



## Lodwar County and Referral Hospital, Turkana, Kenya

Date: October 31, 2016	Prepared by: Emma Kiriungi
<b>I. Demographic Information</b>	
1. City & Province: Lodwar, Turkana, Kenya	
2. Organization: Real Medicine Foundation ( <a href="http://www.realmedicinefoundation.org">www.realmedicinefoundation.org</a> ) Medical Mission International ( <a href="http://www.mminternational.org.uk">www.mminternational.org.uk</a> )	
3. Project Title: Lodwar District Hospital (new name: Lodwar County & Referral Hospital - LCRH) Support - Health Systems Strengthening in Turkana, Kenya	
4. Reporting Period: July 1, 2016 – September 30, 2016	
5. Project Location (region & city/town/village):	
<ul style="list-style-type: none"> <li>Location: Lodwar County &amp; Referral Hospital (formerly Lodwar District Hospital), Lodwar, Turkana – Rift Valley Province, Kenya – 1,000 km from the capital city, Nairobi</li> <li>Area coverage: 750 km<sup>2</sup></li> <li>Geographical characteristics: Arid area characterized by scarcity and poor infrastructure (lack of quality roads, electricity, and other social amenities)</li> <li>Means of transportation: Mainly trekking, with a few buses only on the main road that joins other parts of the country</li> <li>Lifestyle: Nomadic, moving from one place to another</li> <li>Dependency: Few animals - cows and goats; dependent on relief aid by WFP (World Food Programme), Kenya Red Cross, and other agencies</li> </ul>	
6. Target Population: Over 900,000 residents of the Turkana region	
<p>Even though Lodwar County &amp; Referral Hospital (formerly Lodwar District Hospital) officially only covers Turkana Central, in practice the district hospitals in Turkana North and South are not functional; hence the patients from those areas also come to Lodwar for referral care.</p> <p>Lodwar County &amp; Referral Hospital (LCRH) is the only functional hospital in the entire Turkana region. It is categorized as a level 4 facility, which ideally should serve a population of 100,000, with limited human resources, personnel, and medical supplies. Yet currently, Lodwar County &amp; Referral Hospital (formerly Lodwar District Hospital) is functioning as a referral facility for all of the Turkana region's 90 health centers and dispensaries, as well as many in the neighboring countries of Uganda and South Sudan. This increases Lodwar County &amp; Referral Hospital's catchment population to almost 1 million people.</p>	
<b>II. Project Information</b>	
7. Project Goal:  Enable Lodwar County & Referral Hospital (formerly Lodwar District Hospital) to fulfill its role of providing referral health care for the Turkana region.	
8. Project Objectives:	

- Rehabilitate the infrastructure of Lodwar County & Referral Hospital (formerly Lodwar District Hospital), beginning with the Pediatric ward and proceeding to Male and Female wards, the Outpatient department, Operating Theatre, and Physiotherapy department.
- Rehabilitate the equipment set at Lodwar County & Referral Hospital (formerly Lodwar District Hospital), beginning with the Pediatric ward and proceeding to Male and Female wards, the Outpatient department, Operating Theatre, MCH, Dental, Orthopedic, Maternity, Casualty, and Physiotherapy departments.
- Provide regularity of supplies: basic medical devices, disposables, and pharmaceuticals, complementing the items from Kenya Medical Supplies (KEMSA).
- Provide equipment maintenance and spare parts management.
- Organize on-site clinical training, beginning with general equipment use and care, and pediatric emergency care.
- Provide outreach campaigns.

9. Summary of RMF/MMI-sponsored activities carried out during the reporting period under each project objective (note any changes from original plans):

### Medical Equipment

During this quarter, RMF continued its strong support of Lodwar County & Referral Hospital (LCRH) by supplying the hospital's departments with needed medical equipment. Departments that received new equipment include the Maternity ward, Pediatric ward, Occupational Therapy ward, and Physiotherapy department.

- The Maternity ward received ambu bags and glucometer strips. The head of the Maternity ward was very excited to receive this equipment, as it was in high demand. Glucometer strips, in particular, were needed to confirm mothers' glucose levels before conducting emergency cesarean sections.
- The Pediatric ward received an infant nasal aspirator, along with ambu bags, reservoir bags, and face masks.
- The Operating Theatre received two minor cesarean sets.
- The Occupational Therapy ward received cervical collars, a hammer massager, an Energy King massager, and a powerful massager.
- And lastly, the Physiotherapy department received orthopedic casting tape: 3", 4", and 5". They also received elastic shoulder supports.

