REPUBLIC OF KENYA

MINISTRY OF HEALTH

SQUEAC for Outpatient Therapeutic Program and Supplementary Feeding Program, Coverage Report

COVERAGE ASSESSMENT
» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE
COVERAGE MONITORING NETWORK

MANDERA COUNTY, KENYA

December, 2017

Caregivers and children outside Mandera County Hospital

unicef for every child

Save the Children

ACTION AGAINST HUNGER

TABLE OF CONTENTS

List of Figures iii
List of Tables iii
ACKNOWLEDGEMENTS iv
ABBREVIATIONS/ACRONYMS v
Methodology and Key Findings vi
1.1 OVERVIEW OF THE AREA: 1
1.2 DESCRIPTION OF THE POPULATION 1
1.3 NUTRITIONAL SITUATION: 2
1.4 DETAILS OF HEALTH AND NUTRITION SERVICES: 2
2.0 OBJECTIVES 2
2.1 PRINCIPAL OBJECTIVE: 2
2.2 SUB-OBJECTIVES 2
3.0 INVESTIGATION PROCESS 3
3.1 STAGE 1: 3
3.1.0 QUANTITATIVE DATA: 3
3.1.1 Admission Trends over time: 3
3.1.3 OTP MUAC or Oedema on admission: 4
3.1.5 Distance from treatment centre: 5
3.1.6 Defaulters: 5
3.1.7 Length of Stay: 6
3.1 8 Outcome Trends 7
3.2 Qualitative Information 8
3.2.1 Concept Maps 9
3.2.2 OPT and SFP Programs Barriers / Boosters: 10
4.1 Hypothesis Testing: 15
4.2 Study description: 15
4.3 Methodology: Small Area Study 15
4.4 Case definition: 15
4.5 LQAS decision rule: 15
4.5.1 Hypothesis of high coverage results 16
4.5.2 Hypothesis of low coverage results 16
4.6 Hypothesis Rejection or Confirmation: 16
4.7 Prior Development 16
4.7.1 OTP Weighted and Simple Boosters and Barriers 16
4.7.2 SFP Weighted and simple Boosters and barriers 18
4.7.2 Concept map Positive and Negative Links 19
4.7.2a OTP Concept Map 19
4.7.2b SFP Concept Map 19
4.7.3 Histograms SFP and OTP 19
4.8 Average Prior Mode Development 20
5.1 Sampling Method 22
5.2 Sample size Calculation OTP/SFP: 22
5.2.1 OTP Calculation 22
5.2.2 SFP Calculation 22
5.3 Data Collection 22
5.3.1 Case finding methodology: 22
5.3.2 Qualitative data framework: 23
5.3.3 Quantitative data results: 23
5.4 Reasons for Defaulting 23
5.5 BAYES COVERAGE ESTIMATE: 24
5.6 Coverage estimate: 25
5.6.1 Interpretation of Bayes plot: 25
6.1 Conclusion 25
6.2 Recommendations 26
ANNEX 1: List of People Trained During the SQUEAC Assessment 28

ANNEX 2: Chronogram of Training and Assessment 28
ANNEX 3: QUESTIONNAIRES _KII, IDI, FGD 29
ANNEX 4. Local terminologies 30

List of Figures

Figure 1: Mandera County Map 1
Figure 2: OTP Admission Trends 3
Figure 3: SFP Admission Over Time 4
Figure 4: OTP Admission by MUAC 4
Figure 5: SFP Admission by MUAC 5
Figure 6: OTP Defaulters over Time 5
Figure 7: SFP Defaulters over Time 6
Figure 8: OTP LoS Mandera South 6
Figure 9: OTP Exit Outcome trends 7
Figure 10: SFP Exit outcome trends 7
Figure 11: OTP Length of stay before default 8
Figure 12: SFP Length of stay before default 8
Figure 13: OTP Concept Map 9
Figure 14: SFP Concept Map 10
Figure 15: OTP Histogram 19
Figure 16: SFP Histogram 20
Figure 17: OTP Bayes Plot 21
Figure 18: SFP Bayes Plot 21
Figure 19: Qualitative data results OTP 23
Figure 20: Reasons for Defaulting 23
Figure 21: Bayes plot OTP with Prior, Likelihood and Posterior 24
Figure 22: Bayes plot SFP with Prior, Likelihood and Posterior 24

