



Samburu County Semi-Quantitative Evaluation of Access and Coverage (SQUEAC)

Assessment Findings Report

April 2023



TABLE OF CONTENTS

Table of contents	Error! Bookmark not defined.
List of abbreviations	iv
Acknowledgements	vi
I INTRODUCTION.....	1
1.1 Background.....	1
1.2 Nutritional Situation.....	2
1.3 Objectives of Coverage Assessment.....	2
Specific objectives.....	2
2 METHODOLOGY: THE SQUEAC APPROACH.....	3
3 THE SQUEAC INVESTIGATION.....	4
3.1 Stage 1: Quantitative Data	4
3.1.1 Admission Trends	4
3.1.2 MUAC, WHZ and Oedema at admission	5
3.1.3 Program Indicators.....	6
3.1.4 Length of Stay LOS.....	8
3.2 Stage 1: Qualitative Data (Boosters, Barriers, and Questions Analysis)	11
Barriers Boosters and Questions (BBQ) Development.....	14
1.0.1. OTP and SFP Concept Maps	25
3.3 Stage 2: Hypothesis Testing and Verification	27
3.3.1 Small Sample Size Survey	27
3.3.2 Prior Development.....	29
Stage 3.4 Wide Area (Likelihood) Survey.....	32
3.4.1 Villages Sample Size Calculation.....	32
3.4.2 Likelihood Survey Sampling.....	33
3.4.3 Single Coverage Estimate.....	34
3.4.4 Reasons for Uncovered Cases.....	36
4 Conclusion and Recommendations.....	37

4.4	Conclusion.....	37
4.5	Recommendations	38
	References.....	41
	Annexes	42
	<i>Annex I: SQUEAC Assessment Implementation plan.....</i>	<i>42</i>
	<i>Annex III: Referral Slip</i>	<i>43</i>
	<i>Annex IV: Semi Structured Interview (SSI) guide Community-Other community people.....</i>	<i>44</i>
	<i>Annex VI: Semi Structured Interview guide-TRADITIONAL HEALERS.....</i>	<i>49</i>
	<i>Annex VII: Semi Structured Interview guide-CARERS OF BENEFICIARIES.....</i>	<i>50</i>
	<i>Annex VIII: Semi structured interview guide-GROUP DISCUSSION WITH CARERS.....</i>	<i>52</i>
	<i>Annex IX: Semi Structured Interview guide-COMMUNITY HEALTH VOLUNTEERS.....</i>	<i>54</i>
	<i>Annex X: Semi-Structured Interview guide-IMAM PROGRAM STAFF.....</i>	<i>56</i>
	<i>Annex XI: Semi-Structured Interview Guide – NGO FIELD AGENTS.....</i>	<i>58</i>
	<i>Annex XII: Seasonal Calendar (12 months): Village Elders</i>	<i>59</i>

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 Volunteers
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
FEED	Feed the Children
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
SQUEAC	Semi Quantitative Evaluation on Access and Coverage
SUN	Scaling Up Nutrition
SWOT	Strengths, Weaknesses, Opportunities and Threats
TBAs	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 Samburu County SQUEAC assessment was due to the great support and dedication of partners. Samburu County would like to thank the following organizations:

- United Nations Children’s Fund
- World Food Program
- 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

Samburu County is part of the arid lands of Kenya. It is situated in the northern part of the Great Rift Valley and covers a land area of 21,065.1 sq. km with a population of 348,298. The County borders Baringo County to the Southwest, Marsabit County to the Northeast, Turkana County to the Northwest, Laikipia County to the South and Samburu County to the East. The County lies between latitudes 0°30' and 2°45' N and between the longitudes 36°15' and 38°10'E.



The county is divided into three sub counties (Samburu Central, Samburu East and Samburu North), seven divisions and 15 wards. There are three main livelihood zones: pastoral all species (57%), Agro-pastoral (37%) and formal employment/ casual waged labour (6%) (SRA Report February 2023). In the county’s EWS (NDMA Bulletin, January 2023), all livelihood zones were classified in ALARM phase and worsening.

Currently, Samburu County has five Primary Care hospitals, 32 Basic Health Centres, One Comprehensive Health Centre, 66 Dispensaries, 29 private Medical Clinics, and one nursing Home. The county has a total of 127 functional community health units. There are 70

health facilities that offer IMAM. Only 5 facilities offer In-patient services for management of acute malnutrition with complications.

There are a number of partners supporting the County government of Samburu in the implementation of nutrition program. They include UNICEF, World Vision, World Concern, USAID NAWIRI, Feed the Children and Kenya Red Cross Society. There are 139 outreach sites supported by various support partners in Samburu County aimed improving accessibility to nutrition services in the hard-to-reach areas.

Being an arid and chronically food-deficient county, drought is the most persistent and destructive natural hazard in the county, which at its most severe decimates crops and livestock, erodes the landscape and results in hundreds of millions of shillings in damage and losses. While in general the long rainy season occurs in the months of March-May and the short rains occur mainly between October-December. Rainfall in the county follows an erratic pattern with significant temporal and spatial variations. The county is often affected by cyclical droughts, which occur every one to three years, although the frequency of droughts is reported to have increased because of increasingly erratic weather patterns. Droughts are likely to occur, and are relatively chronic, particularly in the predominantly pastoral zones of Samburu North and Samburu East sub-counties. Occasional

outbreaks of disease and attacks by pests threaten the population and harvests and the county also faces a constant threat of wildfires. Insecurity is another serious concern. Whilst cattle rustling has traditionally been a source of insecurity, increasing competition over resources (pasture and water) lead to violent conflicts. In addition, highway banditry is a problem that affects the free movement of people and goods.

1.2 Nutritional Situation

According to the February 2023 Integrated Phase Classification (IPC) for acute malnutrition among children U5, Samburu county was classified in critical phase (IPC phase 4) with a worsening projection. The SMART survey conducted in 2022 showed a Global Acute Malnutrition (GAM) of 21.8%, an increase from 16.8% reported in June 2021. In 2022, 7471 (MAM) and 2261 (SAM) children aged 6-59 months and 5264 PLW received treatment in OTP, SFP and SFP-for PLW programs respectively compared to the estimated caseloads of 3693 SAM, 10,463 MAM 6-59 Months and 6,810 MAM PLW.

There was need for contextually meaningful information for strategic decision-making since the last Coverage (SQUEAC) survey in Samburu County was conducted in 2019. SQUEAC method achieves rapidity and low cost by collecting and analysing diverse data intelligently, Coverage Assessment (SQUEAC) is also important in identification of the barriers currently affecting IMAM program coverage as well as boosters currently promoting IMAM coverage in order to device ways to remove such barriers and strengthen boosters in a comprehensive plan of action.

1.3 Objectives of Coverage Assessment

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

Specific objectives

- To measure coverage of IMAM program in Samburu county
- To identify boosters and barriers of access to SAM and MAM interventions of the:
 - Outpatient Therapeutic Program
 - Supplementary Feeding Program
- To build the capacities of MoH and partners technical persons on SQUEAC methodology

2 METHODOLOGY: THE SQUEAC APPROACH

2.1 Introduction

SQUEAC 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 three 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. These barriers and boosters were the basis of development of the prior. 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 Volunteers, Traditional Healers, local village/religious leaders, and Community-Lay People.

Stage 3: Bayesian techniques were used to estimate overall program coverage with a wide area survey using a sample size generated by Bayes SQUEAC software.

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 SQUEAC Managers (2 MoH, 1 Partner). NITWG offered overall technical support during training and quality checks.

Duration of the Survey: The assessment took place from 27th March to 18th April 2023.

3 THE SQUEAC INVESTIGATION

3.1 Stage I: Quantitative Data

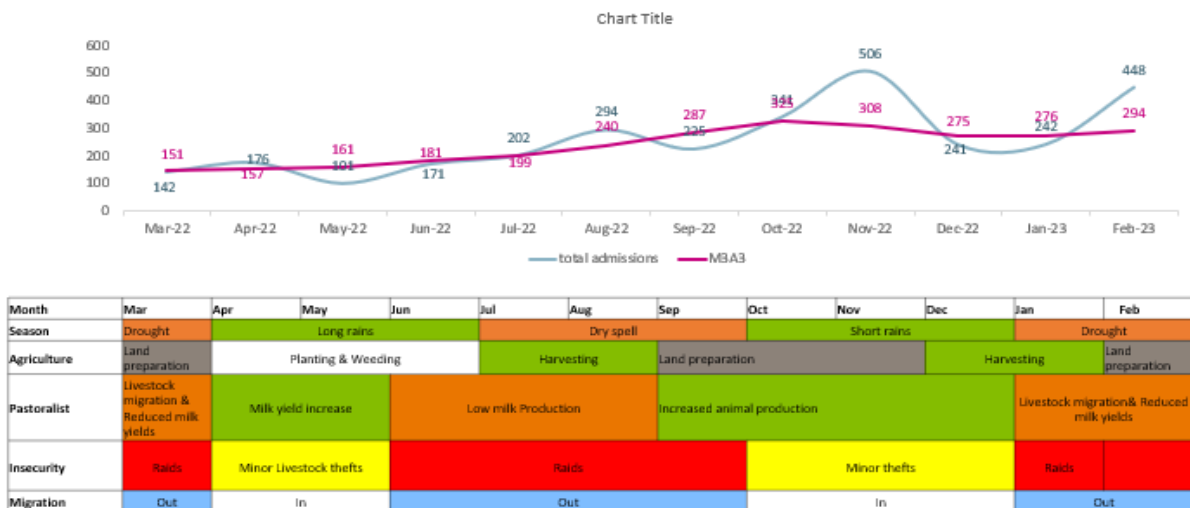
This stage involved quantitative data analysis for Inpatient, OTP and SFP beneficiaries in the program. Data was collected from standard monthly reporting tools, In Patient, OTP and SFP register. The data analysed covered the period between March 2022 to February 2023.

3.1.1 Admission Trends

OTP Program Admissions

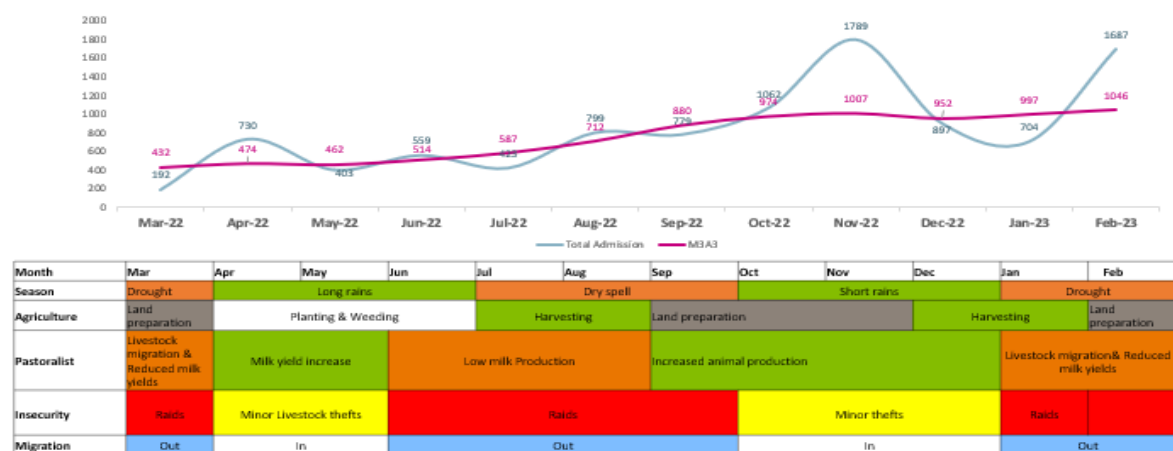
Increased admissions were reported in November can be attributed to scaling up of integrated health and nutrition outreaches/mass screening.

OTP- Admissions over time compared with seasonal calendar



SFP Program Admissions

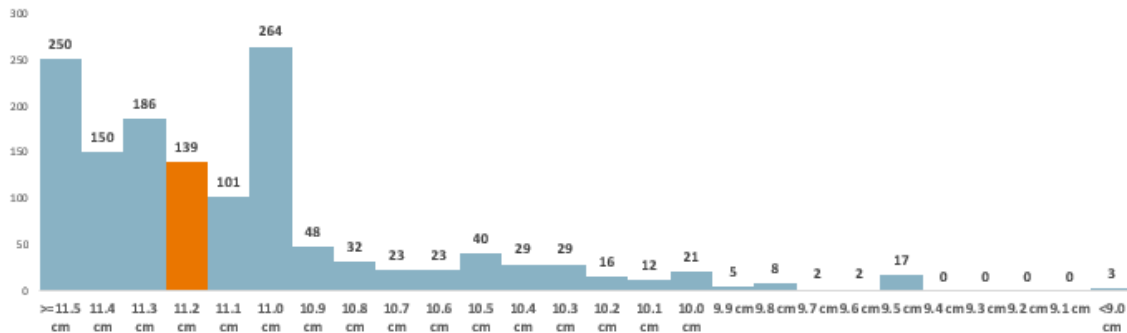
SFP- Admissions over time compared with seasonal calendar



There was an upward trend of admissions due to scale up of integrated health and nutrition outreaches. High peaks were in noted November 2022 and Feb 2023 could be attributed to intensified mass screening.