### Medical Supplies

Continuing its emphasis on pediatric support, RMF purchased comprehensive medical supplies for the Pediatric ward. Emergency drugs that are never supplied by KEMSA have continued to be supplied by RMF/MMI for the pediatric patients. Drugs including Floxapen, Zinnat, phenobarbital, fluconazole, Darrow's solution, adrenaline, flucloxacillin, phenytoin, mannitol, Fortum, and Ventolin respirator solution were purchased. Before these drugs were provided by RMF/MMI, patients were asked to purchase them from local clinics, and many patients could not afford to do so. The constant supply of these essential drugs and many others have gone a long way in benefitting the pediatric patients and ensuring that the Pediatric ward continues to register low mortality numbers.

### Non-Pharmaceutical Supplies

As always, to support the entire hospital, RMF continues to purchase non-pharmaceutical supplies. Non-pharmaceuticals purchased include glucometer strips, gauze rolls, strapping adhesives, granular gauges, gloves, surgical spirit, examination gloves, crepe bandages, and paraffin gauze, among other essential non-pharmaceuticals. These non-pharmaceuticals are not only important in the day-to-day running of the hospital, but also in the case of emergencies with urgent needs, such as traffic accidents, and when the hospital is in a crisis because of many patients needing care at the same time, when large amounts of non-pharmaceuticals are required.

10. Results and/or accomplishments achieved during this reporting period:

- The hospital continues to record a high number of patient visits with a low number of mortality cases due to the availability of emergency drugs (which are usually very costly, but now are given to patients for free). This has been constant since RMF's partnership with the hospital began in 2011.
- The Pediatric ward benefitted by receiving equipment such as reservoir bags, face masks, and drugs.
- The Operating Theatre benefitted by receiving equipment such as minor cesarean sets.
- The Maternity ward benefitted by receiving glucometer strips and ambu bags.
- The Occupational Therapy ward benefitted by receiving cervical collars, a hammer massager, Energy King massager, and a powerful massager.

- The Physiotherapy department benefited by receiving equipment such as orthopedic casting tape: 3", 4" and 5". They also received elastic shoulder supports.
- Pediatric patients continued to receive medical treatment and supplies for free. Emergency drugs that are not supplied by KEMSA and that patients would otherwise have to purchase are provided free of charge.
- The hospital also remains clean, and nosocomial infections are being prevented as much as possible with the constant provision of cleaning supplies and disinfectants from RMF.
- Hospital stays for patients are minimal due to the availability of emergency drugs. Patients are attended to and discharged quickly.
- Traffic accidents and other emergencies are handled efficiently with RMF/MMI's constant provision of non-pharmaceutical supplies for the entire hospital.
- All wards continue to benefit from the free supply of non-pharmaceuticals purchased by RMF.
- The sterilizer that was purchased for the Operating Theatre last year continues to be used by the entire hospital. Equipment can now be sterilized after procedures, thus preventing patient infection.

11. Impact this project has on the community (who is benefiting and how):

Patients continue to access quality health care in a clean, friendly environment conducive to healing. Real Medicine Foundation's approach of being needs-oriented and working with flexibility has brought change to Lodwar County & Referral Hospital (formerly Lodwar District Hospital) as a whole. The hospital continues to remain clean and hygienic; nosocomial infections are kept as low as possible.

The entire hospital staff and local community have benefited from the project. The hospital staff, i.e. the medical officers, nurses, and support staff, have profited by working in better conditions, in terms of infrastructure and medical supplies. The pediatric patients continue to benefit from our program by receiving free emergency medical treatment when admitted.

Availability of supplies has also consistently motivated the hospital staff in serving the Turkana people/patients, making it much easier for them to do their work effectively. The community has benefited tremendously in the sense that drugs and non-pharmaceuticals are available. The locals no longer have to buy (or do without) costly drugs, syringes, gauze rolls, cotton wool, and emergency drugs, as these are supplied by RMF for the inpatient units at the hospital.

Not only have the Pediatric ward and Male and Female wards benefited from the project, but the Operating Theatre has also been improved by RMF's support. Patients with fractures coming to the hospital from Lodwar and neighboring communities can now be attended to by the surgeon without further referral, since all the equipment has been supplied by RMF.

Consistent availability of medical supplies in the Pediatric ward has also enabled patients to be treated and discharged at no cost. The hospital staff continues to be very motivated thanks to the continued support they get from RMF/MMI.

