



Makueni County Community Assessment

Assessment Findings Report

September 2023



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List of abbreviations

BCC	Behavior Change Communication
BBQ	Barrier Booster Question
BSFP	Blanket Supplementary Feeding Program
CBO	Community Based Organization
CHA	Community Health Assistant
CHEW	Community Health Extension Worker
CHMT	County Health Management Team
CHV	Community Health Volunteer
CHP	Community Health Promoter
CHW	Community Health Worker
CMAM	Community Management of Acute Malnutrition
CMN	Coverage Monitoring Network
CNC	County Nutrition Coordinator
CU	Community Units
DQA	Data Quality Assessment
EBF	Exclusive Breastfeeding
FSN	Food Security and Nutrition
GAM	Global Acute Malnutrition
GBV	Gender-Based Violence
GMP	Growth Monitoring and Promotion
HAZ	Height-for-age Z-score
HIV	Human Immunodeficiency Virus
IEC	Information Education and Communication
IGA	Income generating activity
IMAM	Integrated Management of Acute Malnutrition
INGOs	International Non-Government Organizations
IYCF	Infant and Young Child Feeding
LQAS	Lot Quality Assurance Sampling
M&E	Monitoring & Evaluation
MAD	Minimum Acceptable Diet
MAM	Moderate Acute Malnutrition
MoA	Ministry of Agriculture
MoH	Ministry of Health
MUAC	Middle-Upper Arm Circumference
NDMA	National Drought Management Authority
NGO	Non-Governmental Organization
ORS	Oral Rehydration Salt
OTP	Outpatient Therapeutic Program

PHO	Public Health Officer
PLW	Pregnant and Lactating Women
PSP	Private Sector Providers
RUTF	Ready to Use Therapeutic Feeds
SAM	Severe Acute Malnutrition
SBC	Social and Behavior Change
SCHMT	Sub County Health Management Team
SDG	Sustainable Development Goals
SFP	Supplementary Feeding Program
SMART	Standardized Monitoring Assessment on Relief and Transition
COMMUNITY ASSESSMENT	Semi Quantitative Evaluation on Access and Coverage
SUN	Scaling Up Nutrition
SWOT	Strengths, Weaknesses, Opportunities and Threats
TBAAs	Traditional Birth Attendants
THPs	Traditional Health Practitioners
U5	Under 5 (years in age)
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WAZ	Weight-for-age Z-score
WFP	World Food Programme
WG	Working Group
WHO	World Health Organization
WHZ	Weight-for-height Z-score

Acknowledgements

The successful implementation of the Makueni County Community assessment was due to the great support and dedication of partners. Makueni County would like to thank the following organizations:

- World Food Program
- United Nations Children's Fund
- World Vision

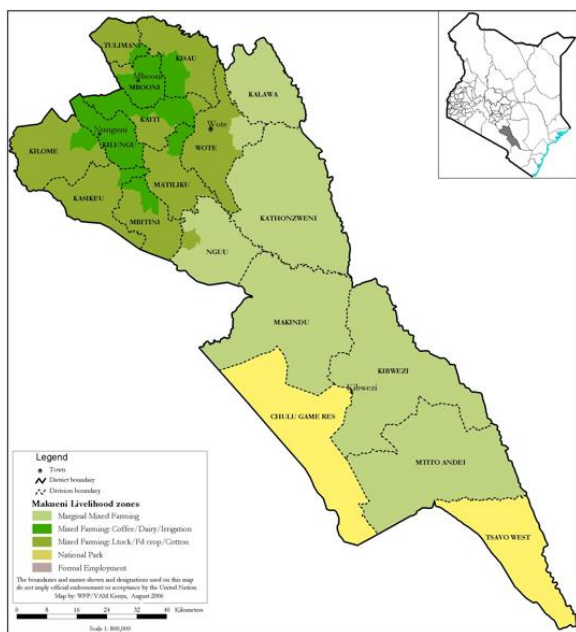
Special thanks to the National nutrition Information Technical working group for technical guidance during protocol development, assessment implementation and validation as well as technical backstopping.

Finally, the most heartfelt gratitude goes to the team that participated in data collection process, the Village Elders and all the respondents who participated in the generation of data that made this assessment successful.

I INTRODUCTION

I.1 Background

Makueni county is one of the 47 counties in Kenya. It is situated in the Southeastern part of the country and borders the following counties: Machakos to the North, Kitui to the East, Taita Taveta to the South and Kajiado to the West. The county lies between Latitude 1° 35' and 3° 00' South and



Longitude 37°10' and 38°30' East with an area of 8,176.7 KM². The county is divided into nine National government administrative sub-counties (Kathonzweni, Kibwezi, Kilungu, Makindu, Makueni, Mbooni East, Mbooni West, Mukaa and Nzau) and six county government administrative sub counties (parliamentary constituencies) namely, Makueni, Mbooni, Kibwezi East, Kibwezi West, Kaiti and Kilome. The six sub-counties are further subdivided into 30 electoral wards. (KNBS, 2019). According to the 2019 Kenya Population and Housing Census (KPHC), the county population was 987,653 consisting of 489,691 males, 497,942 females and 20 inter-sex. The county has a population growth rate of 1.1% with a population projection of 1,042,300 by the end of the year 2023. The County has three major livelihood zones namely: Mixed Farming

(Coffee/Dairy), Mixed Farming (Food Crop/Livestock) and Marginal Mixed Farming livelihood zone each accounting for 30, 30 and 40 percent of the total population respectively.