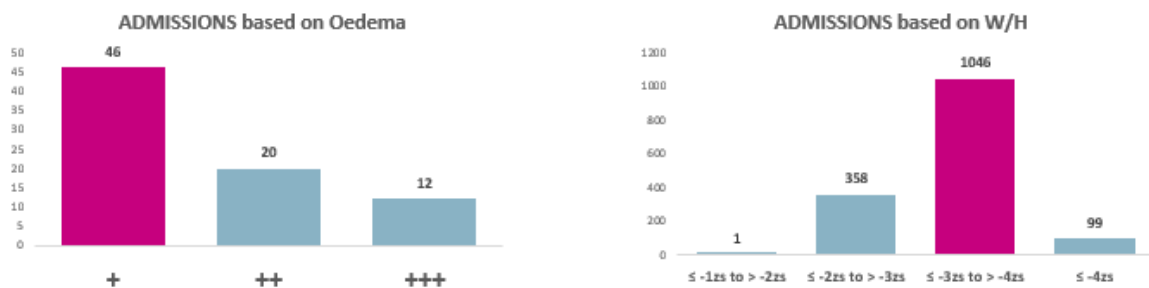
3.1.2 MUAC, WHZ and Oedema at admission

OTP PROGRAM: MUAC at Admission



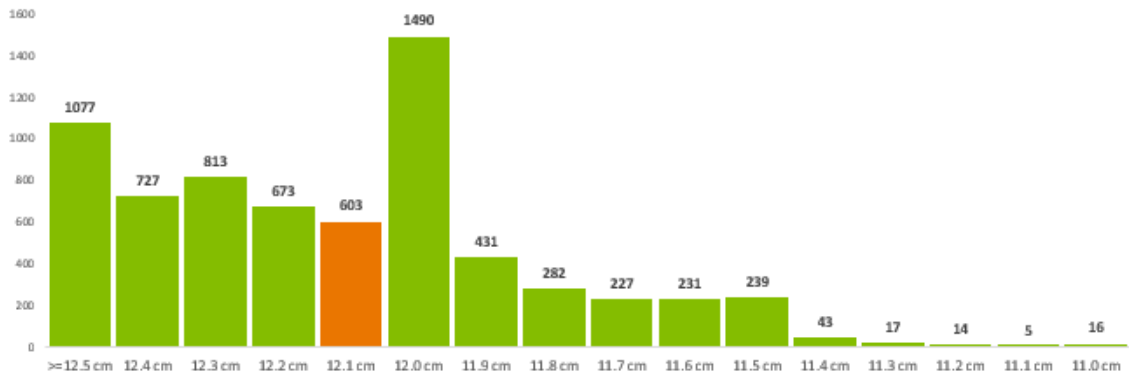
Median admission MUAC = 11.2CM an indication of early admission to OTP. However, there are still many admissions made with low MUAC indicating late admission. There were many cases admitted over program admission criteria (250 cases with MUAC \geq 11.5cm) into OTP. This can be attributed to the use of other admission criteria (Oedema & W/H).

OTP PROGRAM: Oedema & W/H at Admission



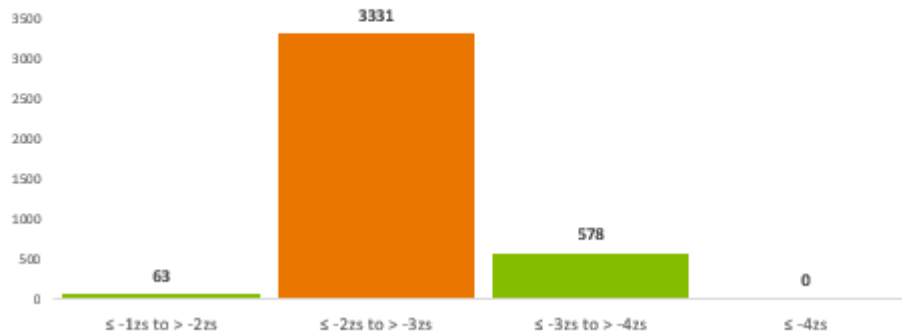
Most children were admitted early at $< -3sd$ - $\geq -4sd$. A few cases admitted with $< -4sd$ indicating late admission. A few cases of wrong admission ($\leq -1zs$ - $\geq -3sd$). This can be attributed to the use of other admission criteria (Oedema & MUAC)

SFP PROGRAM: MUAC at Admission



Median admission MUAC = 12.1CM an indication of early admission to SFP. However, there are still many admissions made with low MUAC indicating late admission. However, the data also points to some late critical admission which indicates late health seeking behaviours.

SFP PROGRAM: W/H at Admission



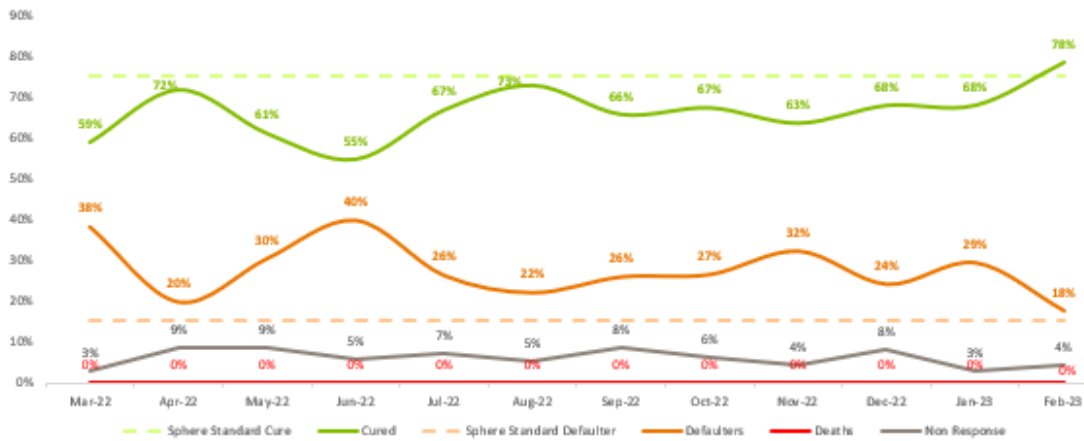
Most children were admitted early at $\leq -2zs$ - $> -3sd$. A few cases of wrong admission ($\leq -1zs$ - $> -2sd$). This can be attributed to the use of other admission criteria (MUAC)

3.1.3 Program Indicators

OTP Exit Outcomes Trends

OTP Cure remained below the minimum sphere standard of above 75% except in Feb 2023. High Defaulter rate in OTP program is recorded throughout the assessment period- Above the minimum sphere standard of below 15%.

OTP Exit Outcomes Trends

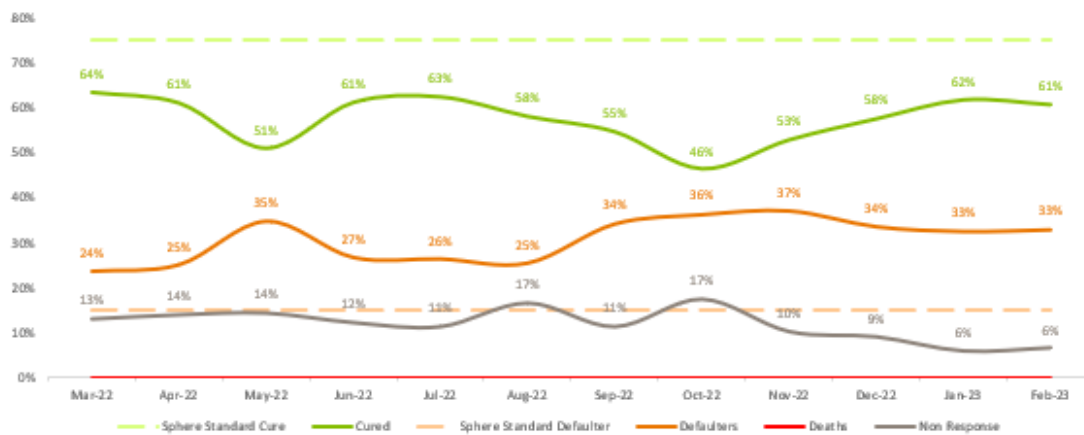


Month	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Season	Drought	Long rains			Dry spell			Short rains			Drought	
Agriculture	Land preparation	Planting & Weeding			Harvesting			Land preparation			Harvesting	Land preparation
Pastoralist	Livestock migration & Reduced milk yields	Milk yield increase			Low milk Production			Increased animal production			Livestock migration & Reduced milk yields	
Insecurity	Raids	Minor Livestock thefts		Raids				Minor thefts			Raids	
Migration	Out	In			Out			In			Out	

SFP Exit Outcomes Trends

SFP Cure remained below the minimum sphere standard of above 75%. High Defaulter rate in SFP program is recorded throughout the assessment period- Above the minimum sphere standard of above 15%

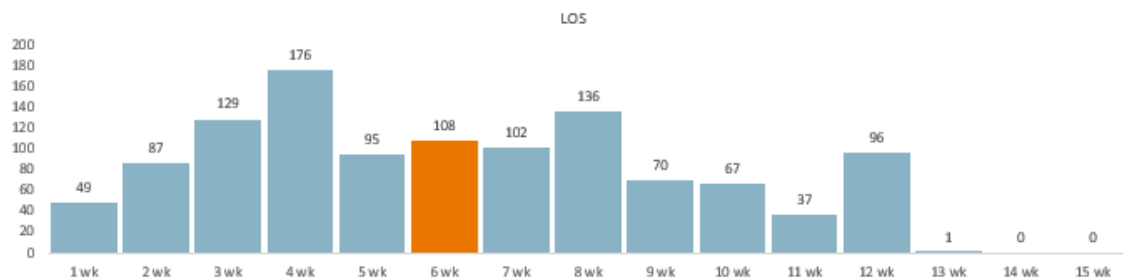
SFP Exit Outcomes Trends



Month	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Season	Drought	Long rains			Dry spell			Short rains			Drought	
Agriculture	Land preparation	Planting & Weeding			Harvesting			Land preparation			Harvesting	Land preparation
Pastoralist	Livestock migration & Reduced milk yields	Milk yield increase			Low milk Production			Increased animal production			Livestock migration & Reduced milk yields	
Insecurity	Raids	Minor Livestock thefts		Raids				Minor thefts			Raids	
Migration	Out	In			Out			In			Out	

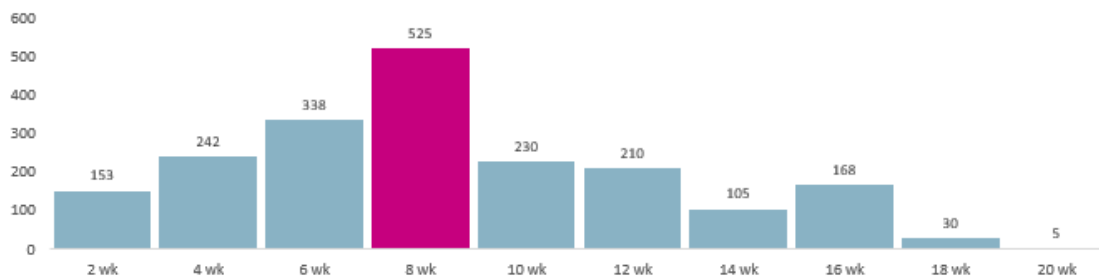
3.1.4 Length of Stay LOS

OTP LENGTH OF STAY (LoS) AT DISCHARGE-CURED (FOR ALL CATEGORIES OF ADMISSION)



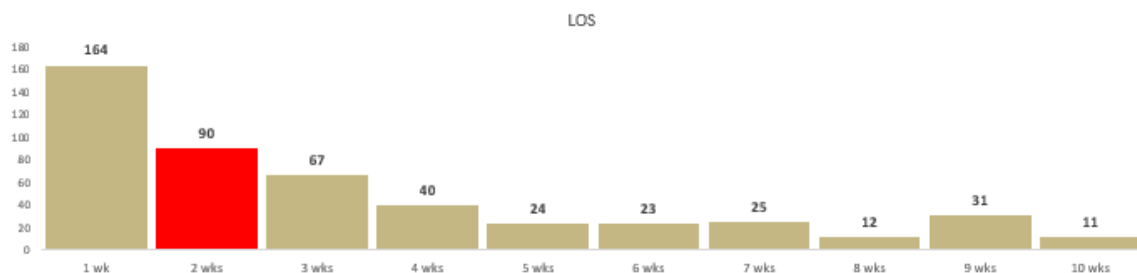
The median LoS of discharge as cured was 6 weeks. Some Children exited earlier/later than expected. Too Early and late discharge can be attributed to lack of following the IMAM Protocol by some program staff or Community health volunteer implementing program.

SFP LENGTH OF STAY (LoS) AT DISCHARGE-CURED (FOR ALL CATEGORIES OF ADMISSION)



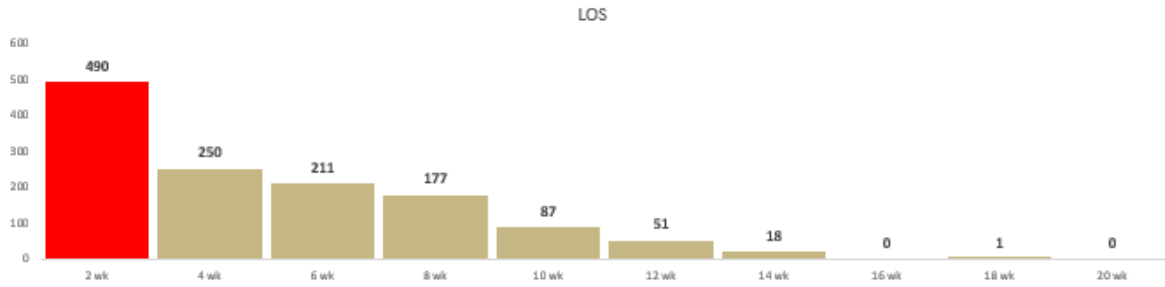
The median LoS of discharge as cured was 8 weeks. Some Children exited earlier/later than expected. Too Early and late discharge can be attributed to lack of following the IMAM Protocol by some program staff or volunteer implementing program.

OTP Length of Stay- Defaulting



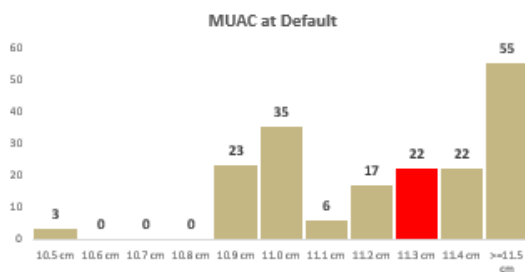
The median LoS of discharge for defaulters in OTP was 2 weeks signifying early defaulting.

SFP Length of Stay- Defaulting

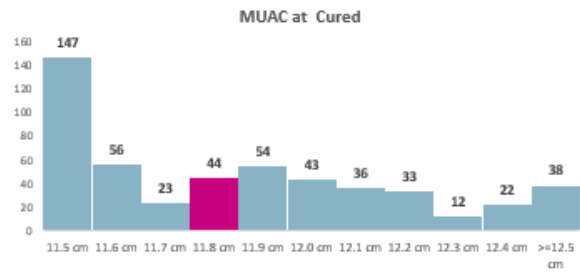


The median LoS of discharge for defaulters in SFP was 2 weeks signifying early defaulting.