12. Number served/number of direct project beneficiaries (for example, average number treated per day or month and if possible, per health condition).

- **31,944** outpatients (**8,910** being pediatric outpatients) were treated at Lodwar County & Referral Hospital (formerly Lodwar District Hospital) in the third quarter of 2016.
- **924** inpatients were treated at Lodwar County & Referral Hospital (formerly Lodwar District Hospital) in the third quarter of 2016.

Please refer to the morbidity and mortality tables in **Appendix B**.

13. Number of indirect project beneficiaries (geographic coverage):

Lodwar County & Referral Hospital (formerly Lodwar District Hospital) is now the county referral hospital for the Turkana region, whose current population exceeds 1 million people. Lodwar County & Referral Hospital is the only functional hospital in the area with the capacity to support referral cases. RMF's support through the supply of emergency drugs, medical equipment, non-pharmaceuticals, and the now complete infrastructure repairs of the inpatient unit has enabled Lodwar County & Referral Hospital to provide all these services. It is a referral center for these 7 sub-counties (and also continues receiving patients from Uganda, Ethiopia and South Sudan):

1. Turkana South
2. Turkana North
3. Turkana Central
4. Turkana East
5. Turkana West
6. Loima
7. Kibish

14. If applicable, please list the medical services provided:

- Curative: treatment of illness, diagnosis (lab investigations, x-rays), management and follow-up review with a medical doctor and/or clinical officer
- Preventive: promotion of good health education, such as safe water, safe motherhood, HIV prevention, and school health programs
- Rehabilitative: occupational therapy and physiotherapy
- Eye clinic
- Dental services

15. Please list the five most common health problems observed within your region.

1. Malaria
2. Gastroenteritis
3. Anemia
4. Pneumonia
5. Severe Acute Malnutrition

16. Notable project challenges and obstacles:

Unavailability of proper roads and public transportation to enable locals to bring sick patients to the hospital in time; patients have to walk long distances — frequently for days — to get to the hospital. Many sick patients do not get to the Lodwar County & Referral Hospital (formerly Lodwar District Hospital) in time, which reduces their chances of survival.

17. If applicable, plans for next reporting period:

- 1) Continuous support of the Pediatric ward in terms of medicines, medical supplies, non-pharmaceutical supplies, and equipment maintenance
- 2) Provision of medical equipment for the Operating Theatre
- 3) Provision of medical equipment and supplies for the Pediatric ward
- 4) Provision of medical supplies, specifically non-pharmaceuticals, for the entire hospital

18. If applicable, summary of RMF/MMI-sponsored medical supply distribution and use:

Provision of medicines, medical supplies (for the inpatient Pediatric ward) and non-pharmaceuticals for the entire hospital - inpatient and outpatient units - priority is given to the Pediatric ward in terms of distribution and use.

19. Success story(s) highlighting project impact:

### Success Story 1

**Name:** Akal Atabo  
**Age:** 19 months old  
**Origin:** Kawalase

**History:** Akal was admitted through the CCC (Comprehensive Care Clinic) department with complaints of fever, vomiting, severe wasting, and abdominal pain. This was the first time she was admitted with these symptoms. Akal was born in the hospital with no complications. She got all of her immunizations as per schedule. Akal is the youngest child in a family of four children.

**Diagnosis:** Acute G.E. and Pneumonia with Severe Acute Malnutrition

- Blood slide (for malaria), negative
- Malnutrition (SAM)

**Treatment:**

- Gentamycin 40 mg od x 5/7
- Multivitamins
- X-Pen ½ ml, qid 5/7
- Amoxicillin 150 mg tds 3/7
- Paracetamol 5 ml qid 3/7

**Management of Malnutrition:**

Therapeutic milks: F-75 for three days, then F-100 for six days. Akal progressed well and was discharged after fifteen days. The medications used to treat her until the day of her discharge were purchased by RMF. These medicines were provided to Akal free of charge, and enabled her quick recovery.



*Akal on admission*



*Akal on the day of discharge*

**Success Story 2**

**Name:** Ikone Samuel

**Age:** 55 months old

**Origin:** Nawaitorong

**History:** Ikone was admitted with burns. He was playing when he accidentally hit a cooking pot with hot water and it poured on him. Ikone was delivered in the hospital with no complications. He did not get all the immunizations as per schedule.

