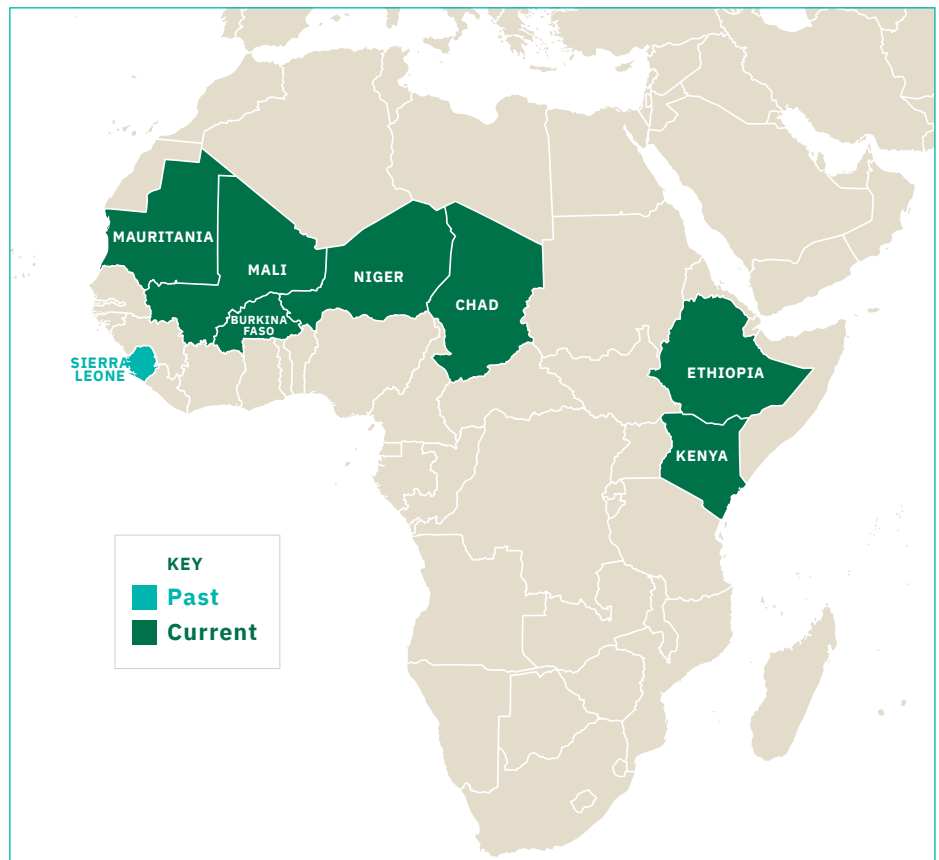


IMAGE 1: Health Surge: Status of implementation based on known partner (NGO, Unicef or WFP) support as of end 2021

In early 2021, Concern produced a set of Health Surge tools and a framework to document key programme details, adaptations to tools and capture learning from the pilots. These Health Surge tools are being piloted in Niger (2021–2023), Kenya (2021–2022) and Mali (2021–2022). In addition, lessons learnt from other partners piloting a Health Surge model in West and East Africa are being gathered (See section 6).

4. The Treat and Prevent (TAP) Malaria project was implemented in Tonkololo Health District in Sierra Leone, from October 2017 to March 2021 with funding from Comic Relief. The aim of the project was to increase the uptake of preventive measures and appropriate health care seeking by pregnant women and mothers of children under five, improve health service delivery at Primary Health Unit level to treat malaria and other diseases, including during surges of disease and improve gathering and analysis of data to inform decision making by Facility Management Committees.