OTP- MUAC at Default and Cured

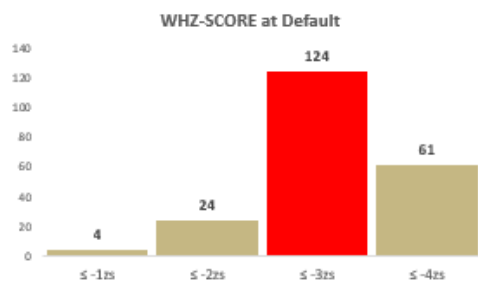


The median MUAC at defaulting was 11.3cm indicating that some children defaulted from the program and could still be SAM cases

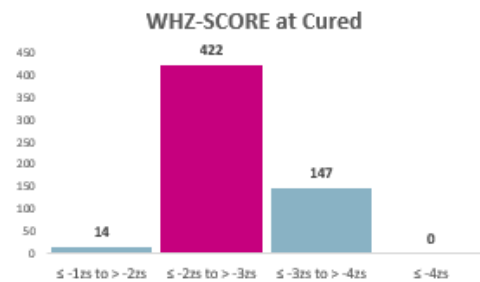


The median MUAC at cured was 11.8cm indicating that some children overstayed in OTP program

OTP- WHZ-SCORE at Default and Cured

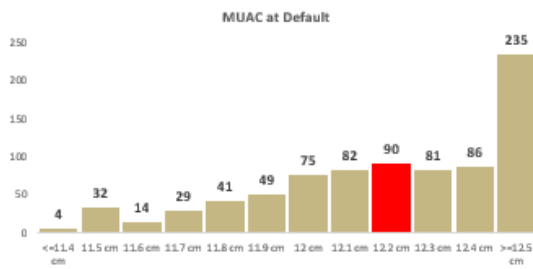


The median WHZ-SCORE at defaulting was <= -3SD indicating children are defaulting while they are still severely malnourished.



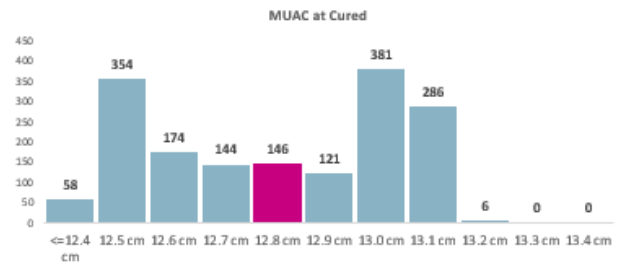
The median WHZ- Score at cured was <= -2zs> -3Zs indicating that some children overstayed in OTP program

SFP- MUAC at Default and Cured



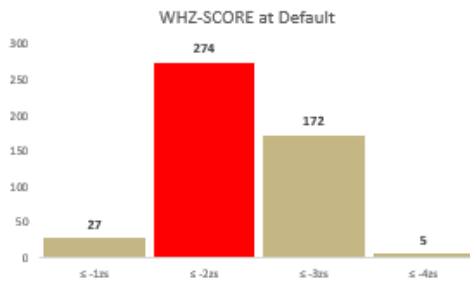
The median MUAC at defaulting was 12.2cm indicating that most cases defaulted whilst MAM.

A bigger proportion of beneficiaries defaulted with MUAC >=12.5cm, while recovering before formal discharge.

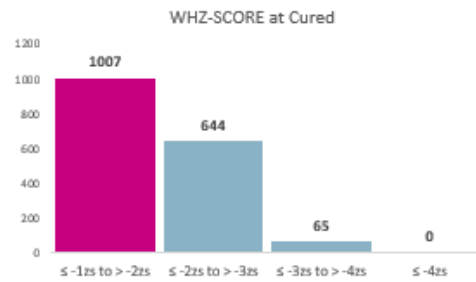


The median MUAC at cured was 12.8cm indicating that some children overstayed in SFP program

SFP- WHZ-SCORE at Default and Cured



The median WHZ Score at defaulting was $\leq -2zs$ - $\geq -3sd$ indicating that a significant number was found to have defaulted whilst MAM



The median WHZ-Score at cured was $\leq -1zs$ - $> -2sd$ indicating that timely in SFP program

However, early discharges, when the children are not yet cured, were also observed attributed to poor documentation and mix up of the discharge criteria

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

One of the main outputs of a SQUEAC assessment is a list of barriers that carers of malnourished children face in accessing treatment at health centres. The assessment also identifies positive factors, or “boosters”, which encourage carers to take their children to health centres for treatment. Field teams undertook a community assessment to understand the social, cultural, or medical contexts in which the malnourished children live using a variety of qualitative data collection techniques. A total of 6 teams supported qualitative data collection for 4 days. Three methods were used to collect qualitative information. Qualitative information collected was triangulated using different sources. The methods used to collect qualitative information included.

Semi structured interviews: where the data collection team engaged one on one with the respondents using interview guides adopted from the Kenya Coverage Assessment Guideline For Nutrition Programs. Semi structured interviews were used to identify individual thoughts perceptions and feelings towards topics such as health workers views on IMAM services, disease calendar, defaulting information, opinion on program including challenges and ways to improve on IMAM program. The respondents included health facility staff (health facility in charge, CHAs, nutritionists), carers of children in OTP and SFP program, NGO agents and program staff.

Informal group discussions: The data collection teams engaged groups of people who included separate and mixed groups of men and women, carers of OTP and SFP program beneficiaries and community leaders. The facilitators deeply probed the respondents on a given topic until no more information came. If new information came around, it formed the basis of questioning in the next group of respondents. Triangulation was done with methods and sources.

In-depth Interviews: Respondents were intensively interviewed in order for the investigator to obtain an in depth understanding and explore their perspectives on particular topic.

Observations: An observation is a process of systematically observing objects, events, people and/or relationships. It is an essential qualitative data collection tool on the community behavior, which cannot be collected otherwise. It allows for a more complete understanding of the community and its context. The observation at health facilities focused on the quality of service, the availability of RUTF, client interactions, etc. An observation checklist was also used to collect information regarding; the presence of IEC materials, RUTF stock, OTP registers and ration cards and also program organization.

KEY COVERAGE ISSUES BASED ON QUALITATIVE DATA

Geographical Coverage Issues:

Long distance from the villages to the nearest health facilities was one of coverage barriers mentioned. The information was triangulated by informal group discussions with community health volunteers,

semi structured interviews with the health workers, focus group discussions with carers of children with acute malnutrition as well and the area chief through key informant interviews. Despite the County efforts to increase health facilities across, Samburu County, long distance greatly contributes to inaccessibility of IMAM services in the County. this has been further worsened by drought that has led to migration of communities in areas with poor access to social amenities, insecurity that has led to displacement of communities and also rendered some villages inaccessible by outreach workers and CHVs especially in Samburu North and Central.

Defaulting

Defaulting was identified as a major program barrier to Both OTP and SFP based on both quantitative and qualitative data. High defaulting was associated to perceived long distances to OTP and SFP sites aggravated by insecurity and drought as well as social cultural issues such as alcoholism among caregivers and family labor responsibilities. Distances to both OTP sites is still long as per the community opinion. Largely being pastoral communities, the community residing in Samburu County migrate frequently. As such, they move away from areas near the treatment sites making them unable to follow the treatment protocols. Lack of incentive to CHV who are involved in IMAM program and defaulter tracing was also highlighted as one of the contributors to high defaulting. Shortage of staff especially in rural dispensaries led to absenteeism when there are other county level activities hence contributing to high defaulters. This was highlighted by carers of both OTP and SFP beneficiaries, Community health volunteers and health facility nurses especially dispensaries in rural areas.

Community Mobilization Issues

The coverage and functionality of community health units i.e. the community units remains inadequate in Samburu County. **The county currently has xx functional CUs against the targeted yy CUs based on the population and geographical parameters.** In areas where community units have been established and are functional, active case finding is frequently done. The communities are aware of signs of malnutrition and presence of IMAM program in such areas. In areas with functional community health units, the community confirmed involvement of community leaders such as chiefs, CHVs in community mobilization and case finding, CHVs awareness on the community lead MUAC screening of children at the household level, Existence of Referral system by the CHVs and defaulter tracing mechanisms, Community awareness of signs of malnutrition and Community acceptance of the nutrition supplements. This was reported by carers of beneficiaries of OTP and SFP, health workers, CHVs, Chiefs, lay persons (men and women) and village elders. Community acceptance of nutrition supplements. CHVs indicated that they need to be motivated through routine capacity building activities including trainings, support with monthly stipend and be facilitated to do their work. Only the support partners provide incentives to CHVs “when they go to perform the assigned activities”.

CHVs claim that the County had started giving some stipends, but this was only done for some few months after which it stopped.

Social Cultural Issues

There was little or no reliance on traditional methods of treatment of malnutrition in Samburu County. Community awareness of signs of malnutrition and acceptance of the nutrition supplements were highlighted by different respondents including health workers, CHVs, chiefs, lay persons and carers of OTP and SFP beneficiaries. Community health dialogue and action days where the community come together to discuss health issues affecting the community such as malnutrition, diseases/conditions, WASH, MNCHN has also contributed to reduced social cultural barriers to IMAM program coverage as indicated by CHVs and CHAs. Alcoholism among carers of OTP and SFP beneficiaries, perception of RUTF and RUSF as food, domestic violence with women being the victims, stigma when one has two or more under-fives in IMAM program and poor health seeking behavior where some prefer homemade medicines before visiting the facility were highlighted by health workers, CHVs laypeople, carers of SFP beneficiaries and chiefs as among social cultural barriers affecting defaulting and IMAM coverage in the County.

Health Workforce

Health workforce has a major implication on IMAM coverage in Samburu County. Although the County government of Samburu has worked towards addressing the existing gaps, most level 2 health facilities are being manned by one health worker. As such, the workload by health workers remains high. This also leads to frequent absenteeism by health workers in case of trainings and integrated medical outreaches in the facilities catchment hard to reach villages. This has led to long waiting time at the health facility amid high maternal workload and walking long distances only to find a closed health facility. This has contributed to defaulters especially when carers of OTP and SFP beneficiaries stay the whole day at the facility or find a closed facility severally despite walking long distances. This was CHVs, Nurse, Village leader, Chief, Carers

CHVs attached to the health facilities are still assigned the tasks of management and treatment of severely or moderately malnourished children enrolled in OTP and SFP with little or no supervision from health workers. The CHVs sometimes are limited to perform the assigned duties by their literacy levels leading to poor documentation. Health workers' capacity to handle IMAM services and other services offered in the health facility is also a major barrier to access and coverage of IMAM services in health facilities with only one nurse.

Quality of Care: Carers of OTP and SFP beneficiaries were happy with the continuity of care where the child is transferred from OTP to SFP and managed until cure. Availability of health personnel at

the facility during SFP day was also mentioned by carers of SFP beneficiaries, CHVs and Chiefs as one of the boosters to coverage and contributed to reduced defaulters. Selling of nutrition commodities by the carers to buy other goods such as flour, sugar and alcohol as reported by health workers and CHVs however affected quality of care of children in OTP and SFP program. Community health volunteers and health workers opined sharing of nutrition commodities with other healthy children in the household as contributor to increased length of stay and non-response among IMAM beneficiaries.

Barriers Boosters and Questions (BBQ) Development

One of the main outputs of a SQUEAC assessment is a list of barriers that carers of malnourished children face in accessing treatment at health centres. The assessment also identifies positive factors, or “boosters”, which encourage carers to take their children to health centres for treatment.

The BBQ allows the assessment team to organize key elements, representing factors with a positive or negative effect on access and coverage, in a table format and triangulate each by source and method. In consequent stages, the factors with the highest periodicity are weighted higher than elements mentioned occasionally.

BBQ listing was done on daily basis. Data collection teams met every evening where all identified barriers and boosters were presented and discussed during a feedback session facilitated by the team leader. The team leader copied each barrier and booster onto a flipchart, adding sources and methods every time they are mentioned by the teams. Owing to the fact that certain barriers and boosters are likely to be cited numerous times, a legend of barrier, booster methods and sources was developed as illustrated in table I below. If at the end of the day, certain barriers and boosters were mentioned only once, they were shifted to another flipchart entitled Questions. These points were further investigated and were in mind for the next day’s data collection.

This was followed by compiling the final list of barriers and boosters and establishing all sources, methods and demographic information. The team then proceeded with the weighting of individual elements in order to prioritize which are the most important barriers and boosters impacting on coverage.