**Diagnosis:** Second degree burns

**Treatment:**

- Dressing the wound twice a day
- Daily cleaning of the wounds to remove dead skin and ointment
- Ibuprofen
- Antibiotic cream

**Nutrition Management:**

Ikone was put on a high protein diet to aid in his quick recovery. The drugs used to treat him until the day of his discharge were purchased by RMF. These drugs were provided to Ikone free of charge, and his recovery may not have been possible without this support from RMF/MMI.



*Ikone on admission*



*Ikone on discharge*

### Success Story 3

**Name:** John Esinyen

**Age:** 7 years old

**Origin:** Kalokol

#### **History:**

John was admitted with complaints of difficulty breathing, headache, fever, distended stomach, and general body weakness. This was the first time he was admitted with these symptoms. John was born at home with no complications. He did not get all the immunizations as per schedule.

**Diagnosis:** Ascites

#### **Treatment:**

- Aldactone 100 mg
- Lasix 40 mg
- Frequent therapeutic paracentesis

#### **Nutrition Management:**

Restricting dietary sodium (salt) intake to less than 2 grams per day. He was on medication and under close observation.



John on admission



John on discharge

20. Photos of project activities (file attachment is fine):

See Appendix A

### III. Financial Information

21. Detailed summary of expenditures within each budget category as presented in your funded proposal (file attachment is fine). Please note any changes from plans.

Sent separately

## APPENDIX A



Cervical collars received by the Occupational Therapy ward



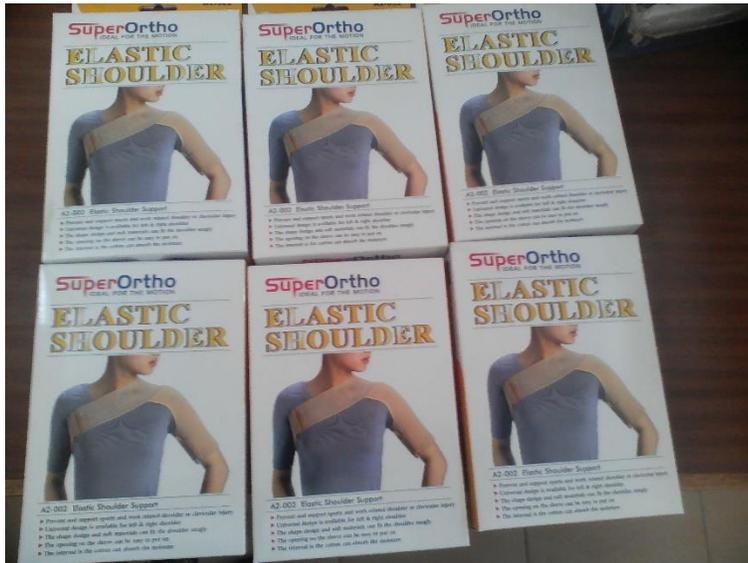
*Energy King massager received by the Occupational Therapy ward*



*Massager received by the Occupational Therapy ward*



*Powerful massager received by the Occupational Therapy ward*



Shoulder supports received by the Physiotherapy department



Orthopedic casting tape received by the Physiotherapy department



*Face masks received by the Pediatric department*



*Two minor cesarean sets received by the Operating Theatre*

**APPENDIX B**

**LODWAR DISTRICT HOSPITAL: Q3 2016**

**TOTAL OUTPATIENT SERVICES: JULY – SEPTEMBER 2016**

No.	GENERAL	JULY	AUGUST	SEPTEMBER	TOTAL
1	<b>GENERAL OUTPATIENT (FILTER CLINICS)</b>				<b>QUARTER (3 MONTHS)</b>
	Over 5 years Male	819	1,154	892	<b>2,865</b>
	Over 5 years Female	905	1,286	1,152	<b>3,343</b>
	Children under 5yrs Male	340	470	558	<b>1,368</b>
	Children under 5yrs Female	364	454	516	<b>1,334</b>
	<b>TOTAL</b>	<b>2,428</b>	<b>3,364</b>	<b>3,118</b>	<b>8,910</b>
2	<b>CASUALTY</b>	2,634	2,620	3,124	<b>8,378</b>
3	<b><u>SPECIALITY CLINICS</u></b>				
	Eye Clinic	399	395	418	<b>1,212</b>
	ENT Clinic	26	23	19	<b>68</b>
	STI	4	1	0	<b>5</b>
	MOPC, SOPC, POPC	223	242	108	<b>573</b>
4	<b><u>MCH, FP CLIENTS</u></b>				
	CW Attendance	3,229	2,708	2,810	<b>8,747</b>
	ANC Attendance	496	632	612	<b>1,740</b>
	FP Attendance	407	542	601	<b>1,550</b>
5	<b>DENTAL CLINIC</b>	262	298	201	<b>761</b>
	<b>GRAND TOTAL</b>	<b>10,108</b>	<b>10,825</b>	<b>11,011</b>	<b>31,944</b>