The main economic activities in the county are agriculture and small-scale trade. The fertile upper part of the county, which experiences a higher average rainfall of 800mm-1200mm, has both natural and planted forest and is suitable for dairy farming, horticulture, and coffee farming. The lower side receives rainfall ranging from 300mm to 400mm and hardly sustains the major food farming. This means livestock rearing remain the common viable economic activity.

Makueni county is largely an Arid and Semi-Arid land, prone to frequent droughts due to unreliable and erratic rainfall. The county experiences two rain seasons in a year. The long rains are experienced during the March-May-April-June season. Short rains are experienced during the October – December season.

Makueni County is predominantly inhabited by the Akamba community who form approximately 97% of the total number of the inhabitants. There is a substantive percentage of people from other communities especially in the major towns. The County has an average population density of 186 persons /KM² with Mbooni West Sub – County recording the highest population of 379 persons /KM² and Kibwezi Sub - County recording the lowest of 62 persons/ KM². Makueni county headquarters are situated at Wote town which hosts both the County Government of Makueni head offices and the National Government County Offices. Wote town is located 130 KMs from Nairobi.

I.2 Nutritional Situation

According to the July 2023 Integrated Phase Classification (IPC) for acute malnutrition among children U5, Makueni county was classified in Alert Phase (IPC Phase 2). The SMART survey conducted in June 2023 showed a Global Acute Malnutrition (GAM) of 6.2%. Based on the WHO/UNICEF 2018 classification of malnutrition, the point estimate indicates a medium nutrition situation while the CI indicate a normal to a medium situation. The prevalence is however slightly higher than the prevalence observed in the KDHS (4.0%). The survey also pointed out that the County had a stunting and underweight prevalence of 17.6% and 11.7% respectively.

There was need for contextually meaningful information for strategic decision-making. Community Assessment method achieves rapidity and low cost by collecting and analysing diverse data intelligently, The assessment is also important in identification of the barriers currently affecting IMAM program coverage as well as boosters currently promoting IMAM coverage in order to recommend ways to eliminate such barriers and strengthen boosters in a comprehensive plan of action.

I.3 Objectives of Coverage Assessment

The primary objective of the survey was to guide the implementation of IMAM program interventions in Makueni county.

Specific objectives

- To explore community systems, structures and actors, including existing networks of community volunteers, which could potentially be used for community engagement.
- To understand community knowledge, perceptions and behaviors regarding childhood acute malnutrition and other illnesses, as well as IMAM services.
- To assess factors, which influence community decisions to access to and use CMAM services.
- To assess the strengths and weaknesses of the current community engagement strategies, as well as opportunities and threats for future CMAM collaboration.
- To develop an action plan and a comprehensive community engagement strategy to improve access and uptake of the CMAM services.

2 Methodology: The Community Assessment Approach

2.1 Introduction

Community Assessment allows for the regular monitoring of programs at low cost, helps identify areas of high or low coverage and provides explanations for such situations. This information allows development of specific, time bound and concrete action plan to improve the coverage of programme.

The investigation process included the following two main stages.

Stage 1: Analysis of quantitative data (routine programme monitoring data compared with sphere standards) and qualitative data was conducted. Staff implementing the program were presented with the data from the program and collectively investigated unusual patterns in admissions, defaulting, performance indicators and special distribution of sites. Additional data included checking on the quality of program records and stock management. Through deep discussions and contextual analysis, the teams identified programme boosters and Barriers and established the hypothesis to be used during stage 2.

Stage 2: Confirmation of areas of high and low coverage and other hypotheses relating to

Coverage identified in stage 1 using small area surveys was done. Reasons for coverage failure were documented to further bolster understanding of the barriers and boosters to program access and uptake identified in stage 1. Decision rule on hypothesis testing was based on the sphere standard requirement of 50% coverage for rural population. Additional data gap identified in stage 1 were further gathered through interviews with beneficiaries, IMAM program staff (Nurses/Nutritionists), Community Health Promoters, Traditional Healers, local village/religious leaders, and Community-Lay People.

Participants

The assessment was led by the County Nutrition Coordinator, had; Six (6) teams. A team comprised of Two enumerators and one team leader per team. Three Community Assessment Coordinators (2 MoH, 2 Partner). NITWG offered overall technical support during training and quality checks.