Table 1: BBQ legend (source of information)

Key/Legend (source of information)			
*	Caregivers of under 5 / SAM Beneficiaries	Ω	Service Delivery Point (Facility) Data Extracts
o	Facility In-charge / Nurse In-charge / Nutritionist	√	Traditional Healing Practitioner / TBA
Δ	Community Health Worker / Volunteer	=	Layperson
△	Health related Program Manager / Others	∩	Key Opinion Leaders; Village Elder / Religious leaders
Σ	Area Chief (Administrative leader)	e	Health Facility Observation Checklist
□	School Teacher	¥	Shop attendance
σ	Small study	Υ	Chemist/Pharmacy Attendant
∞	Caregivers of under 5 / OTP Defaulted Clients	®	Focus Group Discussion – Informal
X	Key Informant Interview - In-depth Interview (IDI)	Θ	Focus Group Discussion – formal
©	Key Informant Interview – Semi-Structured Interview	3	Observation

Table 2: BBQ legend (Method)

Key/Legend (Method)

- ® Focus Group Discussion – Informal
- Θ Focus Group Discussion – formal
- 3 Observation
- X Key Informant Interview - In-depth Interview (IDI)
- © Key Informant Interview – Semi-Structured Interview

OUTPATIENT THERAPEUTIC PROGRAM BOOSTERS (WEIGHTED AND UNWEIGHTED)

Table 3: OTP boosters

Booster (Raise, improve, aid, add to)	Source	Method	Unweighted	Weighted
Health Seeking Behavior				
Use of family led MUAC helped community to refer themselves to the health facilities	Δo^*	$\odot X \ominus$	1	4.5
The beneficiaries access the facility easily during the clinic day	$*\Delta o \omega$	$\ominus X \odot \oplus$	1	3
Awareness about malnutrition and malnutrition signs				
Community awareness of signs of malnutrition hence able to see improvement of the child who have been enrolled in OTP	$\Delta^* \omega =$	$\oplus \ominus X \odot$	1	4
Awareness of IMAM Program Services				
Existence of functional community units has led to awareness of IMAM program	Δo	$\odot X$	1	4
Availability and Accessibility of the service				
Consistent supply of nutrition commodities at the health facility	$*\Delta o \omega$	$\ominus X \odot \exists$	1	5.3
Consistent Integrated health Outreaches in hard-to-reach villages	$\Delta o \omega$	$\ominus X \oplus$	1	5.4
Case identification Strategy and enrolment				
CHVs awareness on the community lead MUAC screening of children at the household level.	$*\Delta o$	$\ominus X \odot$	1	3
Visiting of health facility frequently for weight monitoring	$*o$	$X \oplus$	1	2
Active case finding and referrals	$\Delta o^* \Sigma$	$\odot X \ominus \oplus$	1	5.4
Communication System with community				
Involvement of community leaders such as chiefs, CHVs in community mobilization and case finding during integrated medical outreaches	$\Delta o \omega$	$\ominus X \odot$	1	2

Booster (Raise, improve, aid, add to)	Source	Method	Unweighted	Weighted
Community health dialogue and action days where the community come together to discuss health issues affecting the community such as diseases/conditions, WASH, MNCHN	Δo	ΘX	1	2.5
Consistent bi-monthly meetings among the chvs and the CHA	Δo	ΘX	1	1.8
Appreciation of the Service				
Community acceptance of the nutrition supplements and activities involved	Δ*o	Θ®X	1	2
Referral/Transfer & Follow up strategy				
Existence of Referral system by the CHVs and defaulter tracing mechanisms	Δo	ΘX	1	4
Availability of referrals slip (MOH 100) that guide in defaulter tracing	Δo	ΘX	1	3
Client Retention Strategy				
Continuity of care where the child is transferred from OTP to SFP and managed until cure	o	X	1	2
Capacity of the Service Delivery Point to provide a quality service				
On job training targeting health facility staff including nurses	oΔ	©X	1	2
Timely monthly reporting	oΔ	©X	1	1.8
Total			18	52.3

OTP BARRIERS (WEIGHTED AND UNWEIGHTED)

Table 4: OTP Barriers

Barrier (lower, hinder, reduce, block)	Source	Method	Unweighted	Weighted
Health Seeking Behavior				
Maternal workload; Fetching water, firewood, herding leading to defaulting	Δo^*	$\Theta X \odot$	1	4.5
Alcoholism, where carers are exchanging nutrition commodities with alcohol and money to buy it. This is more so to the alcoholic carers	Δo	ΘX	1	3
Some community members believe in traditional medicine.	$\surd =$	\odot	1	2.7
Domestic violence contributes to defaulting cases.	*	\textcircled{R}	1	1.8
Awareness of IMAM Program Services				
Sharing of the nutrition supplements as a coping mechanism due to household food insecurity	Δo^*	$\Theta X \odot$	1	4.0
Sharing of nutrition commodities with other healthy children in the household leading to increased length of stay and non-response	Δo^*	$\Theta X \odot$	1	3.0
Lack of awareness on IMAM program leading to ignorance by carers in completing visits	$o \Delta$	ΘX	1	3.0
Availability and Accessibility of the service				
Theft of nutrition commodities at the health facility where peoples break the stores and take away the commodities.	o	X	1	1.5
Migrations in search of pasture leading to increased distance to the IMAM site by the beneficiaries	$* \Delta o$	$\Theta \textcircled{R} X$	1	2.5

Barrier (lower, hinder, reduce, block)	Source	Method	Unweighted	Weighted
Distance from the village to IMAM site in far areas not covered with integrated medical outreaches	*ΔoW	Θ®X©	1	3.2
Insecurity due to conflicting communities over resources such livestock, land, water and pasture which instilled fear to the beneficiaries from accessing the facility.	*ΔoW	Θ®X©	1	2.0
Fear of attack by wild animals	*ΔoW	Θ®X©	1	0.9
Inconsistent outreaches in some sites	*Δ	Θ	1	2.4
Case identification Strategy and enrolment				
Inadequate knowledge of IMAM among CHVs hence not able to screen and refer malnutrition cases.	Δo	ΘX	1	2.5
Appreciation of the Service				
Selling of nutrition commodities by the carers to buy other goods such as floor, sugar	Δo	ΘX	1	2.0
Referral/Transfer & Follow up strategy				
Low CHVs motivation for IMAM and other activities at the community leading to low active case finding and defaulter tracing	Δo*Σ	ΘX©®	1	2.1
Health Facility staff attitude toward the CHVs referrals from the community. They throw away the referral forms.	Δo	ΘX	1	1.2
Capacity of the Service Delivery Point to provide a quality service				
Staff shortage: Some health facilities have only one health worker (nurse) who support all primary health care interventions and lack of nutritionists in most dispensaries.	*ΔoWΣ	©XΘ®3	1	5.0

Barrier (lower, hinder, reduce, block)	Source	Method	Unweighted	Weighted
Long waiting time to be served at the facility especially in facilities with only one health worker offering all other health services such as immunization, ANC, treatment	Δo*	©XΘ3	1	3.0
Absenteeism of the health facility staff due to other duties such as attending trainings, outreaches, leaves and meeting which make the beneficiaries to miss their commodities as scheduled	*Δ	Θ®	1	2.5
Total			20	43.0

SFP BOOSTERS (WEIGHTED AND UNWEIGHTED)

Table 5: SFP Boosters

#	Booster (Raise, improve, aid, add to)	Source	Method	Unweighted	Weighted
	Health Seeking Behavior				
1	Routine visit to health facility for growth monitoring	Δ^*O	$\Theta^{\otimes}X$	1	7
	Awareness about malnutrition and malnutrition signs				
2	Health talk targetting caregivers after the case of MAM is identified	Δ^*	Θ^{\otimes}	1	2
	Awareness of IMAM Program Services				
3	Acceptance of IMAM program by the community, they appreciate for it has really helped their children and has reduced death among children.	$*o\Delta\Sigma\omega$	$\Theta^{\otimes}X\Theta^{\otimes}$	1	6
4	Existence of community units has led to awareness of IMAM program	$O\Delta\triangle$	$\Theta^{\otimes}X\Theta^{\otimes}$	1	5
5	Giving health talks by showing examples of cured children	Δ	Θ	1	1
	Availability and Accessibility of the service				
6	Consistent integrated outreaches in hard-to-reach villages	$\triangle O\Delta^*$	$\Theta^{\otimes}X\Theta^{\otimes}3$	1	6.3
	Case identification Strategy and enrolment				
7	Routine Active case findings and referrals	$O\Delta^*\Sigma$	$\Theta^{\otimes}X\Theta^{\otimes}$	1	6
8	Family led MUAC has led to early detection of malnourished child at the household level.	Δo^*	$\Theta^{\otimes}X\Theta^{\otimes}3$	1	4
	Communication System with community				
9	Consistent bi-monthly meetings between CHVs and CHA.	Δo	$\Theta^{\otimes}X$	1	3

#	Booster (Raise, improve, aid, add to)	Source	Method	Unweighted	Weighted
10	Presence of health facility nurse in the CU monthly meetings where she discusses reports and other issues including IMAM defaulters' non-responders and low admission.	ΔΟ	ΘΧ	1	3
Appreciation of the Service					
11	Community appreciation of CHVs work	οΔ	ΘΧ	1	1
12	Carers appreciation of the quality of services given by health workers and also treated well	*	®	1	1
Referral/Transfer & Follow up strategy					
13	Availability of referrals slip (MOH 100) that guide in referral and defaulter tracing	οΔΩ	ΧΘ3	1	3.6
Client Retention Strategy					
14	Routine defaulter tracing in case there is any	ΟΔ△	ΧΘ©	1	3.8
Capacity of the Service Delivery Point to provide a quality service					
15	Availability of IMAM commodities in which there is no clients that gets less supplements or none.	*ΟΔ	®ΧΘ	1	6
16	On job training done to IMAM implementing staffs.	ΟΩ△	3ΧΘ©	1	3
17	Availability of health personnel at the facility during SFP day	*ΔΣ	®Θ©	1	5.5
18	Provision of right quantity of RUSF to the beneficiaries	*	®	1	3
Total				18	69.2

SFP BARRIERS (WEIGHTED AND UNWEIGHTED)

Table 6: SFP barriers

#	Barrier (lower, hinder, reduce, block)	Source	Method	Unweighted	Weighted
Health Seeking Behavior					
1	There is stigma when caregiver has two or more under-fives in IMAM program	Σ	©	1	1
2	Workload of carers due to home activities like looking after the animals, fetching water/ firewood	Δ*O	©XΘ®	1	3
3	Fear of attack by wild animals	*oΔU	©XΘ®3	1	2.7
4	Some clients only seek services only when there is an outreach	oΔ	ΘX	1	0.9
5	Poor health seeking behavior some prefer homemade medicines before visiting the facility	Δo =	ΘX©	1	3
Awareness of IMAM Program Services					
6	Perception of RUSF as food by the community	OΔ△	©X	1	3.2
7	Lack of awareness on IMAM program leading to ignorance by caregivers in completing visits	O△Δ	©X	1	2
8	The community want everyone to be supplemented due to poverty, others during drought and also the elderly	=	©	1	0.9
9	Ignorance from the Caregivers on following the appropriate amounts to give the child, saying the child only wants the supplements and refuses to feed on anything else.	O△	©X	1	1.5
Availability and Accessibility of the service					
10	Long distance from the villages to the health facilities	O*ΔΣ	©XΘ®	1	3.5

#	Barrier (lower, hinder, reduce, block)	Source	Method	Unweighted	Weighted
11	Migration in search of pastures	○△*ω	©XΘ®	1	3.5
12	Inconsistent outreaches in some sites	*△○△	©XΘ®	1	2.5
13	Floods mostly during rainy season that hinders people from coming to the facility	○*	X®	1	1
14	Migration due to insecurity, some move far from the facility.	△*ω	©XΘ®	1	2.4
15	Insecurity leading to inadequate household level screening and referral and increasing displacement of clients which leads to high number of defaulters.	△○*ω	©XΘ®	1	2.9
16	Domestic violence contributes to most defaulting cases.	*	®	1	1
Communication System with community					
17	Lack of motivation that leads to CHVs to be reluctant	△○*Σ	©XΘ®	1	2.4
18	Lack of incentive to CHV who are involved in IMAM program	△○	ΘX	1	1.8
19	No network coverage in some villages that makes it a challenge to communicate, in case there is a mobilization needed or any other issue that needs to be communicated	○△	ΘX	1	0.9
20	There is no involvement of administration leaders mostly in nutrition activities for proper mobilization	Σ	©	1	0.7
Appreciation of the Service					
21	Sharing of nutrition commodities with other healthy children in the household leading to increased length of stay and non-response	○△□	ΘX©	1	3.0

#	Barrier (lower, hinder, reduce, block)	Source	Method	Unweighted	Weighted
22	Some carers are selling IMAM commodities and leads to high cases of nonrespondents while others come before their return dates.	○Δ	⊖X	1	1.0
Capacity of the Service Delivery Point to provide a quality service					
23	Shortage of staffs with some facilities having one nurse.	*Δ○ωΣ	⊖⊗X⊗3	1	3.6
24	Absenteeism of health care staffs during integrated health outreaches, trainings and workshops in health facilities with only 1 nurse leading to Closure of facility.	*Δ	⊖⊗	1	3.6
25	Inadequate of trained personnel on IMAM	○	X	1	1.7
26	Under supplementation by the health worker due to inadequate supply of commodities at the facility	*	⊗	1	1.2
27	High workload during IMAM Day that leads to no counselling done and the staffs exhausted	○	X3	1	3.0
Total				27	56.9

1.0.1.OTP and SFP Concept Maps

Concept-mapping is a graphical data-analysis technique that is useful for representing relationships between findings. Concept-maps show findings and the connections (relationships) between findings (Mark Mayyat 2011). Qualitative and quantitative data collected was further analyzed and organized in a concept map as shown in the figures below. The investigation team linked barriers and boosters in to 2 concepts maps using the XMind software.