**INPATIENT MORBIDITY & MORTALITY: PEDIATRIC WARD JULY – SEPTEMBER 2016**

	DISEASE	ALIVE	DEAD
1	MALARIA	198	9
2	DIARRHEA	32	5
3	HIV	7	3
4	TUBERCULOSIS	6	2
5	INSECT BITES	9	0
6	SNAKE BITES	4	0
7	FRACTURE	6	0
8	SAM	68	7
9	ANEMIA	22	6
10	BURNS	6	0
11	MENINGITIS	1	0
12	SEPTICEMIA	7	1
13	HERNIA	4	0
14	GASTROENTERITIS	36	5
15	INTESTINAL OBSTRUCTION	3	0
16	CELLULITIS	0	0
17	DENTAL ABSCESS	3	0
18	ROAD TRAFFIC ACCIDENT	2	0
19	NEONATAL SEPSIS	8	0
20	GUNSHOT	0	0
21	SEPTIC SCROTUM	1	0
22	FEBRILE CONVULSION	11	4
23	POISONING	0	0
24	TYPHOID	1	0
25	POOR VISION	0	0
26	PNEUMONIA	68	8
27	SOFT TISSUE INJURY	0	0

28	RHEUMATIC HEART DISEASE	1	0
29	DEHYDRATION	28	6
30	ALLERGIC REACTION	5	0
31	NEPHROTIC SYNDROME	0	0
32	RTI	3	0

#### INPATIENT MORBIDITY & MORTALITY: FEMALE WARD JULY – SEPTEMBER 2016

	DISEASE	ALIVE	DEAD
1	MALARIA	72	4
2	PNEUMONIA	22	6
3	TUBERCULOSIS	9	3
4	FRACTURE	5	0
5	CERVICAL PROLAPSE	4	0
6	PUERPERAL SEPSIS	0	0
7	GASTROENTERITIS	13	4
8	ANEMIA	21	6
9	ECTOPIC PREGNANCY	1	0
10	CEREBRAL VASCULAR ACCIDENT	0	0
11	HEPATITIS	0	0
12	PREMATURE RAPTURE OF MEMBRANE	4	0
13	DERMATITIS	3	0
14	HIV	11	5
15	BURNS	1	0
16	HERNIA PROLAPSE	3	0
17	GUNSHOT	2	1
18	VESCIOVAGINAL FISTULA	0	0
19	SEPTIC WOUND	6	0
20	EPILEPSY	0	0
21	CONGESTIVE CARDIAC FAILURE	0	0
22	SNAKE BITES	6	1
23	LIVER CIRRHOSIS	0	0
24	INSECT BITES	9	0
25	DISORDERED UTERINE BLEEDING	2	0
26	ACUTE ABDOMEN	5	0
27	POSTPARTUM HEMORRHAGE	0	0

#### INPATIENT MORBIDITY & MORTALITY: MALE WARD JULY – SEPTEMBER 2016

	DISEASE	ALIVE	DEAD
1	MALARIA	69	9
2	PNEUMONIA	29	5
3	TUBERCULOSIS	14	6
4	FRACTURE	6	0
5	DIARRHEA	7	3
6	GUNSHOT	6	1
7	CANCER	0	0
8	HYPERTENSION	1	0
9	CONGESTIVE CARDIAC FAILURE	0	0
10	ANEMIA	16	4
11	POISONING	3	0
12	HEPATITIS	0	0
13	TYPHOID	2	1
14	INSECT BITES	5	0
15	PLEURAL EFFUSION	0	0
16	KALA AZAR	3	1
17	PSYCHOSIS	2	0
18	PEPTIC ULCER DISEASE	12	3
19	SOFT TISSUE INJURY	6	0
20	MENINGITIS	0	1
21	SNAKE BITES	2	0