List of Tables

Table 1: Results of Previous Coverage Surveys in Sub-county (SQUEACS) 2
Table 2: OTP Boosters 10
Table 3: OTP Barriers 11
Table 4: SFP Boosters 12
Table 5: SFP Barriers 13
Table 6: Small Area Study results, High Coverage 16
Table 7: Small Area Study results, Low Coverage 16
Table 8: Weighted and Simple OTP Boosters 16
Table 9; OTP Weighted and Simple Barriers 17
Table 10; SFP Weighted and Simple Boosters 18
Table 11: SFP Weighted and Simple Barriers 18
Table 12: Active and adaptive case finding results 23
Table 13: Door to door MAM Cases 23
Table 14: Major boosters and barriers that should be prioritised for action 26
Table 15: Recommendations: 26

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- This study would not have been possible without the hard work and commitment of everyone involved.

ABBREVIATIONS/ACRONYMS

BBQ	Barriers, Boosters and Questions
CI	Credible Interval
FGD	Focus Group Discussion
GAM	Global Acute Malnutrition
HC	Health Centres
HF	Health Facility
IMAM	Integrated Management of Acute Malnutrition
INGO	Non-Governmental Organisation
LoS	Length of Stay
MAM	Moderate Acute Malnutrition
MEAL	Monitoring, Evaluation, Accountability and Learning
MoH	Ministry of Health
MUAC	Mid-Upper Arm Circumference
OS	Outreach Site
OTP	Outpatient Therapeutic Programme
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SC	Stabilization Centre
SCI	Save the Children International
SFP	Supplementary Feeding Program
SQUEAC	Semi Quantitative Evaluation of Access and Coverage
TBA	Traditional Birth Attendants
UNICEF	United Nations Children's Fund

EXECUTIVE SUMMARY

Over the years, Mandera County has continued to experience both acute and chronic food insecurity resulting from chronic rainfall failures affecting both agriculture and livestock leading to poor nutrition status.

A SMART survey conducted in June 2017, showed that the global acute malnutrition was 24.6%, with Severe acute malnutrition being 5.2% depicting a deteriorating nutrition situation. However, there was a slight improvement in nutrition status when compared to rapid SMART survey conducted in February 2017 which showed a GAM of 32.8% and SAM of 8.7%.

In December 2015, A SQUEAC assessment covering OTP revealed a single coverage of 67.7% in Mandera East. A number of program barriers were identified that included defaulting, long distance, migration, sharing of RUTF, health worker's turnover, weak linkages of OTP to GFD programs, inadequate case finding as well as inadequate defaulter tracing among others. Key program boosters included; availability of RUTF in most of the health facilities, integrated outreaches, program awareness by the community, early admissions, good documentation, and positive opinion about the program among the others. A number of interventions have been undertaken in Mandera county that includes Blanket Supplementary Feeding Program from September 2017, integrated outreaches, operationalizing on new health facilities, Cash transfer program targeting children with acute malnutrition, Early identification and treatment of children with acute malnutrition and improve supply of nutrition commodities using the new Logistics Management and Information System (LMIS).

In December 2017, the Mandera County department of health supported by Save the Children, Action Against Hunger (ACF) and UNICEF carried a follow up SQUEAC assessment in the entire County. The objective of the assessment was to estimating the overall SAM coverage; identify boosters and barriers to the OTP and SFP program uptake and to make recommendations for coverage improvement. This assessment also aimed to build the technical capacities of the ministry of health and partners technical persons on SQUEAC as a program coverage methodology.

Methodology and Key Findings

SQUEAC is a 3 stage methodology that combines an array of qualitative information about access and the perception of CMAM program with small sample quantitative surveys. Stage one involved collection of quantitative (routine program data) as well as qualitative data using a number of methods and from several sources including; semi structured interviews which were administered to health workers in the health facilities, program staff (County nutrition coordinators, partners implementing staff, Health facility CHVs as well as carers of children in program), informal group discussions were also administered to community leaders, TBAs, men, women, pastoralists and caregivers in the community. In-depth interviews were also done with caregivers of children in program and defaulting children.