OTP Concept Map

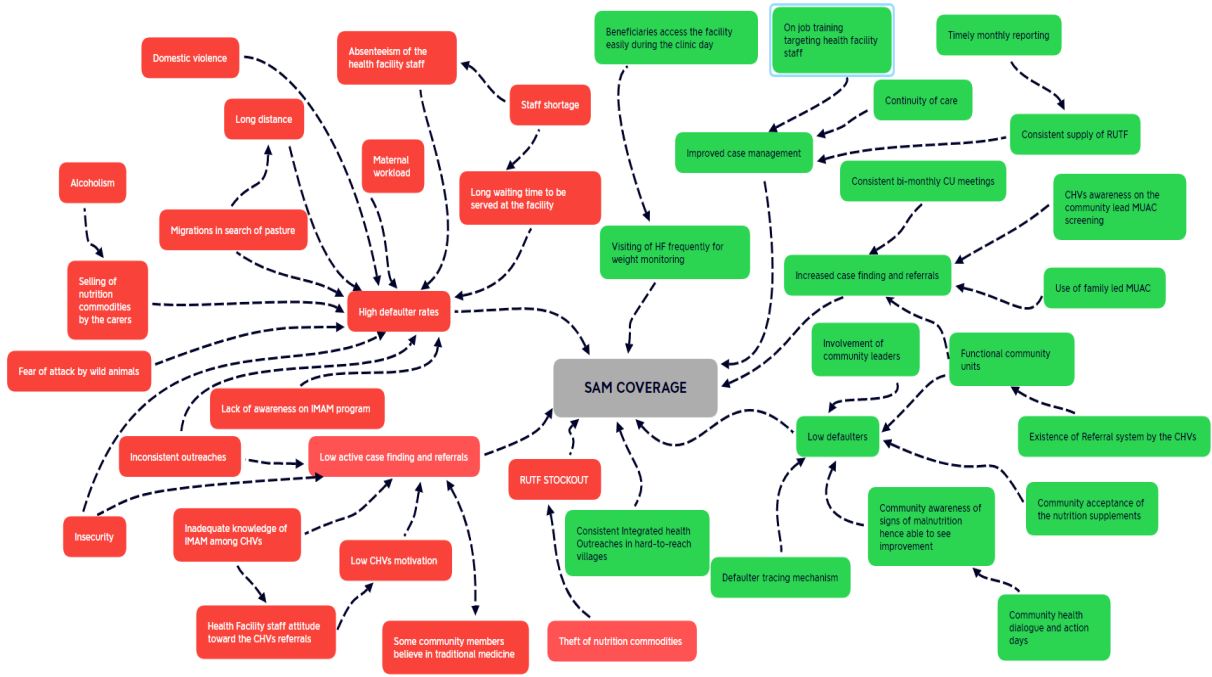


Figure 1: OTP Concept map

SFP Concept Map

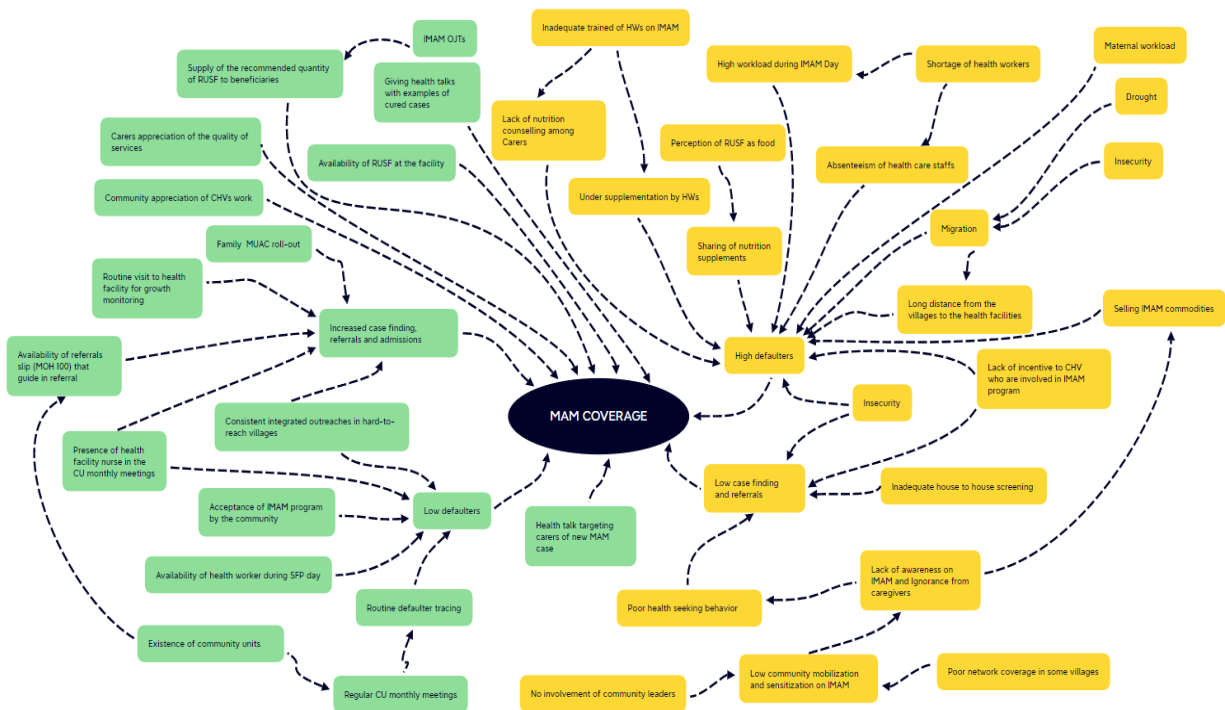


Figure 2: SFP Concept map

3.3 Stage 2: 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 1. The below hypothesis was formulated based on triangulation of quantitative and qualitative data collected in stage one;

“Areas with functional community units (routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community) has high coverage and areas with no community units (low or no routine household visits for screening and referral, no routine monthly meeting between CHVs and link facility, no defaulter activities by CHVs) have low coverage”The justification for this hypothesis was,

- Qualitative data indicated that there is availability of platform for linkage between CHVs and facility health workers through CU monthly meetings and WhatsApp group through which the health facility staff shares the list of defaulters with CHVs for tracing.
- Capacity building of CHVs on screening and referrals done in active Cus.
- There is clear referrals system in active community units with MoH 100 available both at the facility and the community level.
- No defaulter tracing mechanisms in place (most defaulters come from health facilities without functional Cus)

The hypothesis was tested using simplified LQAS formula $d = [n/2]$ in comparison with 50% threshold for rural set up. Small sample size survey was used to test the hypothesis since the hypothesis focused on spatial distribution of coverage in Samburu County.

3.3.1 Small Sample Size Survey

The villages for the small area survey were purposively selected. A small sample size survey was conducted in six purposively selected set of villages; three (Suguta Town B, Lariak Orok, Shaba) that had *routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community meetings and good linkage between facility and community*. These village were classified as **high coverage village**. The second set of villages (Ndikir, Ntirim, Gharma A and B) did not have *routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community meetings and good linkage between facility and community* and was classified as **low coverage villages**.

The Case finding procedure was door to door case finding. Questionnaire for covered cases and non-covered cases were applied appropriately.

Active case finding data collection form and Photos SAM and MAM children, and RUTF/RUSF Commodities were used. More than one criterion are used in admission in Samburu County (MUAC,

Z-scores and/or bilateral oedema) hence the small area study adopted all the three criteria in screening for malnutrition. Six teams visited the two sets of purposively sampled villages. Each team was provided with a MUAC tape, height board, weighing scale, WHO-WHZ score chart and sachets of RUTF and RUSF. When they reached the village, they looked for a key informant who led them to household of caregivers of children under five years of age where they checked edema and took MUAC, weight and height measurements. They confirmed whether the child is admitted in OTP or SFP by showing them RUSF or RUTF.

Table 7: Small sample size survey results (OTP)

Purposively sampled villages	Characteristic(s)	No of SAM cases in program	No. of SAM cases not in program	Total SAM Cases
High coverage village (Suguta town B, Lariak Orok, Shaba)	Villages with routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community	3	0	3
Low coverage village (Ndikir, Ntirim, Gharma A and B)	Villages without routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community	2	0	2
Purposively sampled village	LQAS Survey parameters	LQAS Analysis	Conclusion	
High coverage village (Suguta town B, Lariak Orok, Shaba)	Program coverage standard (p)	50%	No of SAM cases in program = 3. $3 > 1$	Hypothesis is confirmed that Suguta town B, Lariak Orok, Shaba are high coverage villages
	Decision rule (d)	$d = [3/2] = 1.5$		
	No of SAM cases in program	3		
Low coverage village (Ndikir, Ntirim, Gharma A and B)	Program coverage standard (p)	50%	Number of SAM caes in program is 1	The hypothesis is confirmed that Ndikir, Ntirim, Gharma A and B are low coverage villages
	Decision rule (d)	$d = [2/2] = 1$	Number of SAM cases in program = 0	
	No of SAM cases in program	0	$0 < 1$	

Table 8: Small Sample Size survey results (SFP)

Purposively sampled villages	Characteristic(s)	No of MAM cases in program	No. of MAM cases not in program	Total MAM Cases
High coverage village (Suguta town B, Lariak Orok, Shaba)	Villages with routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community	14	9	23
Low coverage village (Ndikir, Ntirim, Gharma A and B)	Villages without routine active case finding by CHVs, linkage of defaulter cases with CHVs for tracing, Monthly CU meetings and good linkage between facility and community	2	6	8
Purposively sampled village	LQAS Survey parameters	LQAS Analysis	Conclusion	
High coverage village (Suguta town B, Lariak Orok, Shaba)	Program coverage standard (p)	50%	No of SAM cases in program = 14. 14 > 11	Hypothesis is confirmed that Suguta town B, Lariak Orok, Shaba are high coverage villages
	Decision rule (d)	$d = \lceil \frac{23}{2} \rceil = 11$		
	No of MAM cases in program	1		
Low coverage village (Ndikir, Ntirim, Gharma A and B)	Program coverage standard (p)	50%	Number of SAM caes in program is 1 1 < 2	The hypothesis is confirmed that Ndikir, Ntirim, Gharma A and B are low coverage villages
	Decision rule (d)	$d = \lceil \frac{8}{2} \rceil = 4$	Number of MAM cases in program = 2	
	No of MAM cases in program	2	2 < 4	

3.3.2 Prior Development

The information and data collected during the qualitative and quantitative data collection stages of a SQUEAC assessment reveal a great deal about coverage and about how it can be improved in a programme. However, they do not provide an overall estimate of programme coverage. The data and information collected during Stages 1 and 2 was used by surveyors to come up with a belief of what coverage is in OTP and SFP programme, known as the prior. Program barriers and boosters were organized and weighted based on the number of sources. Qualitative data was categorized as booster (positives) or a barrier (negatives) to the program. The prior mode was determined as an average of boosters (build up from 0%) and barriers (knock downs form 100%) as shown in the table below. Four Methods were used to determine the prior mode. They included; unweighted barriers and boosters,

weighted barriers and boosters and concept map positive and negative linkages and histogram of belief from the survey teams.

Table 9: OTP prior mode calculation

Method	Booster	Barriers	Prior mode (%)
Simple BBQ	18	20	49.0
Weighted BBQ	52.3	43	54.7
Concept map	21	25	48.0
Histogram	50	46.7	51.7
Averaged Prior mode			50.8

Table 10: SFP prior mode calculation

Method	Boosters	Barriers	Prior mode (%)
Simple BBQ	18	27	45.5
Weighted BBQ	69.2	56.9	56.2
Concept map	22	29	46.5
Histogram	45.7	50	47.8
Averaged Prior mode			49.0

The above information was fed in SQUEAC bayes calculator to come up with Bayes plots. This was done by adjusting the α and the β values of Bayes calculator until the prior mode (50.8 and 49.0) was achieved. Figures 19 and 20 below illustrates the Bayes plots for SFP and OTP. The plots are graphical representation of estimated coverages based on the information so far collected in stage 1 and 2.

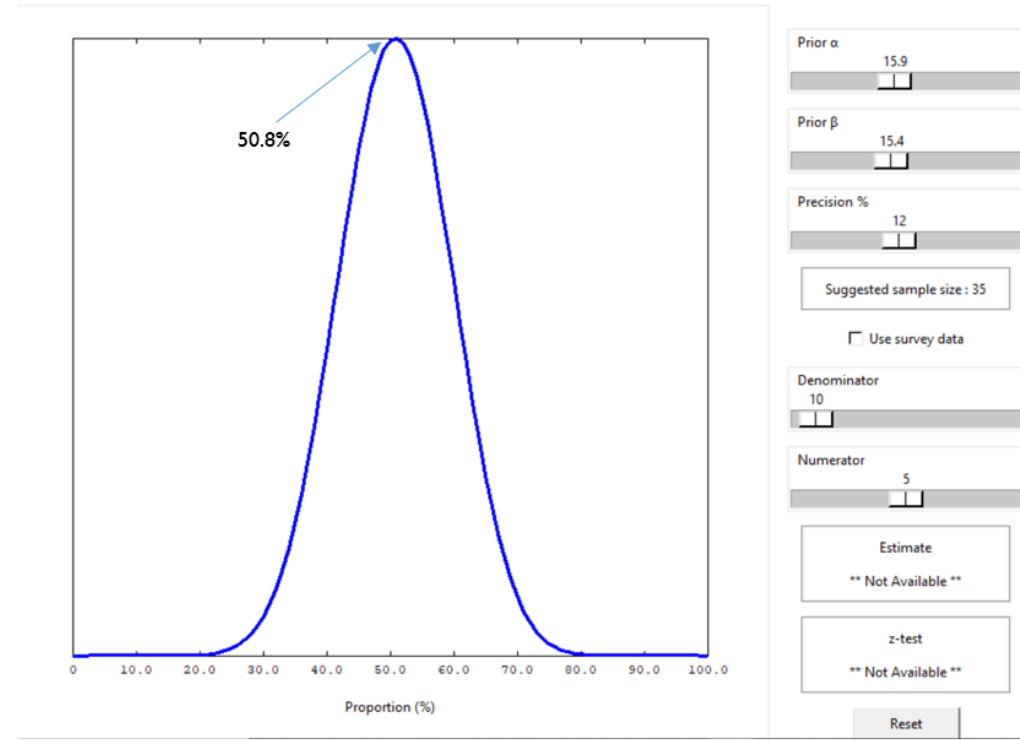


Figure 3: Bayes plot OTP

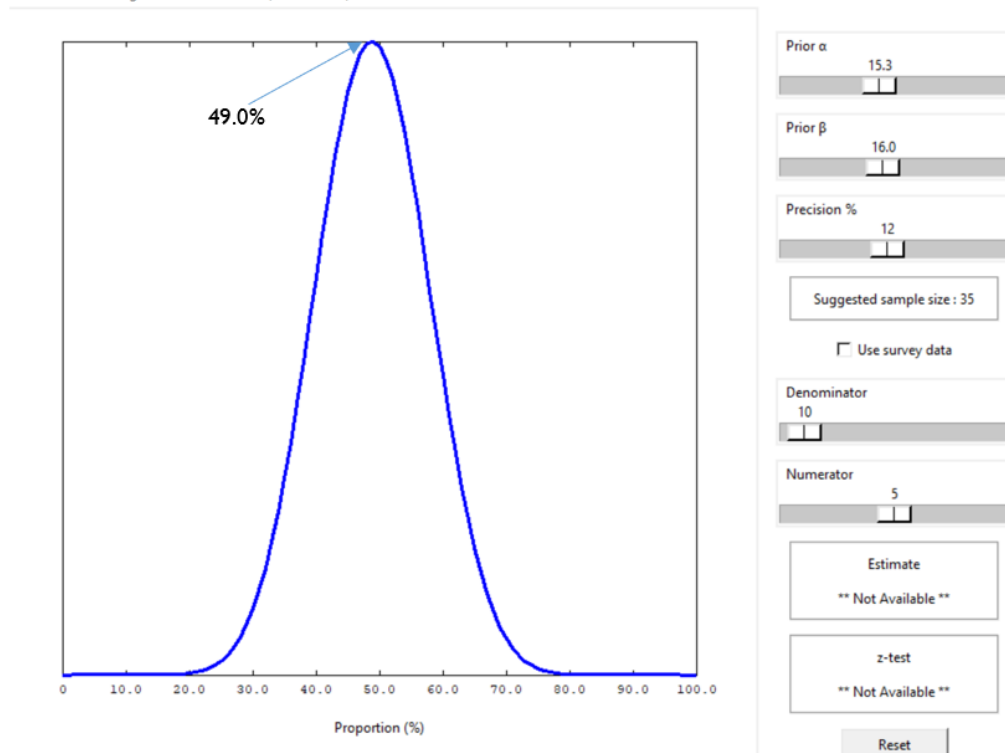


Figure 4: Bayes plot SFP

Stage 3.4 Wide Area (Likelihood) Survey

Once the prior mode had been finalized and its shape parameters entered into the Bayes calculator (a recommended sample size was generated as 35 for SAM and 35 for MAM. This figure is the recommended minimum number of acutely malnourished children which need to be found during the likelihood survey to achieve the desired level of confidence in the posterior, or the overall coverage estimate.