22	ACUTE ABDOMEN	3	0
23	BENIGN PROSTATIC HYPERPLASIA	0	0
24	BURNS	0	0
25	CONTRACTURES	0	0
26	RECTAL PROLAPSE	0	0
27	APPENDICITIS	1	0
28	CEREBRAL VASCULAR ACCIDENT	1	0
29	HIV	12	9
30	EPISTAXIS	0	0
31	ASTHMA	2	0
32	HEAD INJURY	6	2
33	CELLULITIS	0	0
34	CUT WOUNDS	1	0
35	ALCOHOLIC INTOXICATION	0	0
36	ACID POISONING	0	0
37	RENAL DISEASE	1	0
38	BRONCHITIS	0	0
39	URINE RETENTION	3	0
40	HERNIA	2	0
41	STAB WOUND	0	0
42	ORCHITIS	0	0
43	HYPOGLYCEMIA	5	1

#### OCCUPATIONAL THERAPY: JULY – SEPTEMBER 2016

	DIAGNOSIS	TOTAL
1	Cerebral palsy	76
2	Delayed developmental milestones	148
3	Hemiplegic	26
4	Congenital malformation	9
5	Down syndrome	11
6	Fracture	2
7	Speech disorder	9
8	Microcephalus	17
9	Newborn screening	42
10	Learning disorder	4
11	Static nerve injury	2
12	Failure to thrive syndrome	0
13	Phobias	19
14	Mental retardation	10
15	Hydrocephalus	4
16	Osteogenesis imperfecta	4
17	Burns	12
18	Rheumatoid Arthritis	3
19	CTEV	13
20	Erb's Palsy	6

#### APPENDIX C



### **Investing in People, Investing in Health**

As part of our health systems strengthening and capacity building efforts in Turkana, Kenya, we sent RMF Kenya's Project Coordinator, Emma Fredah Kiriungi, to an Integrated Management of Acute Malnutrition (IMAM) Surge training session in Naivasha, Kenya.

RMF believes that by investing in passionate, in-country health professionals like Emma, we are investing not only in those individuals, but also in the present and future health of the country. Continued training and support of our team members is another way that RMF seeks to empower difference makers worldwide, living out our philosophy of "Friends Helping Friends Helping Friends."

## **Integrated Management of Acute Malnutrition (IMAM) Surge Training – Naivasha, Kenya**

Date: August 8, 2016 – August 12, 2016

Prepared by: Emma Fredah Kiriungi

### **Training Overview: Day 1 to Day 5**

#### **Day 1**

- Basic introduction of the participants and workshop training
- Raising awareness of how the Integrated Management of Acute Malnutrition (IMAM) Surge approach works
- Introduction to IMAM Surge approach and toolkit
- Trend and situation analysis
- Capacity review
- Brief summary of the day

#### **Day 2**

- Threshold setting
- Defining surge actions at the health facility level, facilitating the process, and using the tools within the steps
- Finalizing and pricing surge actions at the SCHMT level
- Monitoring thresholds as well as the scaling up and scaling down of surge
- Brief summary of the day

#### **Day 3**

- Introduction to sub-county level, to understand and be able to analyze risk factors and trends at the sub-county level using a variety of indicators available
- Capacity review
- Threshold setting for each phase
- Pricing surge action at sub-county level and establishing actions to be carried out during each phase
- Brief summary of the day

#### **Day 4**

- Monitoring the evolving nutrition situation and phase classification based on the threshold setting
- Understanding how the approach will be monitored and be able to put it into place (monitoring and evaluation)
- Facilitation skills
- Brief summary of the day

#### **Day 5**

- Facilitation skills
- Roll out plans for each sub-county so as to provide the opportunity for each health team to define next steps for the surge approach in their sub-counties
- Wrap-up and evaluation of the workshop:
  - Receiving feedback on the workshop in order to improve it in the future
  - Appreciating the participants for their involvement in the workshop

### **Summary**

**IMAM Surge Goal:** To approach and 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.

**Current Situation:** Under the IMAM model, when an emergency hits:

- It is usually a scramble to figure out what to do, as no (or few) plans are in place and nothing is ready.
- There is usually a delay in the response, particularly as funds are mobilized.
- The response sometimes replaces existing capacity, instead of supporting it.

That why we are scaling to surge approach.

**Surge Benefits and Background:** Surge is an approach that can complement health systems strengthening (HSS) efforts by helping to develop a health system that is more resilient to changes in demand for IMAM services caused by regular shocks and stresses experienced in arid and semi-arid land (ASAL) areas.