Duration of the Survey: The assessment took place from 21st August to 31st August 2023.

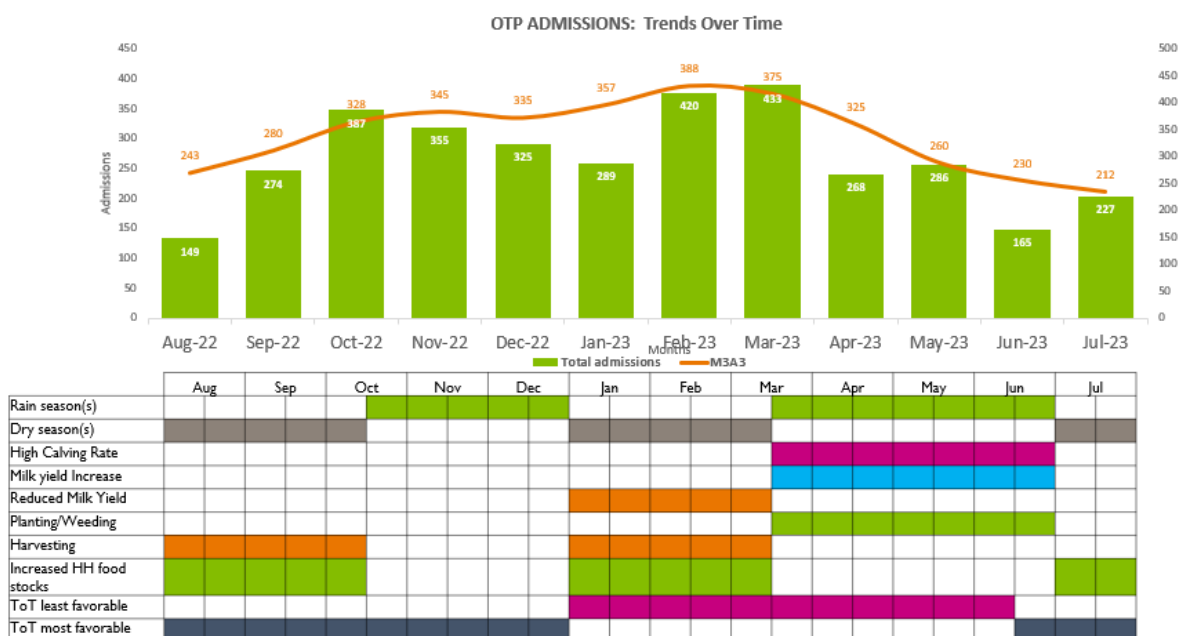
3 The Community Assessment Investigation

3.1 Stage I: Quantitative Data

The routine program data was analysed to inform on various indicators which include MUAC on admission, OTP and SFP admission over time and standard program performance data with focus on the defaulters and the in-program deaths. This data was used to show trends on the indicators giving key issues and areas to be investigated further to provide explanation. A calendar of seasonal events was developed and compared with the trend of program data. The relationship between the OTP and SFP admissions, exits and the defaulters with the seasonal calendar was established. The data analysed covered the period between August 2022 to July 2023.

OTP Admission Trends

From the assessment, there was an observed increase in admissions in October, February & March which coincide with partner supported outreaches/mass screening in parts of the county. The peak in admissions in March 2023 is attributed to the outreaches.

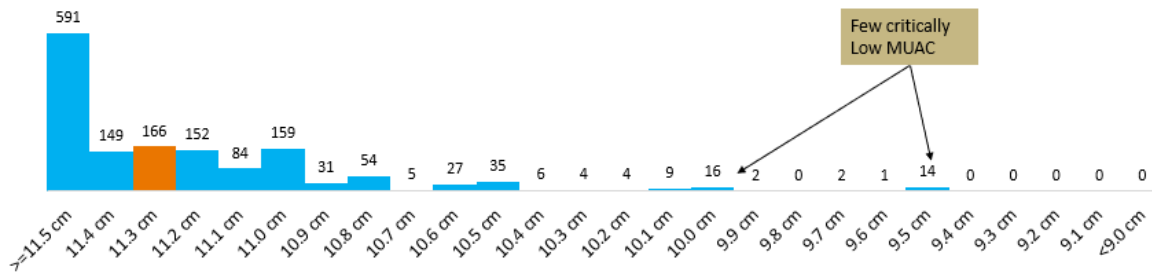


OTP Admissions by MUAC (Aug '22-July '23)

Timely case-finding and early admissions into IMAM are an indication of good coverage. Upon analysis of the quantitative data, the admission MUAC = 11.3cm (Median 755.5) an indication of early admission to OTP. However, there are still some admissions made with low MUAC indicating late admission.