3.4.1 Villages Sample Size Calculation

Based on the sample size generated by the Bayes calculator, the following formula was used to calculate the number of villages or communities to visit (n =recommended sample size). The number of villages depended on the number of cases, average population per village, proportion of children 6- 59 months in the population as well as the current estimate of SAM prevalence (a value midway between the point estimate and the lower 95% confidence limit for SAM prevalence ($0.4\%+(1.0\% - 0.4\%)/2=0.7\%$) as summarized in the formula below.

$$villages = \frac{n}{[average\ village\ population * (\%Children\ 6 - 59m) * \% SAM\ Prevalence\ by\ MUAC]}$$

Where $n= 35$

Average village population = 732 (County Population – 348,298/Total villages - 476)

% of children 6- 59m = 16.2%

SAM prevalence = 0.4%

Therefore,

$$villages = \frac{35}{[732*0.162*0.004]} = 47\ villages$$

For MAM, the sample size was calculated as follows

$$villages = \frac{n}{[average\ village\ population * (\%Children\ 6 - 59m) * \% MAM\ Prevalence\ by\ MUAC]}$$

Where $n= 35$ cases

Average village population = 732

% children 6- 59m = 16.2%

% MAM prevalence by MUAC= 2.1%

Therefore,

$$villages = \frac{35}{[732*(0.162)*0.021]} = 8$$

The largest sample size among the SAM and MAM was used as the overall sample size. Therefore the overall sample size in terms of villages was 47 villages.

3.4.2 Likelihood Survey Sampling

Two stage sampling was applied in likelihood survey. Stage I involved selection of villages (smallest administrative units) based on the health facility catchments. Since a recent village list based on the health facility catchment was available **spatially stratified systematic sampling** was used in this stage. Each village was linked to a health facility catchment. In total there were 476 villages in Samburu County. This was divided by the number of villages calculated in section 2.5.1. That is 47 (The highest among SAM and MAM) villages to obtain a sampling interval of 10.2. The first village was randomly selected between 1 and 10. In this case the first village was village 9 (Angata Rongai A) from the list. The 2nd village was sampled as 27th village from the village list and that continued until the 25th village was sampled.

In stage 2 door to door case finding was used where all children 6-59 months were screened and MAM and SAM cases were actively searched from the sampled villages. The survey was carried out in 47 villages for 8 days. All children 6 to 59 months had their edema checked and MUAC, weight and height measured. Those children who met the admission criteria for SAM (Presence of edema and/or MUAC < 115mm and/or WHZ-Score < -3SD) and MAM (MUAC ≥ 115mm and < 125mm and/or WHZ ≥ -3SD to < -3SD) and were not in program were referred to the nearest health facility. Six teams each with 2 measurers and 1 team leader were involved in the data collection. Fifty six (56) SAM cases and 320 MAM cases were identified as summarized in table 12 below.

Table 11: Likelihood Survey Report

SAM Cases	Number	MAM Cases	Number
SAM cases in program (Ci)	14	MAM cases in program (Ci)	102
SAM cases not in program (Cout)	42	MAM cases not in program (Cout)	218
Recovering cases in program (Rin)	15	Recovering cases in program (Rin)	77
Total Cases	71	Total Cases	397
Recovering cases not in Program (Rout)	14	Recovering cases not in Program (Rout)	54

Total	85		451
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Recovering cases out of program were calculated using the new coverage calculator as follows,

Tools for SQUEAC and SLEAC

Numbers | Single SLEAC | Multiple SLEACs | Barriers Plot | Capture-Recapture

Current cases in program : 14

Current cases NOT in program : 42

Recovering cases in program : 15

Mean length of untreated episodes : 7.5 months

Mean length of treated episodes : 2.5 months

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Current cases in program : 14
Current cases NOT in program : 42
Recovering cases in program : 15
Average length of untreated episodes : 7.5
Average length of treated episodes : 2.5

Correction factor (k) : 3
Recovering cases NOT in program : 14 (estimated)

Single Coverage (Numerator, Denominator) : 29, 85
Point Coverage (Numerator, Denominator) : 14, 56
Period Coverage (Numerator, Denominator) : 29, 71

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OTP recovering cases NOT in program: 14

SFP recovering cases NOT in program: 54

Tools for SQUEAC and SLEAC

Numbers | Single SLEAC | Multiple SLEACs | Barriers Plot | Capture-Recapture

Current cases in program : 102

Current cases NOT in program : 218

Recovering cases in program : 77

Mean length of untreated episodes : 7.5 months

Mean length of treated episodes : 2.5 months

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Current cases in program : 102
Current cases NOT in program : 218
Recovering cases in program : 77
Average length of untreated episodes : 7.5
Average length of treated episodes : 2.5

Correction factor (k) : 3
Recovering cases NOT in program : 54 (estimated)