A very large increase in the prevalence of acute undernutrition and an accompanying surge in demand for IMAM services is classified as an emergence. 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 stop once it was determined that the prevalence and surge were below certain thresholds. This type of emergency approach has been much criticized for its inflexibility, frequent delays, lack of sustainability and the negative impacts it has on the on the existing health system. Consequently, health and nutrition partners have made significant investments in developing local government capacity to manage emergencies and surges. 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 system strengthening efforts result in a stronger and more resilient health system at all times while addressing both emergency surges and chronic term needs in the integrated management of acute malnutrition (IMAM).

### **Underlying Principles**

- **Government led:** Strengthening local capacity and aligning with government priorities, since they determine when and how they require additional capacity support.
- **Development of resilience:** The health system is strengthened in such a way that the system develops greater resilience over the long term.
- **Adaptable and flexible:** Surge approach threshold, 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 address local problems within an environment of limited resources.
- **Participatory:** The surge approach is problem driven and tailored to the context, needs, and capacities of each level of the health system, based on regular participatory capacity assessment for effective response.
- **Transparent:** Threshold, capacity support, and partnership modalities for support are agreed by all parties.
- **Health systems strengthening:** The surge approach is embedded within a health systems strengthening strategy and related existing activities and efforts and is not an emergency response.

**Objective:** To strengthen the capacity of the government health system to effectively manage increased demand for services for the management of acute malnutrition before, during, and aftershocks whilst protecting and supporting ongoing health and nutrition system strengthening efforts.

**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.

### **Implementing the 8-Step Surge Approach: Focus on the Health Facility**

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

- Step 1 – Trend and risk analysis: This step first analyses trends in the caseloads within a health facility (HF) and then analyses factors that influence access to health care and health seeking behavior. 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 behavior, known as drivers of caseload of IMAM in the months ahead.
- Step 2 – Capacity review: This step guides the health facility (HF) 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.
- Step 3 – Threshold settings: This is the process whereby surge stakeholders of each individual HF bring together the information from the trends and risk analysis as well as their capacity to handle the workload of patients that they have and consider when they may need help to respond to any increase in demand for IMAM services.

Thresholds are set in four phases:

Phase	Description of the Phase at the Health Facility
Normal	When the health facility (HF) can handle its workload, and has adequate resources to meet the demand for services.
Alert	When the HF starts to be overstretched due to an increased number of IMAM patients, but can mostly handle the situation by reorganizing itself 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.
Alarm	When the HF is overstretched from the increased caseload and requires additional support from SCHMT and partners in order to appropriately meet the additional demands. This is when reorganizing within the HF and mobilization of the HF's own resources are insufficient to handle the situation.
Emergency	When the caseload in the HF is beyond the capacity of the staff and they need substantial external support to ensure: a) the HF is functioning at full capacity, and b) the population is able to access appropriate services in a timely manner.

- Step 4 – Defining and pricing of the surge package: This step is a process to define what actions should be undertaken to ensure that the health facility (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 alert, alarm, or emergency phase.

WHO Health System Building Blocks	Surge Actions
Service Delivery	Review/direct patient flow to speed up patient movement and efficiency Move from weekly to daily outpatient therapeutic services Give bi-weekly ready-to-use therapeutic food (RUTF) rations Ensure discharge protocols are followed to avoid growing IMAM caseloads
Community	Increase community volunteer or paid community staff Increase number of outreach sites/set up mobile clinics to improve access Increase frequency of follow up of absentees, defaulters, and non-responders Increase regularity of screening within the community
Human Resources	Better plan/shift staff leave Extend working hours Make temporary staff accommodation, recruit and train staff on temporary basis or engage volunteers Provide overtime compensation to current staff
Medicine, Supplies, Equipment, and Infrastructure	More frequent inventories and stock requests Use of text messages to facilitate communicating stock needs, pre-positioning buffer stocks of therapeutic/supplementary foods and drugs Transport of supplies
Health Information	Increase frequency of monitoring to fortnightly or weekly

	On-the-job refresher training on use of reference materials Produce additional reference materials and job aids for new or temporary staff Monitor thresholds and communicate when they are crossed
Leadership and Governance	Increased communication between HF and SCHMT Conduct more frequent coordination meetings Increase joint supervision meetings and on-the-job training by SCHMT staff
Financing	Additional budget for personnel, stocks, phone credit, and transportation Price each surge action for HF and sub-county

- Step 5 – Formalizing agreements and commitments: 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.
- Step 6 – Monitoring caseloads against thresholds: It involves monitoring the demands for services in real time and paying attention to whether thresholds that have been set are crossed. Staff of the health facility (HF) keep track and visualize their actual workload/caseload for diarrhea, pneumonia, malaria, MAM, and SAM using the data that they report to the HMIS.
- Step 7 – Scaling up and scaling down surge actions: This step encompasses the process to activate and scale up the package of surge actions when admissions for SAM or MAM exceeds thresholds, as well as to deactivate and scale down the package when the situation normalizes.
- Step 8 – Reflect (regular review and adaptation of surge activities at the health facility): This action 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 (HF) is better able to respond to fluctuations in demand for IMAM services.