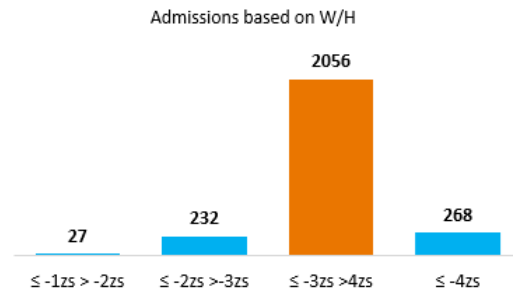
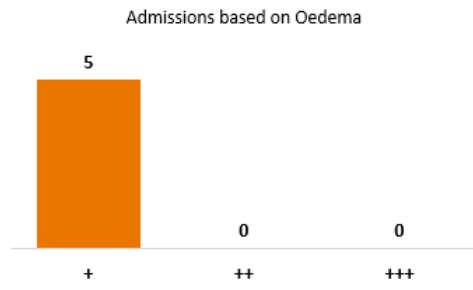
There were cases admitted over program admission criteria (591 cases with MUAC \geq 11.5cm) into OTP. This can be attributed to the use of other admission criteria (Oedema & W/H)

OTP PROGRAM: MUAC at Admission



OTP Admissions by Oedema & W/H (Aug '22-July '23)

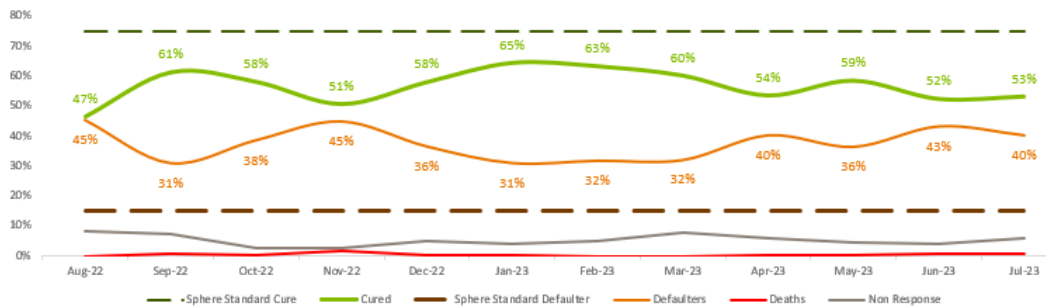
Most children were admitted at <-3sd - ≥-4sd indicating timely admission and correct admission criteria. Some cases admitted with <-4sd indicating late admission. A few cases of wrong admission (≤ -1zs - ≥-3sd). This can be attributed to the use of other admission criteria (Oedema & MUAC)



OTP Exit Outcomes Trends

The cure rates and defaulter rates were below and above the sphere standards of 75% and 15% respectively in the entire year.

Trends in OTP Program Exit Outcomes

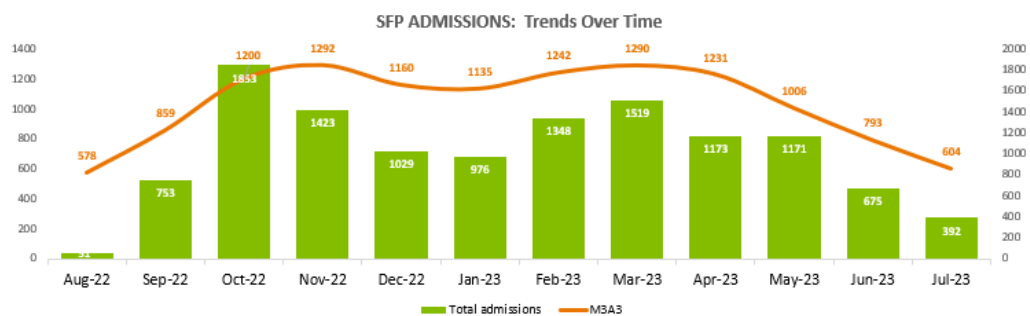


	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Rain season(s)												
Dry season(s)												
High Calving Rate												
Milk yield Increase												
Reduced Milk Yield												
Planting/Weeding												
Harvesting												
Increased HH food stocks												
ToT least favorable												
ToT most favorable												

There was high defaulter rate in the entire assessment period (August 2022-July 2023) which is attributed to massive admissions during mass screening and outreach exercise who quickly defaulted from the activities were halted. ended.

SFP Admission Trends

From the assessment, there was an observed increase in admissions in October, November, February & March which coincide with partner supported outreaches/mass screening in parts of the county.