Single Coverage (Numerator, Denominator) : 179, 451
Point Coverage (Numerator, Denominator) : 102, 320
Period Coverage (Numerator, Denominator) : 179, 397

```

3.4.3 Single Coverage Estimate

Single coverage estimator was used to estimate the program coverage. Single coverage estimator includes both recovering cases that are admitted and those that are not in the program as illustrated below.

$$\text{Single Coverage} = \frac{Ci + Ri}{Ci + Ri + Cout + Rout}$$

Where C_i = Active cases in program

C_{out} = Active cases not in program

R_i = Active cases not in program

R_{out} = Active cases not in program

Sum of active and recovering cases in program was used as the numerator (29 for SAM and 179 for MAM) while active and recovering cases in and out of program (85 for SAM and 451 for MAM) was used as a denominator. This information was fed in a Bayes coverage estimator Calculator. Combining prior estimate and likelihood information in the calculator generated a posterior which showed the overall coverage for OTP in Samburu County as **38.4% (30.0%- 47.4%)** and **39.7% (34.3%- 45.5%)** for SFP as illustrated in figure 21 and 22 below. There was insignificant conflict between likelihood and prior in both OTP and SFP with a z value of 1.61, $p = 0.1083$ for OTP and z value of 1.06, $p = 0.2883$ for SFP.

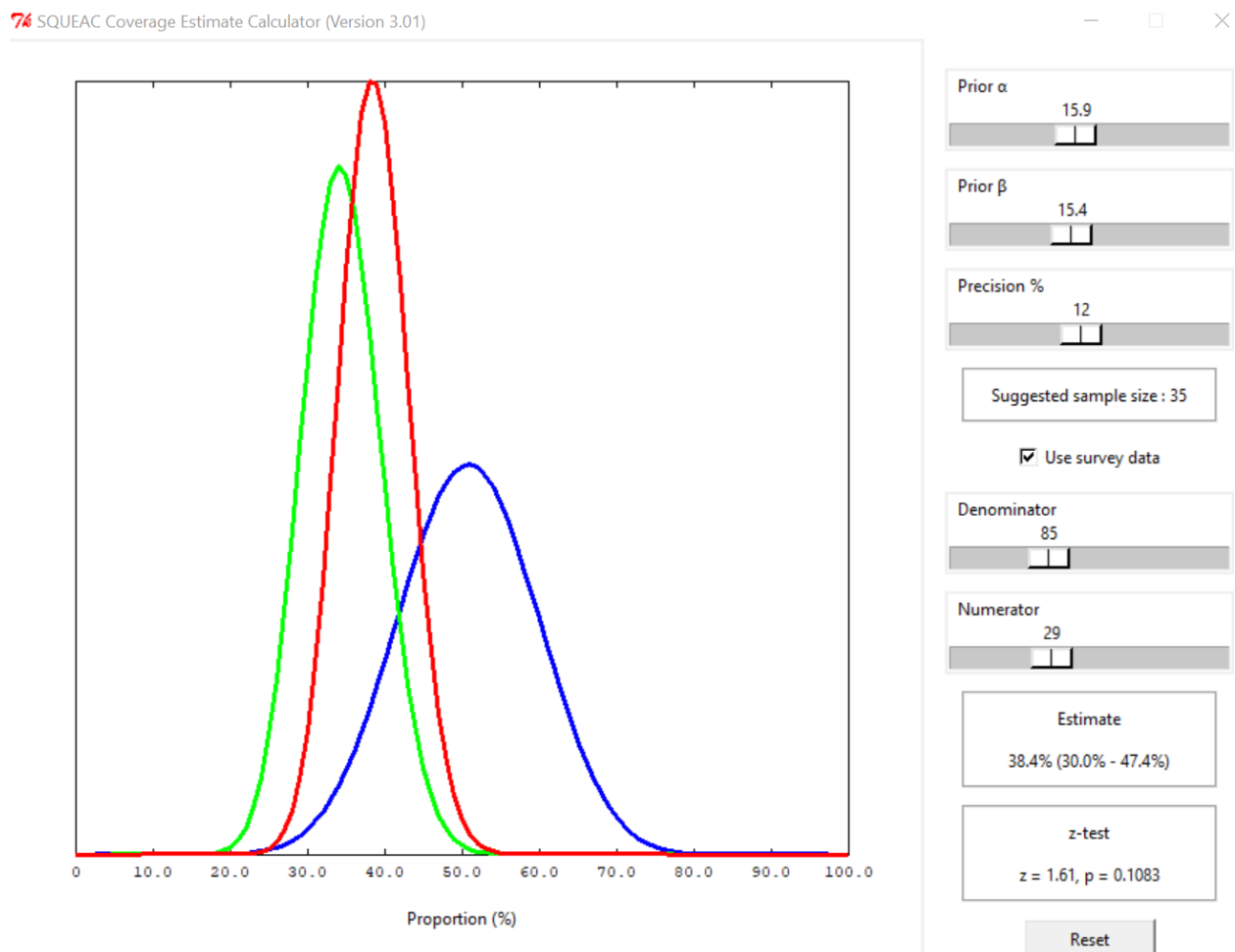


Figure 5: Single Coverage Estimate for OTP

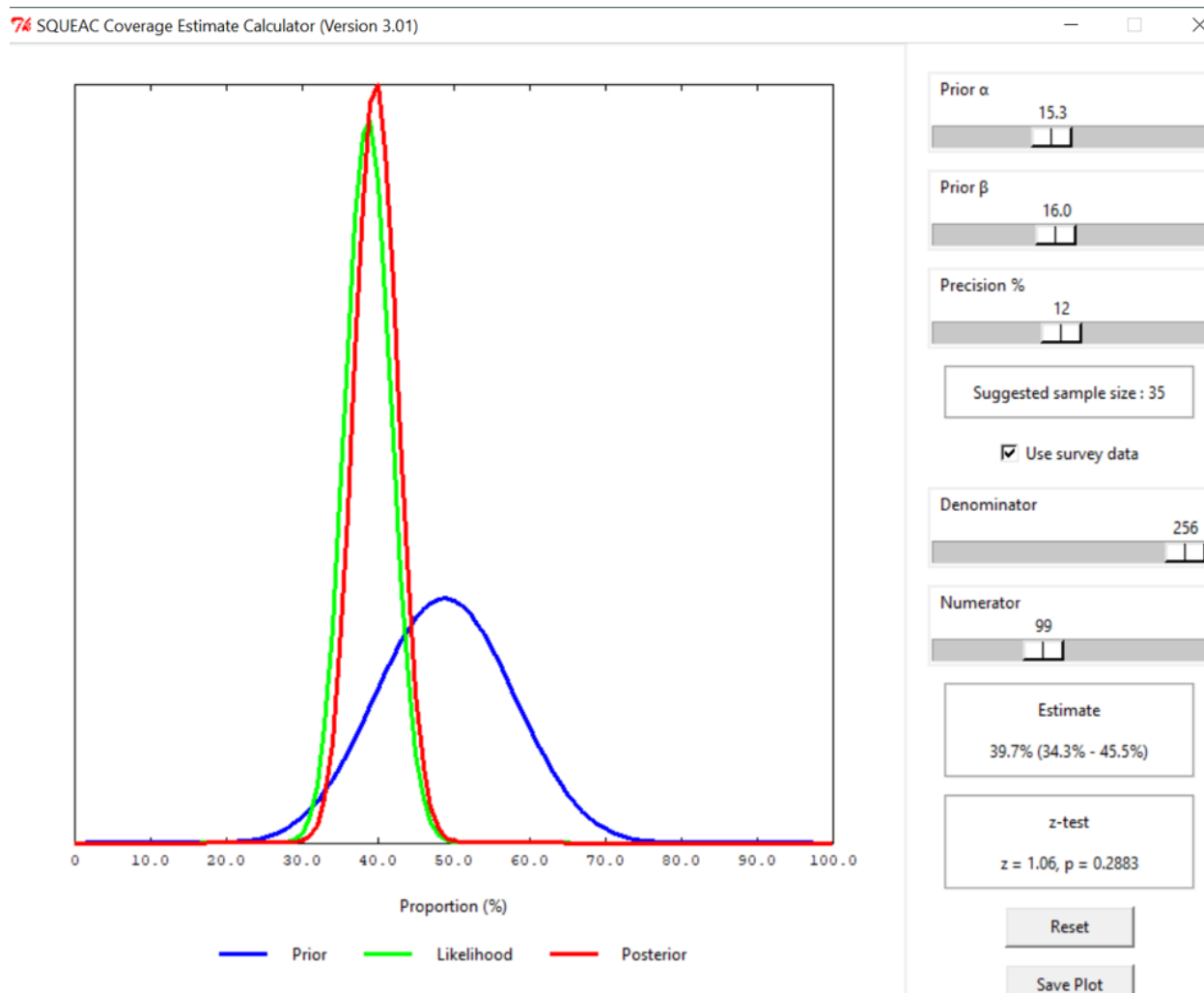


Figure 6: Single coverage estimate, SFP

3.4.4 Reasons for Uncovered Cases

For those children who were not admitted in the program, a questionnaire was administered to the caregivers to establish why they were not admitted in the program. Lack of awareness that their children was suffering from any illness was mentioned by a majority of the caregivers (7) whose children had SAM followed by distance and the feeling that the child was not ill as well as the distance to the health facilities as illustrated in table 11 below.

Table 12: Reasons for Non covered

Reasons for Non-Covered cases	n	%
Not aware of illness	198	79.8%
Not aware of IMAM program	10	4.0%
Too far	13	5.2%

Reasons for Non-Covered cases	n	%
Non-availability of means of transportation	1	0.4%
Non-availability of financial resources for the journey	1	0.4%
Non-availability of financial resources for the treatment	1	0.4%
Carer ill	1	0.4%
Too busy	8	3.2%
No-one to look after other children	1	0.4%
Lack of conviction that the programme can help the child	2	0.8%
Fear of hospital stay (away from HH, fees)	1	0.4%
Preference of traditional treatment	1	0.4%
Previous rejection of a child; when?	4	1.6%
Rejection of a known child	1	0.4%
Other	5	2.0%

4 Conclusion and Recommendations

4.4 Conclusion

The overall coverage for OTP and SFP in Samburu County was below the IMAM coverage SPHERE standards for emergency for rural set-up. There was a decline in OTP and SFP coverage compared to the previous SQUEAC assessment that was carried in November 2019 where the coverage then was 45.2% compared 55.4%. For SFP, the coverage estimate was 57.9%.

The main factors that promote coverage (boosters) included significant improvement in geographical coverage, where the number of IMAM cites increased from 43 in May 2017 to 67 in October 2019. The presence of outreaches (80) though not adequate increased the accessibility (supply) of IMAM services by reducing distances to service delivery units thus promoting the overall coverage of IMAM services. There were a number of support partners in Samburu County these include UNICEF, World Vision Kenya, WFP KRCS, Feed the Children among others. All these contribute to the coordination of IMAM services as well as strengthening the capacities of health workers to offer IMAM services, availing the necessary commodities to treat malnutrition, support outreaches to reach the hardest to

reach areas of Samburu County among others. In essence, presence of nutrition support partners was a great booster to IMAM coverage.

On the demand side, the health seeking behaviors among the community was good as the community recognizes that malnutrition was a condition that was caused by lack of “food” with little attachment of the condition to cultural causes. They therefore considers health facilities as the places where malnutrition could be treated. As such they take children to the health facilities and not to local herbalists or traditional healers, the moment they realized their children suffered from malnutrition. From the analysis of health facility data, there was early program admission for both OTP and SFP. There were no stigma attached to malnutrition apart from association of severe acute malnutrition to HIV. This was mainly caused by the fact that the commodities used for management of HIV is the same as the one used for treatment of SAM.

Some of the factors that contribute to lowering the coverage of OTP and SFP in Samburu County included, distance to the OTP and SFP sites. Despite the fact that geographical coverage had improved, there are communities that are still residing in areas far away from the OTP and SFP sites. Distance to the service delivery units was cited as a major program barrier to both OTP and SFP. This coupled with migration which is caused by drought and insecurity in some parts of Samburu County was a major hindrance to both OTP and SFP. Other factors that “knock down” coverage included lack of community mobilization strategies where there was scanty distribution of community units in Samburu County. In addition the available community units were mainly donor funded rather than County government funded that compromises their sustainability. Documentation was also identified as a major coverage barrier. Poor documentation was attributed to health workers commitment to IMAM services, high workload due to inadequate staffing in both level 2 and level 3 health facilities. In some of the health facilities, IMAM services are manned by community health volunteers who sometimes have low literacy thus compromising their capacity to do proper documentation.

Other issues that contribute to inadequate coverage included limited financial allocation of resources by the County government to support nutrition services which hinders key monitoring and supervisory activities such as field visits and joint monitoring as well as support supervision. As such, it is difficult to correct documentation gaps on time. Lastly food insecurity led to sharing and selling of RUTF and RUSF as well as social cultural issues such as alcoholism and family labor responsibilities.

4.5 Recommendations

To address the identified barriers and improve on IMAM program coverage, the following actions are recommended.

Program Barrier	Recommendation	Responsible persons	Timeliness
Geographical Barriers			
Migration in search of pastures	Continuous remapping and supporting integrated outreaches to places where communities have migrated to	<ul style="list-style-type: none"> • SCHMT • Partners • Local leaders 	Quarterly
Long distance to IMAM sites	Consistent integrated outreaches in hard-to-reach villages	<ul style="list-style-type: none"> • County government • Partner's 	Biweekly
	Health facilities to be constructed in hard-to-reach areas and upgraded to IMAM sites	<ul style="list-style-type: none"> • County government • Partner's 	December 2024
Social cultural barriers			
Sharing of nutrition commodities	Advocate for social protection to households with children in program	<ul style="list-style-type: none"> • Health workers • CHVs • Partners 	December 2023
	Sensitize the carers and community at large on nutrition supplements and its importance to avoid sharing, selling, and seeing it as food/snack.	<ul style="list-style-type: none"> • Health workers • CHVs • Partners 	December 2023
Alcoholism, where carers are exchanging nutrition commodities with alcohol and money to buy it. This is more so to the alcoholic carers	Scale-up mental health and psychosocial support interventions targeting households and caregivers with malnourished children.	<ul style="list-style-type: none"> • County government • Partners 	December 2023
Community mobilization barriers			
Lack of awareness on IMAM program leading to ignorance by carers in completing visits	Conducting health talks and community dialogues on importance of IMAM	<ul style="list-style-type: none"> • HWs • CHVs 	Quarterly
	Sharing of success stories in community forums	<ul style="list-style-type: none"> • HWs • CHVs 	Quarterly

Program Barrier	Recommendation	Responsible persons	Timeliness
	Scale-up linkage of SAM and MAM cases with CHVs for follow-up and monitoring RUSF/RUTF consumption.	<ul style="list-style-type: none"> • HWs • CHVs 	December 2023
Health System barriers			
Staff shortages	Increase/employ health workers in health facilities to reduce the workload.	<ul style="list-style-type: none"> • County government • Partners 	December 2024
Inconsistent outreaches	Enhance consistency of outreaches by advocating for resources to reduce defaulters and help in early detection of malnutrition	<ul style="list-style-type: none"> • NGOS and county government 	Biweekly
Poor documentation in the IMAM registers	Intensify OJT and IMAM trainings among health workers to improve on registers and report writing	<ul style="list-style-type: none"> • Sub-county HMTs trained personnel 	Monthly
Inadequate knowledge on IMAM among CHVs	Sensitize the CHVs on IMAM and correct anthropometric measurements to avoid rejection at the health facility.	<ul style="list-style-type: none"> • Nutritionists, CHAS 	Quarterly
	Scaling up of family led MUAC	<ul style="list-style-type: none"> • County government • Partners 	May 2023
	Support monthly CHVs meeting	<ul style="list-style-type: none"> • CHAS, Nutritionist 	Monthly
Lack of incentive to CHV who are involved in IMAM program	Supporting CHVs with incentives on monthly bases	<ul style="list-style-type: none"> • County government 	County government
Long waiting time to be served at the facility especially in facilities with only one health worker offering all other health services such as immunization, ANC, treatment	Employment of additional staffs to improve service delivery	<ul style="list-style-type: none"> • County government 	December 2023

References

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2. Samburu County, Integrated Development Plan 2018- 2022, County Government of Samburu
3. Myatt, Mark et al. 2012. Semi-Quantitative Evaluation of Access and Coverage (SQUEAC)/Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage (SLEAC) Technical Reference. Washington, DC: FHI 360/FANTA
4. <http://www.coverage-monitoring.org/wp-content/uploads/2015/07/How-to-conduct-Community-Assessments-2015.pdf>
5. <https://www.coverage-monitoring.org/squeac-2/>

Annexes

Annex I: SQUEAC Assessment Implementation plan

TASK	No. of Days	Mar-15	Mar-20	March 27-29	Mar-30	Mar 31-Apr 2	Apr-03	Apr-04	Apr-05	Apr-06	Apr-07	Apr-08	Apr 9-13	Apr 14-15
Resource Mobilization in the counties for funding and capacity Gap		Up to mid March												
Presentation of the ROAD MAP (Methodology) to the National SQUEAC Taskforce for Review & Approval		Third week of March												
Mobilization of the Survey Team -Training Participants •County Staff (6 MOH Staff per County) •Partner Organization Staff in each county														
Classroom training: Training on Quantitative and Qualitative tools - Introductions and schedules - Training on SQUEAC Methodology; Methodology review - Training on Community Assessment - Local terminology and calendar Detailed work plan; Distribution of tasks to the assessment team	3													
Stage One: Field data collection (Quantitative and Qualitative Data Collection) •Complementary quantitative data collection and Analysis •BBQ tool •Seasonal calendar Analysis Field data collection: Qualitative information collection: •OTP and SFP data collection for additional data •Contextual data analysis (qualitative) •Identification of potential Barriers and Boosters of coverage •Development of Mind maps •Data Synthesis and Hypothesis Testing; preparation for Small Area Survey	4													
Stage Two: confirmation of Hypothesis Small studies, small surveys, and small-area surveys (according to hypothesis) Data analysis for Small Area Survey Verification of HYPOTHESIS	2													
•Formulation of the Prior and Wide Area Survey Sampling Histogram, BBQ weighted/unweighted, concept map PRESENTATION OF STAGE 1 & 2 FINDINGS TO NATIONAL SQUEAC TASKFORCE FOR APPROVAL BEFORE MOVING TO STAGE 3	2													
Preparation for Wide Area Survey: • Planning of quantitative data collection and further classroom training														
Stage Three: Conducting Wide Area Survey: - Quantitative data collection (4 days fieldwork) - Data compiling - Estimations of Coverage (Posterior calculations) - Recommendations - Action plan - Summary report	6													
Presentation of Results and submission of summary report Writing of final report Incorporation of feedback into final report	3													
TOTAL NO. OF DAYS	20													

Annex III: Referral Slip

REFERRAL SLIP

Date: _____

Child name: _____ Caretaker name: _____

Village Name: _____ Type of Program referred to: _____

Sex: _____ Age: _____ MUAC: _____

Weight: _____ Kg Height: _____ cm WHZ: _____ Oedema(Y / N)

During our coverage survey in _____, our team has screened and identified this child to be malnourished.

In advance, we would like to thank you for giving this child necessary attention.

Comments:

Name of Team leader:

Annex IV: Semi Structured Interview (SSI) guide Community-Other community people

(Please specify)

Name of Village.....Health facility link.....Number interviewed:..... Method used.....

Other COMMUNITY – PEOPLE (Please Specify)

The discussion should flow naturally and leads/interesting points should be followed/explored as they come up. The question list should not be rigidly adhered to. This is just a guide as to the kind of topics which are important and the type of questions which could be asked. The direction the discussion takes will depend on what is said by the participants. It is always important to probe and ask follow up questions.

UNDERSTANDING/ PERCEPTION OF SEVERITY OF MALNUTRITION IN THEIR COMMUNITY

- What are the common health problems that children experience here?
- Which are the most frequent? Rank (most frequent to least frequent).
- Are any more frequent at certain times of the year? When? Why?
- Which are the most serious? Rank. Why?

If malnutrition mentioned ask:

- What symptoms do these children have?
- What terms do you commonly use to describe this condition?
- Which children get this condition? Why?

HEALTH SEEKING BEHAVIOUR

- What do you do when your child has this (insert name of most common illnesses) problem?
 - Probe fully for different illnesses
- What factors determine which treatment / approach you use for a particular illness?
 - Probe on: Cost, Access, Father permission, Habit/familiarity

If clinic/hospital mentioned:

- Which? How far is it? Why do you go there?
- Is there any alternative/anything else you might do? Is there anyone you might ask for advice nearer home?

If malnutrition not already mentioned ask/show pictures:

- Have you seen children like this (those who have lost weight/become very thin or whose feet/legs/hands have started to swell)?
- When do you see this condition? Are there children who have this problem now?
- What do you call this condition?
- Which children get this condition? Why?
- What do you do when your children get this condition? Why?

AWARENESS OF IMAM SERVICE

- Do you know of a place where this condition can be treated?
- How did you hear about it?
 - Who told you? When? What do you know about it?
- What are children given for this condition?

If people think the RUTF is a food ask:

- What sort of food is it?
- What do you call it?
- Who can eat it?
- What foods do you give your children to make them health/strong?

- Do you know children receiving this treatment?

PERCEPTIONS OF IMAM

- What do **you** think about this service?
- What are people saying about this service?

If people say it is good ask: What is good about it?

- Have you noticed a change in the children who are being treated?
- What improvements would you like to see to the service?

If people say it isn't good ask:

- a. *What is wrong with it?*
- What do people not like about the service?
- How can we change it? What suggestions do you have?

AWARENESS OF CHV (CASE FINDER) AND HIS/HER ACTIVITIES

- How are children identified for treatment?
 - a. What tool is used?
 - b. Have you seen anyone doing this in your community?

If people know the volunteer/have seen the MUAC ask:

- c. When was the last time you saw the volunteer measuring children? How often does he/she do it?
- d. How are children referred to the health center?

If not, show the MUAC tape and repeat questions if necessary:

COVERAGE QUESTION

- Do you know children who have this condition but who are not going to the health center for treatment? Why?
- Do you know of any children who have stopped going for treatment?
 - a. Why is this? What would encourage them to return?
- Do you know of children who have been to the clinic and have not been given the treatment?