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

1. Routine monitoring
2. Annual/periodic surge review
3. Post-surge response review
4. Review of thresholds

### Surge Approach at the Sub-County and County Level

The surge approach has two main aims:

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

### Steps Involved

- Step 1 – Trend and risk analysis:
  - Analysis of admission trends in the context of SAM and MAM caseloads reported in the sub-county from the DHIS.
  - Analysis of drought early warning information such as VCI, MUAC, and milk consumption that are collected, analyzed, and reported on a monthly basis by NDMA.
  - Analysis of the prevalence of acute malnutrition using SMART surveys and rapid nutrition assessment.
- Step 2 – Capacity review (consider whether the county or sub-county has the following in relation to IMAM):
  - Supplies
  - Human resources
  - Service delivery
  - Financing
  - Information
  - Leadership and governance

- Step 3 – Threshold settings: 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.

Phase	Proportion of Facilities Reporting Alarm or Emergency Phase	PLUS	VCI	NDMA Drought Phase	SMART Survey GAM Rates
Normal	<25% of Health Facilities		>35	Normal	<10%
Alert	25 - 50% of Health Facilities		30 - 35	Alert	10 - 15%
Alarm	50 - 70% of Health Facilities		20 - 30	Alarm	>15%
Emergency	>70% of Health Facilities		<20	Emergency	>20%

- Step 4 – Defining and pricing surge action: Establishing actions to be carried out during each phase and the costs of additional actions linked to IMAM scale up, and to ensure that sub-counties and counties have the capacity to meet the surge needs.
- Step 5 – Defining communication arrangements and commitments to trigger scale up/down response: Ensure that there is a clear communication channel and a mutual, formal agreement and understanding of who does what, when, and how by all the stakeholders involved in the surge at all levels.
- Step 6 – Monitoring the nutrition situation at the sub-county and county level against thresholds: Monitoring the evolving nutrition situation and phase classification so as to trigger the correct response in real time at the county and sub-county level.
- Step 7 – Scaling down surge action: When to scale down surge actions due to the improving nutrition situation as reflected by a decreasing number of health facilities in elevated phases.
- Step 8 – Evaluating the surge at a sub-county, county, and national level: The objective is to compare and learn from the experience of different counties and partners for the purpose of strengthening the approach.

### Roles and Responsibilities of Various IMAM Surge Stakeholders

#### MOH at the Sub-County and County Level

- Health workforce
- Service delivery
- Monitoring and evaluation
- Products and supplies
- Information

#### Health Management Teams (SCHMT & CHMT)

- Leadership and governance
- Information

#### County Nutrition Technical Forum (CNTF)

- Discuss technical issues that are related to nutrition interventions in their administrative units and advise HMTs
- Select a subcommittee to meet on a frequent/agreed basis to coordinate emergencies

#### NDMA

- Information
- Financing
- Workforce
- Leadership

#### NGOs and Partners

- Financial and technical support
- Service delivery
- Support some of the cost of HMT staff being involved in outreach, screening, monitoring, and supervision at the emergency phase
- Mentorship of health facility (HF) staff during the emergency phase
- Support the collection and analysis of credible nutrition data

UN (UNICEF, UNOCHA, WFP) and other Donors

- Financial and service delivery
- Work with MOH and partners to ensure policies and structures that advocate for surge implementation are in place

### **Recommendations**

Considering that RMF was one of the NGOs selected to attend the IMAM Surge training, we have the upper hand when being considered for IMAM Surge implementation. These are my recommendations:

1. To write a proposal to UNICEF, for RMF to be an implementing partner in the IMAM Surge.
2. To support the MOH in outreaches, screening, monitoring, and supervision, especially in insecure and hard to reach areas.
3. To support the MOH in human resources and capacity building to create early awareness and better service delivery, so as to maintain a normal nutrition situation.