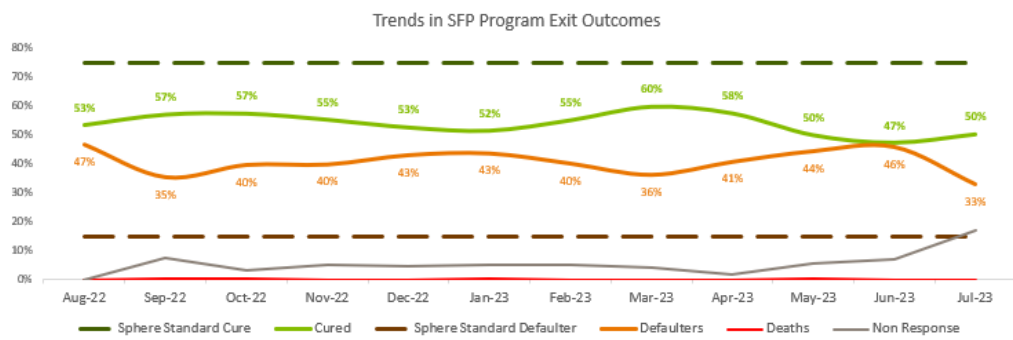
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Rain season(s)												
Dry season(s)												
High Calving Rate												
Milk yield Increase												
Reduced Milk Yield												
Planting/Weeding												
Harvesting												
Increased HH food stocks												
ToT least favorable												
ToT most favorable												

SFP Admissions by MUAC (Aug '22-July '23)

SFP Admissions by W/H (Aug '22-July '23)

SFP Exit Outcomes Trends

The cure rate and defaulter rate were below the sphere standard of 75% and 15% the entire assessment period. The increased defaulting in November 2022 and March 2023 can be attributed majorly to the Impromptu halt of outreaches. Defaulting could also be attributed to inadequate follow-up on the beneficiaries.



	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Rain season(s)												
Dry season(s)												
High Calving Rate												
Milk yield Increase												
Reduced Milk Yield												
Planting/Weeding												
Harvesting												
Increased HH food stocks												
ToT least favorable												
ToT most favorable												

3.2 Stage I: Qualitative Data (Boosters, Barriers, and Questions Analysis)

Qualitative data was collected from different sources with an aim of confirming the already collected quantitative data. This data was then crosschecked with the assessment team for validity and confirmation as well as establishing barriers and boosters for both SFP and OTP.

Several methods were used to collect qualitative data from a variety of sources. These were:

1. Semi-structured interviews with key informants such as:

- Program staff
- Clinic staff
- Community-based informants such as, traditional healers, traditional birth attendants (TBAs), Community Health Worker / Promoter
- Carers of children in the program
- Carers of non-covered, defaulting cases
- Community leaders and religious leaders

2. Simple structured interviews, undertaken as part of routine program monitoring and during small-area surveys, with:

- Carers of defaulting cases
- Carers of non-covered cases

3. Focused group discussions with:

- Carers of children attending program sites.
- Community Health Promoters

4. Observation

The qualitative data led to identification of several factors as either promoters or barriers to the access of OTP or SFP as see below:

- Barriers were defined as factors that contributed to poor/low coverage for OTP/SFP.
- Boosters were defined as factors that contributed to good/high coverage for OTP/SFP.

#	Booster (Raise, improve, aid, add to)	Source	Method	wt %	#	Barrier (lower, hinder, reduce, block)	Source	Method	wt %
Boosters in OTP Coverage					Barriers to OTP Coverage				
Health Seeking Behavior									
1	Early health care seeking practices as indicated by the Quantitative data	Ωo	$\odot 3$	3	1	High workload by caregivers	∞^*	$\ominus \odot$	4.2
2	Care givers of Sick & Malnourished children seek help from health facilities	Δo^*	$\ominus \odot$	4.5	2	Negative cultural beliefs	$o \square \sqrt{}$	$\ominus \odot$	3.6
3	Linkages between Traditional Healing Practitioner / TBA and CHP/Health Workers	\sqrt{o}	$\odot \textcircled{R}$	2	3	Stigma	$\Delta o^* \sum \omega =$	$\ominus \odot \textcircled{R}$	2.4
Awareness about malnutrition and malnutrition signs									
4	Community awareness of signs of malnutrition and association of the signs with sickness	$\Delta o \sum =$	$\ominus \odot$	3.5	4	Knowledge gap on malnutrition	$\Delta o^* \sum \omega =$	$\ominus \odot \textcircled{R}$	4.0
Awareness of IMAM Program Services									
5	Good understanding of IMAM services	Δo^*	$\odot \ominus$	2	5	Limited understanding about the programme from the communities leading to a poor participation in the programme	$\Delta o^* \sum \omega =$	$\ominus \odot \textcircled{R}$	3.5
					6	Caregivers Illiteracy	$o \Delta = \sum \square$	\ominus	3.0
Availability and Accessibility of the service									
6	Adequate RUTF supply	Δo	$X \odot$	5	7	Long Distance to IMAM Service delivery point	$* \Delta o = \omega$	$\ominus \textcircled{R} X \odot$	4.0
7	Availability Integrated health Outreaches in hard-to-reach villages	$\Delta o \omega^* = \sum$	$\ominus X \textcircled{R}$	5	8	Human-Wildlife conflict	$* \Delta o =$	$\ominus \odot$	1.5
8	Availability of anthropometric equipment/tools	Δo	$\ominus X \textcircled{R}$	2.4	9	Impromptu halting/Irregular outreaches	$* o$	$\ominus \odot$	4.3