TABLE 1: ‘Health Surge’ Project Mapping, all projects are implemented in collaboration with national Ministries of Health⁵

HEALTH SURGE’ PROJECT MAPPING	
Burkina Faso	<ul style="list-style-type: none"> • Health Surge model is being implemented in 4 regions (since 2018) – Nord, Centre-Nord, Est, Boucle du Mouhoun; • Terre des Hommes (TdH) in collaboration with Action Contre la Faim (ACF), Médecine du Monde-France (Mdm-F) and Alima ; • ECHO funded project; • The Health Surge model has been integrated into a project focusing on supporting the digitalisation of health data and a digital app has been created to support health workers to implement integrated management of childhood illnesses (IMCI) protocols more effectively.
Chad	<ul style="list-style-type: none"> • Adapted CMAM Surge model for other morbidities included in a project in Batha region (2019-2021) & new Health Surge project in Bokoro region (started in 2021); • French Red Cross (CRF); • Funded by ECHO & Ambassade de France respectively.
Ethiopia	<ul style="list-style-type: none"> • CMAM Surge steps applied to support the management of diarrhoea caseloads in Amhara region (2018). As part of ERNE programme Health Surge approach is being implemented in selected health facilities in 2 regions (Amhara and Somali) (2021–2023); • Concern Worldwide; • Funded by USAID and ECHO respectively.
Kenya	<ul style="list-style-type: none"> • Health Surge approach set up in two counties in the arid and semi-arid lands (ASALs) under the five-year Nawiri programme (2021); • Concern Worldwide; • Funded by USAID.
Mali	<ul style="list-style-type: none"> • A large-scale transition to a Health Surge approach was launched in 2021 in four regions (Segou, Koulikoro, Mopti, Tombouctou) via the Health Surge sub-working group of the Mali CMAM Surge Taskforce; • Save the Children (SCI), International Rescue Committee (IRC), COOPI, ACTED and Alima; • Funded by UNICEF and ECHO; • Also in 2021, TdH secured funding to implement a Surge model as part of a digitalisation of health data project (similar to Burkina Faso) in the Segou region (ECHO).
Mauritania	<ul style="list-style-type: none"> • The CRF have been implementing an adapted CMAM Surge model for other morbidities since 2018 in two regions (Gorgol & Guidimaka); • In addition the CRF and TdH are planning to integrate a Health Surge component to a national digitalisation projects financed by the Global Fund.
Niger	<ul style="list-style-type: none"> • An adapted CMAM Surge model for other morbidities has been implemented in Zinder since 2019. Tahoua Regional Hospital has been applying the CMAM Surge approach for the management of malaria since 2018⁶. In addition the Health Surge approach is being implemented in a select number of health facilities in the Tahoua Region via the ERNE programme (2021–2023). In November 2021, a Health Surge project was launched in Tillabéri region.

5. Information in the table has been gathered via the West Africa Health Surge working group and Concern Country offices, and is to the best of our knowledge at the time of publication.

6. More information about this pilot can be found here: Erin McCloskey, Kate Golden and Amanda Yourchuck. Expanding CMAM Surge beyond nutrition – towards a broader Health Surge approach. Field Exchange 64, January 2021. p35. www.ennonline.net/fex/64/cmamsurgehealthsurge