Analysis of routine program data as well as qualitative information showed a number of program barriers and boosters. Some of the program boosters identified included; awareness of the program by the community, capacity of health workers or CHVs to identify IMAM services, appreciation and positive perception by the community, early program admissions, partners supported outreaches among others. On the barriers side, the barriers identified included weak defaulter tracing mechanisms, inconsistent active case findings by CHVs due lack of incentives, facility closure due to staff turnover or insecurity, distance, limited awareness about program, RUTF stocks at the remote health facilities among others.

Stage two involves formulation of hypothesis based on the information generated from quantitative and qualitative data collection in stage one. The hypothesis formulated was; Villages that are near (accessible) to the health facilities have a higher coverage compared to those that are far, outside 5 km radius to the facility. This hypothesis was tested using the Simplified LQAS formula; d= In/2I in comparison with 50% SPHERE threshold for rural area using small area survey. The hypothesis was confirmed.

Stage three involved likelihood (wide area) survey. Before this stage, prior mode was calculated using Weighted, simple, histogram and concept map. Then prior mode is finalized and its shape parameters entered into the Bayes calculator (as, a recommended sample size will be generated. 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.

Spatially Stratified Sampling method was used for sampling the villages. This was informed by the fact that there was no clear map of Mandera County with all villages or communities marked. An updated list of all the villages for Mandera County was made. Each village was linked to a health facility catchment. There were 324 villages in Mandera County. To get the required number of case, the villages to be visited were 20 for OTP and 3 for SFP. This was divided by the number of villages, in this case 20 villages to obtain a sampling interval of 17. The first village was randomly selected between 1 and 17. Thus the first village was village 4 (Dawder) from the list and continually applied the sampling interval until all the 20 villages were sampled.

Data collection was done by 6 teams for 6 days. Each team had 3 members. Active case finding was used to search for SAM cases in all the sampled villages where door to door was used to search for SFP cases. Single coverage estimator was used to estimate the program coverage because it factors in both recovering cases that are admitted and those that are not in the program and therefore give unbiased estimate of the overall performance of programme. Combining prior estimate and likelihood information in the calculator generated a posterior which showed the overall coverage for OTP in Mandera County as 66.3% (56.8% - 74.4%) and SFP 62.7% (50.4% - 73.5%) respectively.

1.0 INTRODUCTION

1.1 OVERVIEW OF THE AREA:

Mandera County is located in the North Eastern part of Kenya and it borders Ethiopia to the North, Somalia Republic to the East and Wajir County to the South and South West. It's divided into 6 sub-counties; Mandera East, Mandera North, Lafey, Mandera South, Mandera West and Banisa Sub-counties. It's located between longitudes 400 40' 0.12" East and Latitude 30 25' 0.01" North in the arid lands of Kenya. Mandera County covers an area of 25,991.5Km2 which is sparsely populated making accessibility of resources a challenge for the populations living in the county. It has 1300 km of classified road network of earth surface which becomes impassable when impounded with rains.