If yes, Why not? What were they told? How did they feel?

BARRIERS

- What factors might prevent children from being able to access treatment? Why? How can we overcome these obstacles?
- What messages/suggestions would you like us to pass to the people running the IMAM Service?

Annex V: Semi structured interview (SSI) guide for KEY COMMUNITY FIGURES

Name of Village..... Health facility linkNumber interviewed:..... Method used.....

Key community figures (local village/religious leaders)

Open questions about the situation in the village / the health of the children etc. can always be asked of the leaders at the start before focusing on the issues of interest.

- Understanding of malnutrition
- Health seeking behavior

KNOWLEDGE AND UNDERSTANDING OF IMAM

- Are you aware of any nutrition service at your local clinic?
- Who told you about it?
- When did you hear about it?
- What do you know about it?
 - a. Target children? (ensure both marasmic and kwashiorkor types are identified)
 - b. Admission criteria?
 - c. Treatment given?
 - d. OTP day?
 - e. Identification of children?

ROLE / AWARENESS RAISING

- Have you been involved in telling others about the service? How? When?

PERCEPTIONS OF IMAM

- What are people saying about IMAM?
 - a. Do you think most people are aware of it?
 - b. What do they understand about it?
- What do you think of the service?
 - a. What do other key community figures think of it?

BARRIERS/COVERAGE QUESTION

- Do you know any children currently receiving treatment in the village?
 - a. What can you tell me about them?
- Are you aware of any children who need treatment but are unable to access services?
 - a. What stops them coming? (distance/family/beliefs/other)
 - b. How could we reach these children/encourage them to attend?
- Do you know any children who have defaulted/stopped coming?
 - a. Why is that? How can we encourage them to return for treatment?

STIGMA

- Is there a stigma attached to malnutrition in your village? Are there parents who might hide their malnourished children? Why?

COMMUNICATIONS

- Do you know anyone in the village who identifies children for this service?
 - a. When did you last see them? When were they last active?
 - b. What do they do? (frequency and organization of activities = passive or active)
- Have you had any feedback from the volunteer/clinic staff/MoH officials about the service?

- Do you know what the results are (number of children cured)?

IMPROVEMENTS

- How can we improve the service?
- Do you have any messages for those who run the service?

Annex VI: Semi Structured Interview guide-TRADITIONAL HEALERS

Name of Village..... Health facility linkNumber interviewed:.....
Method used.....

TRADITIONAL HEALER / OTHER HEALER

TREATMENT AND PERCEPTION OF MALNUTRITION

Start the discussion by asking:

- What types of illnesses do you treat? Most common? How many patients do you see a week?
- How do you treat this illness (ask for the each illness mentioned by the healer)? What do you do if the treatment is not effective?

If not mentioned show picture of malnourished children and ask:

- Do you see children like this in the village? Do you treat this illness? How do you treat this illness? How often do you see it and when? What are the causes of this illness? How effective is the treatment?
- Are you aware of any other treatment for this condition?

Continue with similar questions asked of key community figures starting with awareness of the service

KNOWLEDGE AND UNDERSTANDING OF IMAM

- Are you aware of any nutrition service at your local clinic?
- Who told you about it?
- When did you hear about it?
- What do you know about it?
 - a. Target children? (ensure both marasmic and kwashiorkor types are identified)
 - b. Admission criteria?
 - c. Treatment given?
 - d. OTP/SFP day?
 - e. Identification of children?

Etc.

Annex VII: Semi Structured Interview guide-CARERS OF BENEFICIARIES

Name of Village..... Health facility linkNumber interviewed:..... Method used.....

CARERS OF BENEFICIARIES

(Individual case history)

HISTORY OF THE ILLNESS

- When did you first notice that your child was unwell?
 - a. What was wrong with them? What symptoms did they have?
 - b. What was the cause of the problem (probe for illness / food availability)?

HEALTH SEEKING BEHAVIOUR

- What did you do when your child became ill?
- Did anyone tell you to go to the health center (information source)?
- How long was it before you went to the health center?

INFORMATION SOURCE FOR THE OTP/ISFP

- How did you first hear about the service?
 - a. Who told you?
 - b. Have you heard about it from any other source since?
 - c. Who is telling people about it in your settlement?
- What did you hear about it?
- What made you come?

AWARENESS OF CONTACT WITH CHV (CASE FINDER)

- Did your child have his/her arm measured at home (MUAC)?
 - a. By whom? How was it done? What did he/she tell you about it?
 - b. When was the last time your child was measured at home?

UNDERSTANDING OF THE SERVICE

- What did the clinic staff tell you about your child's condition?
- What were you told about the treatment? (Check understanding of procedures, approximate length of treatment, what to do if you need to travel, sharing of RUTF/RUSF etc.)
- What does the staff call the treatment? What do you call the treatment?

STANDARD OF SERVICE

- How long do you usually wait before the nurse sees you?
- How much time do you spend with the nurse?
 - a. How does the staff treat you?
 - b. Have you ever been scolded? Why?
- Have you always received the correct supply of treatment sachets?
 - a. Have there been any shortages on any week?
 - b. Have you ever not received the full amount / or received something else instead?

OPINION OF THE SERVICE

- What do you think of the service?
 - a. What are the strengths/weaknesses?

- b. Difference in the health of your child?
- c. What could be improved?

ABSENCE/DEFAULTING

- How easy is it for you to come every week?
 - a. What makes it difficult / stops you from coming sometimes?
- Do you know of any children who have stopped coming?
 - a. Why is that?
 - b. How can we encourage these children to return and continue the treatment?

COVERAGE QUESTION

- Do you know of other children who have the same problem but who are not attending the clinic?
 - a. If yes, why not?

Annex VIII: Semi structured interview guide-**GROUP DISCUSSION WITH CARERS**

Name of Village..... Health facility linkNumber interviewed:..... Method used.....

Group discussion with carers

INFORMATION SOURCE FOR THE OTP

- How did you first hear about the service?
 - a. Who told you?
 - b. Have you heard about it from any other source since?
 - c. Who is telling people about it in your settlement?
- What did you hear about it?
- What made you come?

AWARENESS OF CONTACT WITH CHV (CASE FINDER)

- Did your child have his/her arm measured at home (MUAC)?
 - a. By whom? How was it done? What did he/she tell you about it?
 - b. When was the last time your child was measured at home?

STANDARD OF SERVICE

- How long has your child been receiving treatment?
- Difference in child's condition?
- Have you had any difficulties in following the treatment/attending every week? (Probe for: distance, waiting time, welcome, etc.)
- Have you missed a week? Why?
- Have you always received the correct supply of treatment sachets?
 - a. Have there been any shortages on any week?
 - b. Have you ever not received the full amount / or received something else instead?

OPINION OF THE SERVICE: What do you think of the service?

- c. What are the strengths/weaknesses?
- d. What could be improved?

DISTANCE: How far is it from your home to the clinic?

- e. How do you get here? Walk/transport?
 - f. How long does it take?
 - g. Determine the farthest distance travelled within the group
- Do you have any other reason to come to this clinic/this place?

COVERAGE QUESTION/DEFAULTING

- Do you know of any children who have stopped coming?
 - a. Why is that?
 - b. How can we encourage these children to return and continue the treatment?
- Do you know of other children who have the same problem but who are not attending the clinic?
 - a. If yes, why not?
 - b. What would encourage them to come?

CASE REFERRAL

- c. Have you told anyone else to bring their child to the clinic? Why/why not?

PERCEPTION OF IMAM

- What are people saying about the service in your settlement?
- Are the other mothers aware of the service?

STIGMA

- Is there a stigma attached to malnutrition in your village? Are there parents who hide their children? For what reason?

If stigma exists:

- How does the stigma affect you personally? In what way?

FEEDBACK: Have you any messages you want us to give to the people running the service?

Annex IX: Semi Structured Interview guide-COMMUNITY HEALTH VOLUNTEERS

Name of Village..... Health facility linkNumber interviewed:..... Method used.....

COMMUNITY HEALTH VOLUNTEERS (CHV)

ROLE

- How long have you been a volunteer?
- What are your main activities?
- How often do you do these activities?
- What area do you cover for case finding?
 - a. How long does it take you?
- How do you decide which children to measure?
- What tools do you have to help you?
- Tell me about the last case you identified? When was that? What was the problem?

EXPLANATION GIVEN TO MOTHERS

- What do you tell the mother when you identify a case?
- What do you say about the new treatment?
- How do you refer to the treatment?
 - a. What do the mothers call it?

REFERRAL AND FOLLOW UP

- Do you give the mother a referral slip/paper when you refer the child to the clinic?
 - a. Why/why not?
 - b. How do you know if the child actually went to the clinic?
- Are you aware of any children who have stopped coming?
 - a. Why is that? How can we encourage them to return?
- Are you ever asked to visit a case that is not improving / has been absent? Tell me about the last one you visited.

REJECTION

- Have you referred any children who have been turned away and not given treatment?
 - a. For what reason? How many were rejected last month?
 - b. Did you receive an explanation from the nurse as to why?
 - c. How did the mother react?
 - d. What was your reaction?
- Are you aware of any other children who went spontaneously to the health center and were turned away and not given treatment? Probe: a-d as above.

COVERAGE QUESTION

- Do any mothers refuse to go to the clinic? Why? How can we encourage them to bring their children?

COMMUNICATIONS

- When was your last contact with clinic staff?

- Are there regular monthly / 3 monthly meetings with health center staff? Are IMAM issues discussed?
- Do you have a monthly written/verbal report to make on your activities (number of children identified, number referred, home visits etc.)
- How do you usually communicate with the nurse at the health center (for example when a home visit is needed)
- Have you received any feedback from clinic staff
 - a. Number cured?
 - b. Number of defaulters? Reason?
- Have you talked with village / religious leaders or other people about IMAM since it started? When was your last contact? Topic of discussion?
- Have you had any further contact with children you have referred?
 - a. Do you know how many were cured?
 - b. Do you know if any defaulted? Why?
- What have mothers said to you about IMAM?
 - a. What are people saying/thinking about IMAM?

OPINION OF THE OTP/SFP

- What is your opinion of the OTP/SFP? Why?
- What is the opinion of the community?

MOTIVATION

- Appreciation of your work by the community?
- Appreciation of your work by programme staff?
- Do you enjoy your role? Why / why not?
- Challenges / difficulties?

IMPROVEMENTS

- What would help you in your job as a volunteer?
- How do you think IMAM could be improved?
- Any messages for those running the service?

Annex X: Semi-Structured Interview guide-IMAM PROGRAM STAFF

Health facility.....

IMAM PROGRAM STAFF(Nurses/Nutritionists)

IMAM INVOLVEMENT AND CHALLENGES

- How long have you been working on IMAM?
 - a. How many staff are involved/trained on IMAM?
- When were you trained on IMAM?
 - a. Have you had refresher training?
 - b. Is there any additional training you feel you need?
- What difficulties, if any, do you have on the IMAM day?
 - a. High number of patients
 - b. Time
 - c. Completing paperwork accurately and keeping up to date

CALENDAR

- What are the main childhood diseases you see in the clinic?
 - a. Which is the most common? Rank.
 - b. What time of year do they occur?
- What do you think are the causes of malnutrition here?

REFERRAL

- How do children usually come to the clinic for IMAM?
 - a. Referred by volunteer
 - b. Heard about it from other beneficiary
 - c. Heard about it from other person in the village
 - d. Heard about it at the clinic
 - e. Heard via the radio/town crier etc.
 - f. Other source
 - g. Rank in order

REFERRAL AND FOLLOW UP

- Do children who are referred by the volunteer come with a referral slip/paper?
 - a. What do you do with the referral slips?
- Is there a system to check that the child referred by the volunteer has actually presented at the clinic? System to confirm the number of referrals per volunteer?
- How do you refer patients to the stabilization center? Paper slip?
 - a. How do you know if they have arrived at the SC?
 - b. Do you know what happens to them?
 - c. When patients are referred back do they come with any paperwork?

REJECTION

- How many healthy children have you rejected who do not correspond to the admission criteria?
 - a. How many every week?
 - b. Explanation given? What do you actually say/what words do you use?
 - c. Why do you think these mothers come with healthy children?

- d. How do mothers react?
- Have you had any wrong referrals from the volunteer?
 - a. How many? What was the problem? Did you report back to the volunteer?

DEFAULTING

- How many children are absent for more than 1 week during the course of treatment?
 - a. Why do you think this is?
- How many children default?
 - a. Why do you think this is?
- Is there a system to follow up on defaulters? How does it work? How could we encourage children to return for treatment?
- What barriers prevent mothers from bringing their children to the OTP/SFP?

COVERAGE QUESTION

- Are you aware of any children with this condition who don't come to the Health Facility? Why is that?

COMMUNICATIONS

- Are there regular monthly/3 monthly meetings with volunteers? Are IMAM issues discussed? How often do you see the volunteers? Last time?
- When was the last time you saw someone from the district office? Frequency of contact?
- Support from the district?

OPINION OF THE SERVICE

- Does the OTP/SFP give good results?
- Has the condition of the children improved?

WORK LOAD

- Does the OTP/SFP give you more work?
- What changes have you had to make to your routine activities?

IMPROVEMENTS

- Challenges? Problems? Improvements?
- What messages do you want us to pass to the people organizing IMAM?

Annex XI: Semi-Structured Interview Guide – NGO FIELD AGENTS

FIELD AGENT (if NGO)

ROLE AND ACTIVITIES

- Tell me about the activities you did last week?
 - a. One off activities?
 - b. How much time do you devote to nutrition activities?
- How many volunteers do you supervise?
 - a. Last contact? For what reason?
 - b. How many have recently had training/refresher training?
 - c. How is case finding carried out and how often?
 - d. How do you supervise their activities? Book? Report?
 - e. How motivated are the volunteers? Complaints? Replacement of non-active volunteers?
 - f. What tools are provided to volunteers? MUAC tape?

COMMUNICATIONS

- How do you communicate with health center staff?
 - a. Last contact? For what reason?
 - b. Relations with health center staff?
 - c. What information is shared? In what format?
- Last contact with your supervisor?
 - a. For what reason? Report?

FOLLOW UP / HOME VISITS

- Who follows up defaulters? How?
 - a. Last defaulter traced? Reason for defaulting? Did the child return to treatment?
- Who follows up children not responding to treatment? How?
 - a. Last case? Reason?
- Is feedback given after home, if so to whom?
- Are home visits documented? Why / why not? How?

OPINION OF OTP

- What do you think of the OTP? Why? Has your opinion changed?
- Challenges / problems / suggestions for improving the service?
- Messages for those running the OTP service?

Annex XII: Seasonal Calendar (12 months): Village Elders

Name of Village..... Health facility linkNumber interviewed:..... Method used.....

Indicate the months when the seasons **occurred most**. Please Specify where applicable

Season/Month	May	June	July	August	September	October	November	December	January	February	March	April
Climate (specify rainy/dry)												
Migration												
Kidding and lambing												
Floods/drought												
Insecurity (Specify incidents)												
Mass MUAC screening												
Childhood illnesses (specify illness e.g Diarrhea, URTI, Fever...)												
Agricultural activities (specify eg Planting or harvest)												

Workload for mothers (Specify the workload)												
Workload for fathers (Specify the workload)												
Other (Specify)												