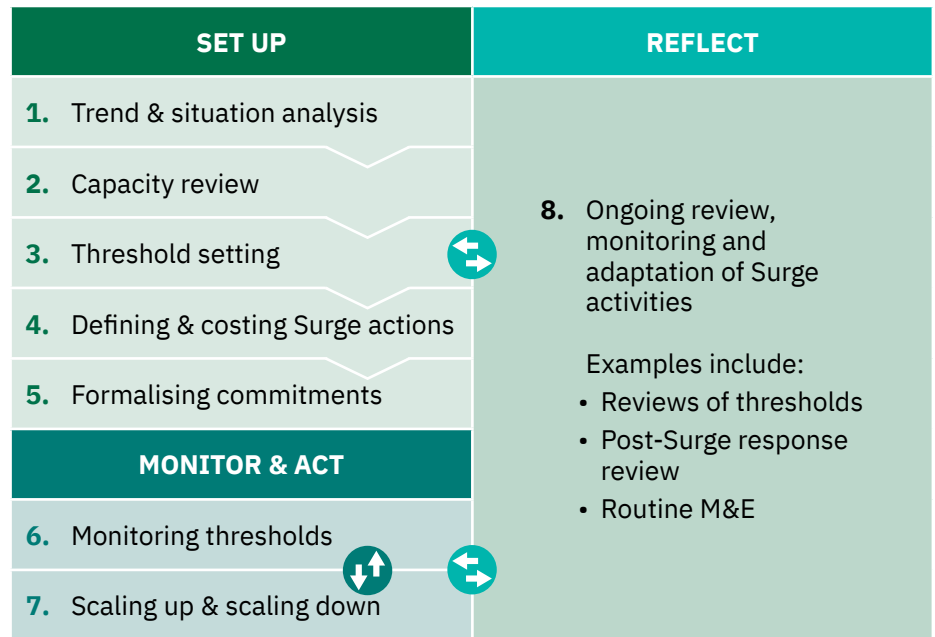
HEALTH SURGE' PROJECT MAPPING	
Niger (cont.)	<ul style="list-style-type: none"> • CRF (Zinder), Concern (Tahoua), IRC (Tillabéri); • Funded by ECHO; • SCI are planning to set up Health Surge in health facilities in three region (Tillabéri, Maradi, Agadez) in 2022 with funding from USAID.
Sierra Leone	<ul style="list-style-type: none"> • A Malaria Surge model was piloted in Tonkolili District from October 2017 to March 2021; • Concern Worldwide; • Funded by Comic Relief.

The Global CMAM Surge Technical Working Group (TWG) was established in 2020 to ensure coordination of CMAM/Health Surge activities to maximize quality, effectiveness, and learning. A priority for the Global CMAM Surge TWG for 2021 was to develop fully the Health Surge approach. In addition CMAM Surge Taskforces are operational in Niger, Mali and West Africa (Regional). These Taskforces were established to support the coordination and implementation of CMAM Surge. With the transition to Health Surge, Health Surge Working Groups have been established in Mali (where a large number of partners are implementing the approach) and West Africa (to facilitate inter country learning and sharing of resources and tools).

5. What adaptations have been made to the CMAM Surge steps?

Health Surge follows the same basic eight steps of the CMAM Surge approach. Neither Health Surge nor CMAM Surge should duplicate any existing health system processes or functions. **Table 2** gives an overview of the standard CMAM Surge steps and the adaptations which have been made in the Health Surge tools. The Health Surge tools were developed following consultations with key stakeholders who had already applied the CMAM Surge model to address broader child health outcomes and members of the Global CMAM Surge TWG.

Prior to setting up Health Surge, contextualisation of the tools is paramount to ensure alignment with national health systems and processes, in particular considering how Health Surge can complement and reinforce, National Health Management Information Systems (HMIS) and Integrated Disease Surveillance and Response (IDSR) mechanisms. As we move to include child illnesses, it is important that the focus is not on epidemic prone diseases (e.g. Ebola) or diseases targeted for eradication or elimination (e.g. measles) which require immediate notification to health authorities and have standard (usually national) thresholds that should trigger immediate action from the country's outbreak response system. The objective of Health Surge is to allow health facility teams to set their own thresholds to trigger localized action, relative to their own capacity to better manage their caseloads. Thresholds are based completely on what is deemed a 'manageable caseload' for that health facility team, not on notifying higher authorities of a potential outbreak.



CMAM and Health Surge can support health facility staff to better understand their data through continuous interaction, which allows real time analysis at health facility level before it is entered into the HMIS. This cannot substitute for broader efforts to strengthen the HMIS and necessary health system strengthening activities should be considered alongside Health Surge implementation.

It is expected that the tools will evolve as we learn more about how Health Surge can best support health facility staff, contribute to strengthening health systems and promote timely and appropriate response to capacity changes and surges in caseloads of childhood illnesses.

TABLE 2: Overview of CMAM Surge steps and adaptations made in the Health Surge model.