#	Booster (Raise, improve, aid, add to)	Source	Method	wt %	#	Barrier (lower, hinder, reduce, block)	Source	Method	wt %
Boosters in OTP Coverage					Barriers to OTP Coverage				
9	Close proximity to health facility	*=	⊖X	3	10	Insufficient money /high cost of health seeking (direct & indirect)	*Δo=Σ	⊖⊙	2.5
					11	Topography/ terrain as a	*Δo=	⊖⊙	1.0
Case identification Strategy and enrolment									
10	Active case finding and referrals in areas with functional community units	Δo*∞	⊖⊙	5	12	Inadequate knowledge of IMAM among health facility casuals and CHPs Esp. on screening malnutrition cases.	ΔoΔ	⊖⊙	3.7
11	Integrated screening of malnutrition with routine activities	Δo	⊙	4	13	Inadequate anthropometric equipment's/tools	Δo	⊖⊙	2.5
					14	Poor identifications of CHPs in the community	*Δω	⊖⊙	1.0
Communication System with community									
12	Monthly meetings between CHPs and health staffs	Δo	⊖⊙	2.4	15	Lack of regular meeting between Helath Workers and CHPs	ωΣ	⊙	2.0
Appreciation of the Service									
13	Good opinion of the program by community	Δ*√ω	⊖⊙⊙	3	16	Sharing of RUTF commodities	Δo*	⊖⊙⊙	3.5
Referral/Transfer & Follow up strategy									
14	Referrals done by the CHVs from the community to the health facility	Δo	⊖⊙	4.8	17	Low CHVs morale for IMAM activities	Δo	⊖⊙	4.0
15	CHP recognition by the community	Ωo	3⊙	3	18	No proof of client referral from the community by CHPs in some helath facilities	Ωo	3⊙	1.5
Client Retention Strategy									

#	Booster (Raise, improve, aid, add to)	Source	Method	wt %	#	Barrier (lower, hinder, reduce, block)	Source	Method	wt %
Boosters in OTP Coverage					Barriers to OTP Coverage				
16	Availability of defaulter tracing system	oΔ	©Θ	1.5	19	Poor implementation of defaulter strategy	ΩΔ△	©Θ	3.7
					20	Higher defaulting rates	Ωo△	3©	3.7
Capacity of the Service Delivery Point to provide a quality service									
17	Availability of staff trained on IMAM service provision	o△*Σ	©Θ	4	21	Staff shortage	*Δo	©Θ®	3.3
18	Active Trained CHPs	Δoω*Σ	ΘX®	5.2	22	Long waiting time at health facilities	Δo*	©Θ3	1.0
19	Availability of staff with positive attitude toward IMAM services	*Σ	©Θ	4.7	23	Health facility rejections	Δ*	©Θ	1.8
Total Booster weight				68.0	Total Barrier weight				65.7
Total Booster without weight				19.0	Total Barrier without weight				23.0

#	Booster (Raise, improve, aid, add to)	Source	Method	wt %	#	Barrier (lower, hinder, reduce, block)	Source	Method	wt %
Boosters in SFP Coverage					Barriers in SFP Coverage				
Health Seeking Behavior									
1	Early health care seeking practices as indicated by the Quantitative data	Ωo	©3	3	1	High caregiver Workload	∞*	Θ©	4.0
2	Good referrals of clients from traditional healers	√o	©®	1.2	2	Retrogressive stereotypes and cultural practices	oΠ√	Θ©	3
					3	Poor health seeking behavior	3o	©	3.6
					4	Stigma, myths and misconception on IMAM services	Δo*Σω=	Θ©®	2.5
					5	Domestic violence contributes to defaulting cases.	*Δo	Θ©	2
Awareness about malnutrition and malnutrition signs									
3	Awareness of some signs of malnutrition-done by CHPs	ΔoΣ =	Θ©	2.6	6	Limited understanding about malnutrition	Δo*Σω=	Θ©®	3.0
Awareness of IMAM Program Services									
4	Awareness creation by active CHPs has led to increased awareness of IMAM program	Δo*	©Θ	4	7	Limited understanding about the programme from the communities leading to a poor participation in the programme	Δo*Σω=	Θ©®	3.5
5	Good understanding of IMAM services	Δo*	©Θ	3	8	Ignorance ,illiteracy and negligence	oΔ=ΣΠ	Θ	3.3
Availability and Accessibility of the service									
6	Consistent supply of nutrition commodities at the health facility	Δo	X©	5.5	9	Long Distance to IMAM Service delivery point	*Δo=ω	Θ®X©	4.0