1.2 DESCRIPTION OF THE POPULATION

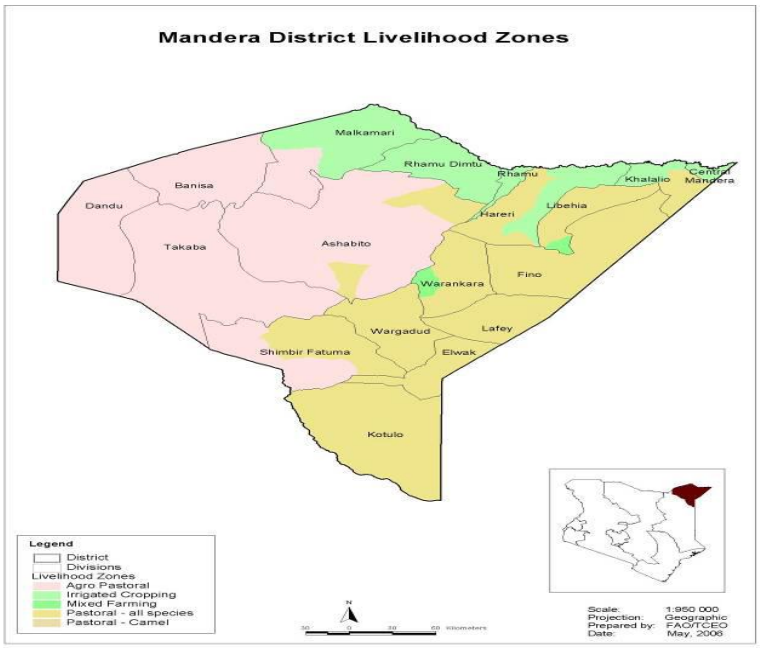

Figure 1: Mandera County Map

Mandera County has a population of 1,025,756 people according to the 2009 National census with 12.9% been Percentage of population 6-59 months. The County is predominantly inhabited by Somali community who profess the Islamic religion. However, the County has also members of other communities coming from all over Kenya either working in the civil service or businesses. The County has three main livelihood zones i.e. a pastoral economy zone in the east and agro-pastoral economy zone in the west and an irrigated cropping zone in the north along the Daua River.

The County like many other arid and semi-arid lands experience chronic drought occurrence that shatters livelihoods and causes hunger, nutrition-related disease and to a decline in livestock production, thus affecting the migratory patterns of pastoralists, exacerbate resource-based conflict, and cause substantial loss of assets, triggering acute food insecurity among vulnerable households and placing a heavy strain on the local economy.

The entire county is highly vulnerable to droughts which occur with increased frequency. Historical data shows the recurrent nature of droughts in the county with the most devastating episodes occurring about every ten years (1092, 1960, 1970, 1980, 1990 and 2000). However, after the 2000 the frequency of droughts has increased with crises registered in 2005/06, 2008/09, 2010/11 and now 2017/18. The frequency and severities of droughts hinder recovery as the herd growth is disrupted by new droughts

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before the recovery phase is completed. During a severe drought, pastoralists may lose more than 45% of their herd.

High levels of vulnerability and low adaptive capacity have been linked to factors such as high reliance on natural resources, lack of infrastructure and services and poor access to markets. From HEA even the better off in all households in all livelihoods have personal income of a dollar per day. It is estimated that only 1/4 of households involved in livestock production owns a herd of a sustainable size to ensure sufficient economic returns and resilience to drought shocks.

1.3 NUTRITIONAL SITUATION:

SMART survey conducted in July 2017 shows the prevalence of Global Acute Malnutrition (GAM) rate for the County was 24.6 % (21.6 - 27.8 95% C.I.) and the severe acute malnutrition (SAM) rate was 5.2 % (3.8 - 7.0 95% C.I.). The findings indicate a critical GAM phase of malnutrition according to WHO classification. Nutrition situation has slightly deteriorated though not statistically significant (p=0.61) when compared to the same period in 2016 which had a GAM level of 22.6% and SAM of 4.3% respectively. The prevalence of global acute malnutrition based on MUAC (<125 mm) and/or oedema was 7.4 % (5.7 - 9.5 95% C.I.) and of severe acute malnutrition MUAC<115 mm and/or oedema) was 0.8 % (0.4 - 1.7 95% C.I.).

1.4 DETAILS OF HEALTH AND NUTRITION SERVICES:

The County has 6 Sub County hospitals providing stabilisation centre services for severely malnourished children with medical complications and outpatient therapeutic care to those without complications. The County has 61 health facilities providing integrated management of acute malnutrition services fully integrated into other routine health services in all sub Counties. Provision of IMAM services are provided by nutritionists, clinical officers and nurses who are in charges in peripheral health facilities who receive training on IMAM case identification, admission and treatment based on the national protocol for management of acute of malnutrition supported by community health volunteers (CHVs) who assist in identification and referral of malnourished children and pregnant and lactating women to the relevant therapeutic programs. Routine capacity enhancements are undertaken through support supervision and on job trainings.

Table 1: Results of Previous Coverage Surveys in Sub-county (SQUEACS)

Sub County	Results	Interpretation
Mandera East/ Lafey	67.7% (2015 Single Coverage)	Above sphere threshold for rural area
Mandera North	63.1% (2013 Point Coverage)	

2.0 OBJECTIVES

2.1 PRINCIPAL OBJECTIVE:

The main objective of this assessment was to evaluate access and coverage of the Integrated Management of Acute Malnutrition (IMAM) for children ages 6 to 59 months with SAM and MAM in Mandera County, using the Semi-quantitative evaluation of access and coverage (SQUEAC) methodology.

2.2 SUB-OBJECTIVES

To develop capacity of various stakeholders on undertaking program coverage assessments using SQUEAC methodology

- To determine baseline coverage for IMAM
- To identify boosters and barriers influencing IMAM program access and coverage
- To develop feasible recommendations to improve IMAM program access and coverage

- To compare and monitor progress since the previous SQUEAC conducted in various sub-counties in Mandera County.