	CMAM SURGE: OVERVIEW ⁷	HEALTH SURGE: ADAPTATIONS
STEP 1: Trend and Situation Analysis	<p>At a health facility level, a seasonal and events calendar is elaborated to identify key drivers of malnutrition in the community.</p> <p>Historical trends (two years) of other morbidities, such as diarrhoea, malaria and Acute Respiratory Infection (ARI) are plotted on a graph.</p> <p>Malnutrition caseload trends for the past two years are contrasted with the seasonal and events calendar and morbidity trends to better understand the situation and drivers of malnutrition in the catchment area.</p>	<p>A ‘disease selection tool’ has been added to Step 1 to assist health facility staff in identifying which morbidities fluctuate the most throughout and between years and put a significant strain on workload and therefore would be most appropriate to set thresholds for. It is recommended that no more than two or three morbidities are ‘selected’ (including malnutrition).</p> <p>Similarly to CMAM Surge, a seasonal and events calendar and other morbidity trends graph is completed, with a focus on identifying the particular drivers of caseload fluctuations of the selected morbidity/ies. Total consultations (for the entire health facility or under 5) are plotted on the seasonal and events calendar.</p>
STEP 2: Capacity Review	<p>The capacity of the health facility to manage its regular, as well as an expanded malnutrition caseload is analysed.</p> <p>How the health facilities services are set up, staffing, and the workflow should be considered when determining what a ‘normal’ and ‘manageable’ malnutrition caseload is to preserve service quality. Pre-existing MoH CMAM capacity assessment tools should be used when available, and identified gaps for normal service provision should be added to routine planning.</p>	<p>In addition to determining what a ‘normal’ and ‘manageable’ caseload is for the selected morbidity, increased attention is given to the overall workload of the health facility (i.e. total consultations), and how the overall workload of the health facility varies between months.</p>
STEP 3: Threshold Setting	<p>A factor of multiplication is applied to the average monthly caseload to determined broad thresholds (alert, serious, emergency). Then based on the information gathered in Step 1 and Step 2, these thresholds are reviewed considering the past experience of the health facility in managing surges and their capacity.</p>	<p>Individual thresholds (alert, serious, emergency) are set for the selected morbidities by contrasting the information gathered in Step 1 (average caseloads) and Step 2 (capacity to provide quality treatment to these patients). Rather than using a formula to calculate the thresholds, they are set based on a conversation with key stakeholders.</p> <p>If the selected morbidity has been identified as being of public health importance to a specific country and subsequently the IDSR has established thresholds, these should be considered when setting the health facility level thresholds.</p> <p>In addition to the thresholds set for individual morbidities, the Health Surge model proposes setting an “investigation threshold”. This is a single threshold based on the total consultations for the entire facility (all ages or under 5 depending on how services and patient ‘flow’ are organized). The threshold should be set based on what the health facility defines as ‘normal capacity’ with the goal of ensuring that essential good quality services are always available when they are needed. The purpose of this threshold is to capture a significant change in the overall workload of the health facility, which may not be detected by individual morbidity thresholds.</p>