#	Booster (Raise, improve, aid, add to)	Source	Method	wt %	#	Barrier (lower, hinder, reduce, block)	Source	Method	wt %
Boosters in SFP Coverage					Barriers in SFP Coverage				
7	Availability Integrated health Outreaches in hard-to-reach villages	$\Delta o \omega^* = \Sigma$	$\Theta X \textcircled{\circ}$	5	10	Human-Wildlife conflict	$*\Delta o =$	$\Theta \textcircled{\circ}$	1.5
8	Availability of anthropometric equipment/tools	Δo	$\Theta X \textcircled{\circ}$	3	11	Impromptu halting/Irregular outreaches	$*o$	$\Theta \textcircled{\circ}$	3.8
9	Availability of free IMAM services	$*=$	ΘX	5.5	12	Insufficient money /high cost of health seeking (direct & indirect)	$*\Delta o = \Sigma$	$\Theta \textcircled{\circ}$	2.5
					13	Topography/ terrain as a	$*\Delta o =$	$\Theta \textcircled{\circ}$	1.0
Case identification Strategy and enrolment									
10	Active case finding and referrals in areas with functional community units	$\Delta o^{*\infty}$	$\Theta \textcircled{\circ}$	5	14	Inadequate knowledge of IMAM among health facility casuals and CHPs Esp. on screening malnutrition cases.	$\Delta o \Delta$	$\Theta \textcircled{\circ}$	3.7
11	Integrated screening of malnutrition with routine activities	Δo	$\textcircled{\circ}$	4.7	15	Inadequate anthropometric equipment's/tools	Δo	$\Theta \textcircled{\circ}$	2.5
					16	Poor identifications of CHPs in the community	$*\Delta \omega$	$\Theta \textcircled{\circ}$	1.0
Communication System with community									
12	Monthly meetings between CHPs and health staffs	Δo	$\Theta \textcircled{\circ}$	4.4	17	Inadequate involvement of community key figures in the IMAM services	$\omega \Sigma$	$\textcircled{\circ}$	2.4
Appreciation of the Service									
13	Good opinion of the program by community	$\Delta^* \sqrt{\omega}$	$\Theta \textcircled{\circ} \textcircled{\circ}$	3.2	18	Sharing of the nutrition commodities	Δo^*	$\Theta \textcircled{\circ} \textcircled{\circ}$	3.5
Referral/Transfer & Follow up strategy									

#	Booster (Raise, improve, aid, add to)	Source	Method	wt %	#	Barrier (lower, hinder, reduce, block)	Source	Method	wt %
Boosters in SFP Coverage					Barriers in SFP Coverage				
14	Good referrals and follow up system by CHPs	Δo	ΘΘ	4	19	Low CHVs motivation for IMAM activities at the community (no/inadequate incentives)	Δo	ΘΘ	4.0
					20	No proof of client referral from the community by CHPs in some health facilities	Ωo	3Θ	1.5
Client Retention Strategy									
15	Availability of defaulter tracing system	oΔ	ΘΘ	2	21	Poor implementation of defaulter strategy	ΩΔ△	ΘΘ	3.7
					22	Higher defaulting rates	ΩoΔ	3Θ	3.7
Capacity of the Service Delivery Point to provide a quality service									
16	Availability of staff trained on IMAM service provision	oΔ*≠	ΘΘ	4	23	Inadequate human resource in Health facilities	*Δo	ΘΘ®	4.0
17	Regular support by CHMT and SCHMT	Δ	◎	5.3	24	Long waiting time to be served at the facility	Δo*	◎Θ3	2.0
18	Availability of staff with positive attitude toward IMAM services	*≠	ΘΘ	4.7	25	Bad attitude of the Health Facility staffs	∞*	◎Θ	1.0
Total Booster weight				70.1	Total Barrier weight				70.7
Total Booster without weight				18.0	Total Barrier without weight				25.0

3.3 Hypothesis Testing and Verification

The objective of this stage was to confirm areas of high and low coverage based on the data collected from stage I. The hypothesis: Program coverage is high (>50%) in villages with functional trained (IMAM) community unit and low (<50%) in villages with or inactive trained/not trained (IMAM) community units was formulated.

Justification

- Villages within active trained CHUs are well covered by CHPs and hence active case finding leading to high admission, good defaulter tracing and strict adherence to protocols.
- In villages with inactive trained/not trained CHUs there is non-compliance to IMAM protocols resulting in poor case finding and defaulter tracing.

Operational Definition of the Hypothesis Parameters:

- Active CHU- Defined as those submitting monthly reports, have monthly meetings and has at least a CHP who is involved in IMAM active case finding and defaulter tracing.
- Active case finding– monthly screening for acute malnutrition in the catchment HHs by CHPs.
- Defaulter tracing– Health facility in charge routinely lists all defaulters and shares the list with CHVs for tracing and follow-up.