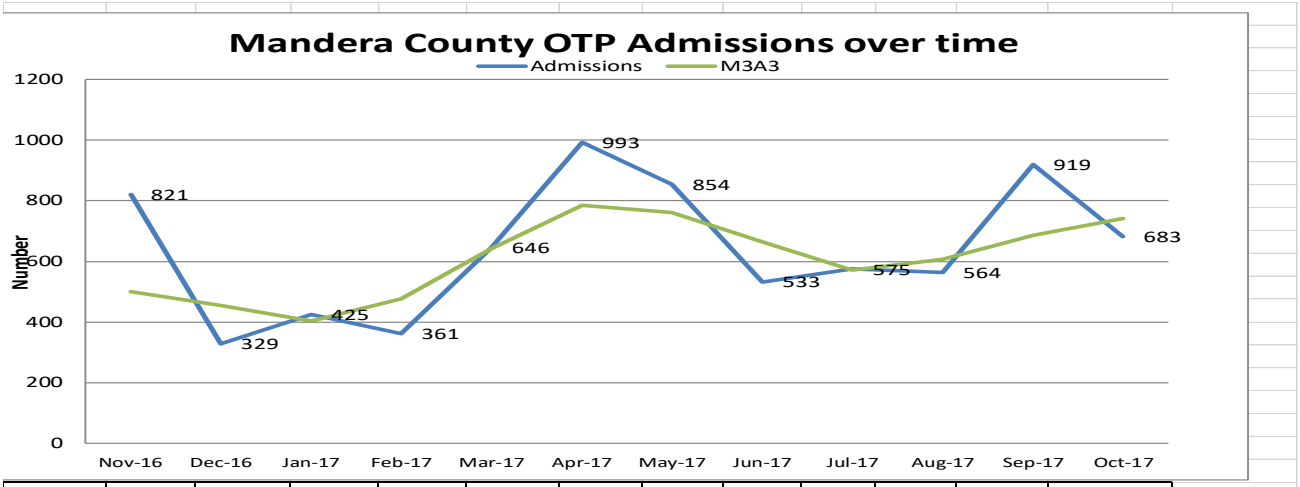
3.0 INVESTIGATION PROCESS

3.1 STAGE 1:

3.1.0 QUANTITATIVE DATA:

A routine programme data for one year prior to the assessment was done for period covering November 2016 up to October 2017 was collected and analysed. This was also triangulated with Qualitative information collected from the community. However, data for length of stay was inadequate as it was only available for Mandera South due to destroyed registers and poor documentation at health facilities.