7. The [CMAM Surge Operation Guide](#) should be referred to for more details on each step.

	CMAM SURGE: OVERVIEW ⁷	HEALTH SURGE: ADAPTATIONS
STEP 4: Defining Surge Actions	<p>Step 4 in the CMAM Surge approach is entitled “Defining and Costing Surge actions”. In this step, Surge actions for the four phases (normal, alert, serious, emergency) are defined, and then if there are cost implications, a budget for the action is calculated.</p> <p>In the ‘normal’ phase, actions should focus on improving preparedness and prevention (rather than routine activities which should be included in standard planning). For example:</p> <p>Preparedness: training of non-nutrition staff on the national CMAM protocol so that they can support during periods of increased demand.</p> <p>Prevention: targeted malaria prevention campaign based on observed seasonal trends (e.g. heavy early rainfall).</p> <p>In the ‘alert’ phase the CMAM Surge actions should have no/minimal cost implications and focus on internal reorganisation/re-prioritisation and task shifting. In the ‘serious’ and ‘emergency’ phases it is likely that additional support from the district health team or partner will be required.</p>	<p>In Health Surge, actions should be defined by phases and also separated by those that are specific to the selected morbidity (e.g. pre-positioning of rapid diagnostic tests, increasing order of amoxicillin) and those that are general regardless of the morbidity (e.g. suspend annual leave, increase frequency of cleaning in waiting areas).</p> <p>In CMAM Surge the budgeting of the Surge actions is completed in Step 4, while in Health Surge it is suggested that a rough estimate of the cost associated with each Surge action is defined in step 4, but the budgeting is completed in Step 5.</p> <p>Investigation actions are also defined for when the ‘investigation threshold’ is crossed, with the aim of identifying the cause of the increased workload (e.g. review health facility admissions/consultation data).</p>
STEP 5: Costing Surge Actions and Formalizing Commitments	<p>CMAM Surge Step 5 is entitled “Formalising Commitments”. Agreements are made as to who will finance and complete the predefined and costed Surge actions when a specific threshold is breached. It is encouraged that a document formalising the commitment is produced to confirm the engagement (e.g. MoU, minutes of meetings etc.) to ensure the actions are triggered in a timely and efficient manner when required.</p> <p>To ensure the sustainability of Surge action plans, efforts should be made to integrate the Surge actions into district or regional annual health budgets.</p>	<p>As mentioned above, the process of costing the Surge actions is started in Step 4, but the budgeting of Surge actions has been moved to Step 5. Obtaining the financial commitment of stakeholders to finance Surge actions is one of the most frequently reported challenges in the CMAM Surge approach. To address this challenge, in Health Surge it is suggested that a meeting with key stakeholders is convened to review the Surge action plan and estimated costs. The Surge action plan is revised based on available finances and commitments are confirmed.</p> <p>As with CMAM Surge, where possible activities from the Surge action plans should be included in district or regional health plan when possible. Consideration should also be given to linking in with IDSR response functions or other health/emergency contingency funds if appropriate. Not all actions, will have cost implications, however agreements (e.g. identifying timeframes) should still be made with the relevant stakeholders.</p>
STEP 6: Monitoring Thresholds	<p>Monthly malnutrition caseloads are plotted on a graph, and compared against the thresholds set in step 3.</p> <p>The seasonal and events calendar is updated on a monthly basis. Other morbidities are plotted on a graph on a monthly basis. These trends are compared with past years. A forward planning chart is completed based on observed trends/changes, so that actions to prevent or prepare for a surge in malnutrition cases can be triggered.</p>	<p>In Health Surge, the other selected morbidity caseload (and malnutrition caseload if chosen) are plotted on a monthly basis on individual wall charts and contrasted with the pre-defined thresholds.</p> <p>Like CMAM Surge the seasonal and events calendar, and other morbidity trends graph should be updated on a monthly basis. In Health Surge it is suggested that the investigation threshold is marked on the seasonal and events calendar, and the monthly total consultations caseload plotted.</p>