Small Area Survey

A small area survey was conducted to test and confirm the hypothesis. The hypothesis was tested using simplified LQAS formula $d = \lceil n/2 \rceil$ in comparison with the Sphere minimum standard relating to coverage of 50% for rural set-ups. That is:

$$d = \left\lceil n \times \frac{p}{100} \right\rceil$$

Where

n=sample size

p = 50% - SPHERE Standards Threshold for Rural

d=decision rule

Six (6) villages for the small area survey were purposively selected. The Case finding in-community sampling technique was Door to door sampling. Makueni County use three admission criteria (MUAC, Z-scores and/or bilateral oedema). The small area studies adopted all the three criteria in screening for malnutrition.

The data collection teams were split into two (2), three (3) teams covered the villages perceived to be of high IMAM coverage and the other three (3) covered areas perceived to be of low IMAM coverage. The teams were fully trained and issued with appropriate nutrition tools to carry out the survey.

Once in the villages, the teams conducted exhaustive door to door screening of all children 6 to 59 months, to locate all SAM and MAM cases to determine if they were covered SAM/MAM cases (C_{in}), non-covered SAM/MAM cases (C_{out}) and recovering SAM/MAM cases (R_{in}).

Case Definition

Definition	Age category	Cut offs
SAM case	Child aged between 6 – 59 months	MUAC < 115mm, and/or Bilateral oedema
SAM recovering	Child aged between 6 – 59 months. Presently in OTP (verify with RUTF/Card)	MUAC ≥ 115mm; No Bilateral Oedema
MAM case	Child aged between 6 – 59 months	MUAC ≥ 115 - < 125mm
MAM recovering	Child aged between 6 – 59 months, presently in SFP (verify with RUSF/Card)	MUAC ≥ 125mm
Case not covered	Child aged between 6 – 59 months who qualifies to be SAM or MAM case but is not admitted in either program.	

Small Area Survey Findings

Village	Total number of SAM cases found	Total number of SAM cases in OTP	Total number of SAM cases NOT IN OTP	Total number in OTP program but recovering	Total number of MAM cases found	Total number of MAM cases in SFP	Total number of MAM cases NOT IN program	Total number of cases in SFP program but recovering	Total children 6-59 months screened
Manza Dispensary	1	1	0	3	3	3	0	4	28
Mavindini Health Centre	0	0	0	0	1	1	0	1	22
Kathulumbi Health Centre	0	0	0	0	3	1	2	3	31
Kako Health Centre	0	0	0	0	0	0	0	0	23
Mweini Dispensary	0	0	0	0	2	0	2	0	20
Muusini Dispensary (Makueni)	1	0	1	0	1		1	0	21
Total	2	1	1	3	10	5	5	8	145

Summary of LQAS calculation for Hypothesis confirmation

SAM HYPOTHESIS

RESULTS	Coverage should be high Village / Community	Coverage should be low Village / Community
	Manza Dispensary	Kako Health Centre
SAM cases found =	1	0
SAM cases covered =	1	0
	Mavindini Health Centre	Mweini Dispensary
SAM cases found =	0	0
SAM cases covered =	0	0
	Kathulumbi Health Centre	Muusini Dispensary (Makueni)
SAM cases found =	0	1
SAM cases covered =	0	0
SAM cases found =		
SAM cases covered =		

The Hypothesis stating, “Program coverage is high (>50%) in villages with functional trained (IMAM) community unit and low (<50%) in villages with or inactive trained/not trained (IMAM) community units” was **CONFIRMED**

COVERAGE BY SMALL AREA

50.0

DEDUCTIONS FOR SAM COVERAGE HYPOTHESIS				
Coverage standard (p)	50%	50%	Coverage should be high Village / Community	Coverage should be low Village / Community
Total SAM cases found (n) =	1	1	1 > 0	Hypothesis validated
Total SAM cases covered =	1	0		
	0.5	0.5		
Decision rule (d) =	0	0	0 < 0	Hypothesis validated

MAM HYPOTHESIS

RESULTS	Coverage should be high Village / Community	Coverage should be low Village / Community
	Manza Dispensary	Kako Health Centre
MAM cases found =	3	0
MAM cases covered =	3	0
	Mavindini Health Centre	Mweini Dispensary
MAM cases found =	1	2
MAM cases covered =	1	0
	Kathulumbi Health Centre	Muusini Dispensary (Makueni)
MAM cases found =	3	1
MAM cases covered =	1	0

The Hypothesis stating, “Program coverage is high (>50%) in villages with functional trained (IMAM) community unit and low (<50%) in villages with or inactive trained/not trained (IMAM) community units” was **CONFIRMED**

COVERAGE BY SMALL AREA

50.00

DEDUCTIONS FOR MAM COVERAGE HYPOTHESIS				
Coverage standard (p)	50%	50%	Coverage should be high Village / Community	Coverage should be low Village / Community
Total MAM cases found (n) =	7	3	5 > 3	Hypothesis validated
Total MAM cases covered =	5	0		
Decision rule (d) =	3	1		
			0 < 1	Hypothesis validated

Barriers/Boosters	Recommendations	Objectives (for specific recommendations)	Strategy	Activity	Monitoring	Evaluation	Frequency	Responsibility
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