3.1.1 Admission Trends over time:

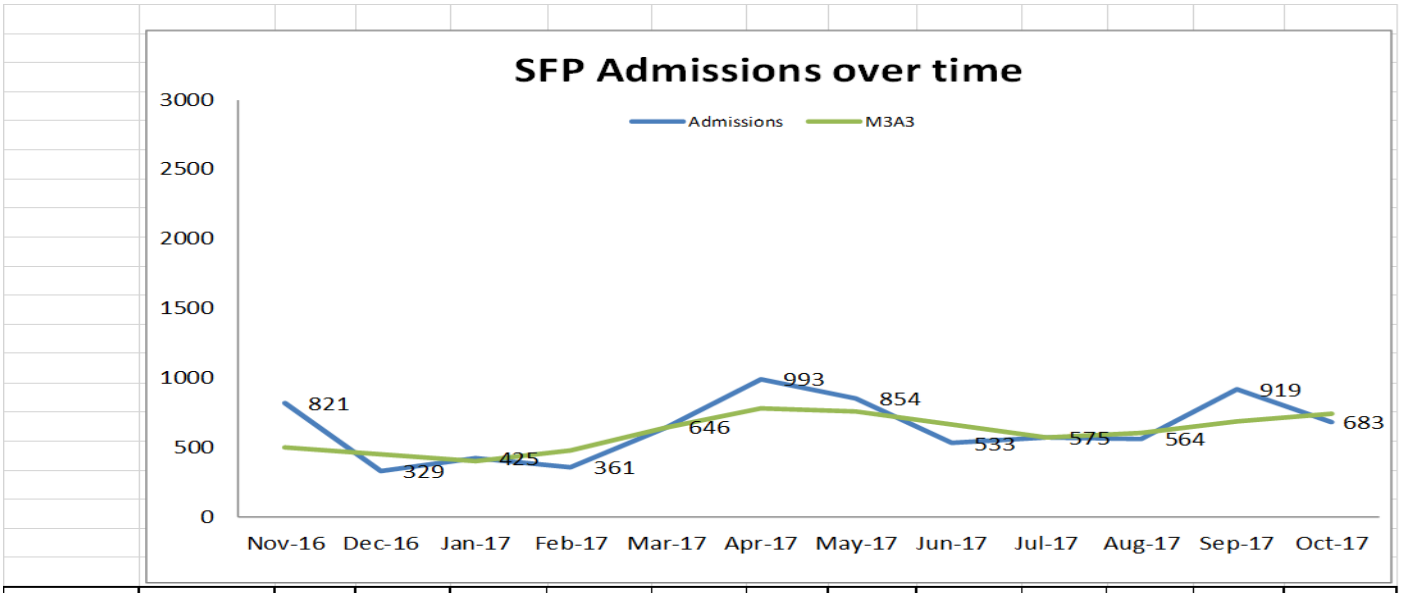


	16-Nov	16-Dec	17-Jan	17-Feb	17-Mar	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct
Diarrhea												
Rainfall												
Drought												
Milk												
Crops												
Food Availability												
Food Price												

Figure 2: OTP Admission Trends

Admissions were noted to increase during periods of drought, low rainfall coverage, and the prevailing diarrheal cases, peak admissions were recorded in April and September 2017.

3.1.2 Mandera County SFP Admission Over Time



		16-Nov	16-Dec	17-Jan	17-Feb	17-Mar	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct
Diseases	Diarrhea												
Climate	Rainfall												
	Drought												
Products	Milk												
	Crops												
	Food Availability												
	Food Price												

Figure 3: SFP Admission Over Time

As observed in OTP admission over time, same trend of admissions was noted to increase during periods of drought, low rainfall coverage, and the prevailing diarrheal cases, peak admissions were recorded in April and September 2017