	CMAM SURGE: OVERVIEW ⁷	HEALTH SURGE: ADAPTATIONS
STEP 7: Scaling up and scaling down	<p>If a threshold is breached, CMAM Surge actions are scaled up, the relevant persons are informed and the action completed.</p> <p>Once the situation stabilizes, and the caseload returns to 'normal' the actions are stopped.</p> <p>Step 7 is only initiated when required i.e. when a threshold is passed.</p>	<p>In Health Surge, depending on which morbidity threshold has been crossed, the disease specific actions are triggered, alongside any of the general actions which may be appropriate.</p> <p>If the investigation threshold is breached, firstly the cause of the increasing workload is investigated. Once the cause has been identified:</p> <p>If the increase in overall workload is due to the crossing of a disease specific threshold, regular Health Surge actions are continued as explained above.</p> <p>If the increase in overall workload is not due to the crossing of a disease specific threshold. A meeting with key stakeholders should be organised to decide on the appropriate action, some of the 'general' action may be appropriate.</p>
STEP 8: Reflect – regular review and adaptation	<p>During the monthly health facility meeting, thresholds should be reviewed to ensure that they reflect any changes in capacity or workload.</p> <p>At a minimum learning and review should happen:</p> <p>Post-Surge (once the situation stabilises). The aim of this review is to assess the quality and appropriateness of the response. It may be identified that Surge actions and/or thresholds should be revised.</p> <p>Annually. All Surge steps should be reviewed during an annual meeting. This includes reviewing other morbidity trends, seasonal and events calendar and the overall health facility capacity. This will allow any changes in the health facilities situation to be identified and may help to improve preparedness for the upcoming year.</p>	<p>The basis of Step 8 remains the same in Health Surge. However, the step has increased importance for Health Surge pilots, as tool and methodologies are being trialled for the first time.</p> <p>In addition to the review time points and considerations mentioned under CMAM Surge, the relevance of the selected morbidities (e.g. are malnutrition and malaria still the two childhood morbidities that have the greatest impact on workload) and the relationship between thresholds (e.g. if a health facility is in 'alert' for malnutrition caseload, is their capacity for managing malaria caseload reduced, and does the threshold need to change) should be reflected upon.</p>

6. Health Surge Learning Plan



FIGURE 1: Rahinatou Hachimou, Head of Koweit Health Facility, Tahoua Department explaining the Health Surge wall charts (May 2021)

Strong engagement and leadership is needed by health actors at district, national and international levels to continually review the relevance of the Health Surge approach. A Health Surge Learning Plan was elaborated to guide and consolidate this learning, with the objective of outlining the main learning questions; the sources of information; reviews, evaluations, and learning events planned between May 2021 and May 2022; and the main documents to be produced to share learning on the Health Surge approach.

As with CMAM Surge, Health Surge encourages adaptation and innovation of the approach to suit the context. For example, adaptations to the threshold setting methodology are being implemented by different partners (e.g. low level threshold for total consultations to try and capture when the number of patients presenting to the health facility for some reason, for that time of year, is below the average; calculating combined total consultations thresholds). It is hoped that lessons learnt from these adaptations will be captured through the learning process.

To capture this learning and facilitate the ongoing review of the approach a number of key events are planned (see Table 3):

- **Health Surge model review:** mixed methods desk review to analyses the current and potential role of the CMAM and Health Surge approach in creating shock-responsive health systems and a critical review of the proposed Health Surge model.
- **Health Surge Working Groups:** regular meetings to discuss implementation challenges, adaptation to tools and learning.
- **Two learning events:** Health Surge webinar (December 2021) and Health Surge workshop (March 2022) to facilitate broader sharing of experiences of implementing a Health Surge approach and engaging health experts.
- **Learning paper series:**
 - » #1: An Introduction to the Health Surge approach.
 - » #2: How can Health Surge add value to strengthening health systems?
 - » #3: Synthesis of learning to date on the Health Surge approach.

TABLE 3: Outline of key events in Health Surge Learning Plan

2021								2022				
May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
							Learning Webinar*			Learning Workshop**		
Health Surge Working Groups												
			Health Surge Model Review									
						Learning paper #1			Learning paper #2			Learning paper #3
<p>*West Africa CMAM Surge Taskforce Webinar on Health Surge **Francophone Health Surge Workshop (Niger)</p>												

You can find more information on CMAM Surge [here](#).
 For any additional information or questions contact cmamsurge@concern.net

Disclaimer: Funded by the European Union. Views and opinions expressed are however those of Concern only and do not necessarily reflect those of the EU or the EU’s Civil Protection and Humanitarian Aid Operations department (ECHO), or other implementing partners referenced in the paper. Neither the EU, ECHO, nor other implementing partners referenced can be held responsible for them. This paper is published as part of Concern’s Enhanced Responses to Nutrition Emergencies programme, funded under a Pilot Programmatic Partnership between Concern and ECHO.