3.1.3 OTP MUAC or Oedema on admission:

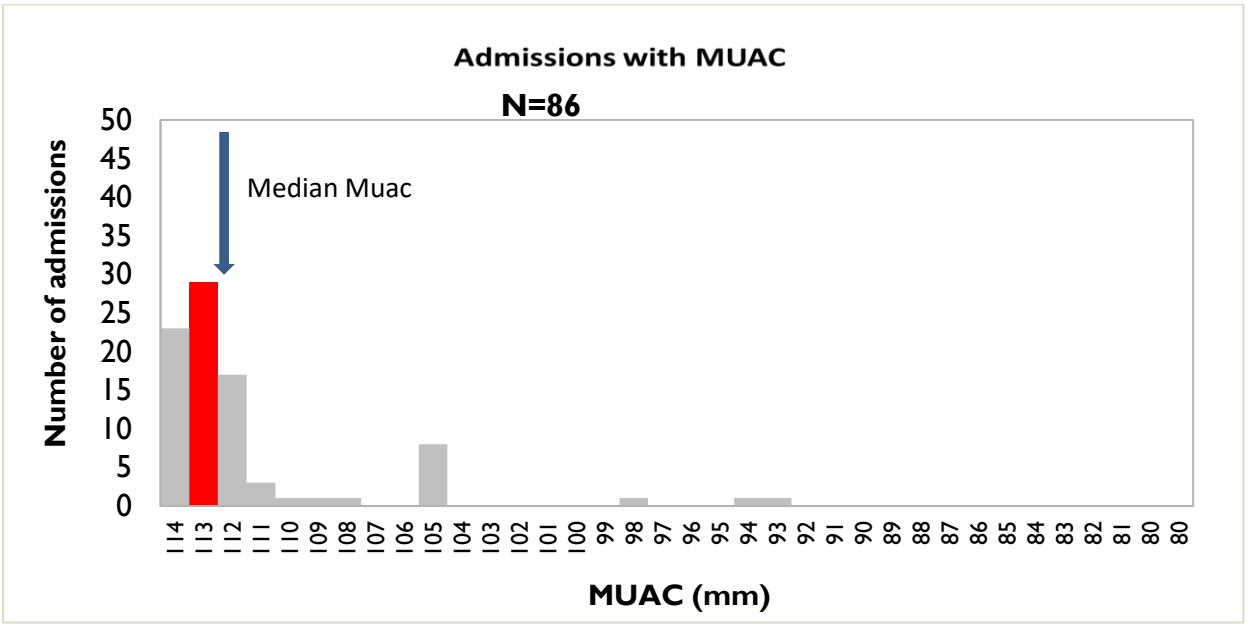


Figure 4: OTP Admission by MUAC

Analysis of admission time indicated that majority of children are admitted in OTP early with most admissions being between 114-111mm and the mean median admission MUAC being 113mm. In this regard, children admitted in OTP program are likely to have good outcome (cured). They are also unlikely to develop complications, default and take a shorter period in the program. As such, the

community is likely to have a positive program opinion and hence early presentation in the program. Early admission was therefore one of the program booster. These were attributed to the intense OJT sessions to the CHWs, active case finding with the assistance from the program staff and the referrals made by the NDMA field monitors after screening.

3.1.4 SFP Admission by MUAC

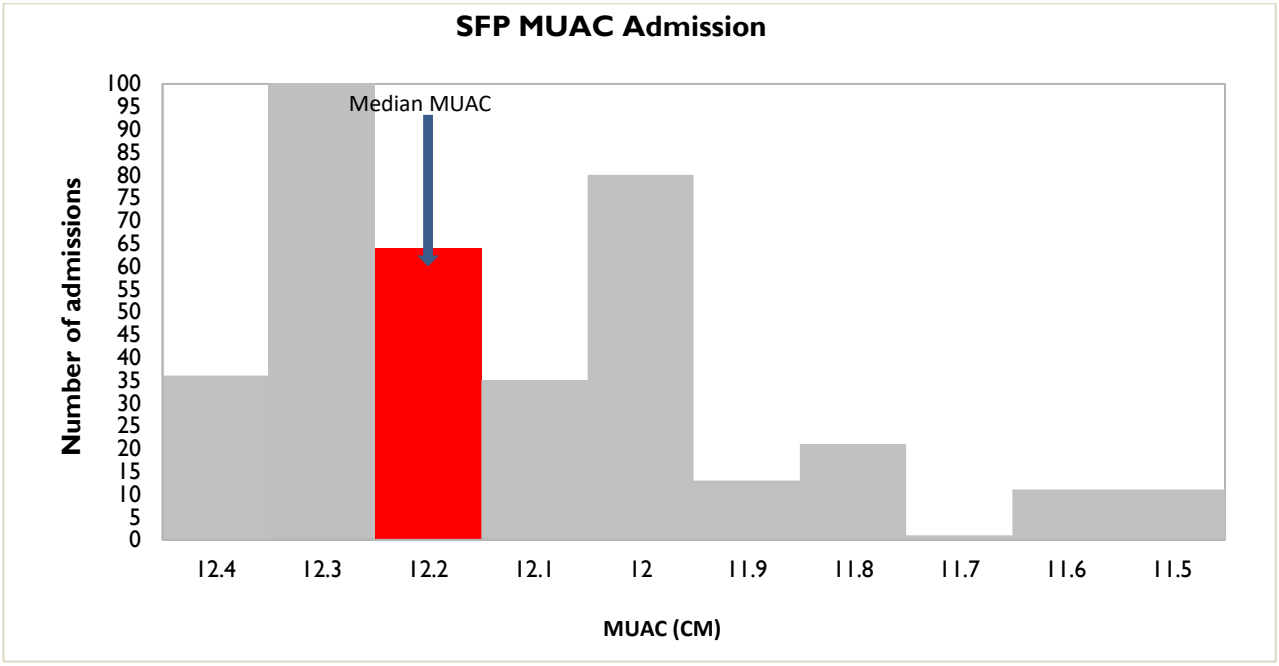


Figure 5: SFP Admission by MUAC

SFP admission over time indicated that majority of children are admitted in SFP early with most admissions being between 12.3-12cm and the mean median admission MUAC being 12.2cm.

3.1.5 Distance from treatment centre:

Distance to treatment centre is a very important factor that negative or positively affect accessibility to treatment. Time-to-travel between different treatment centre and home was determined by a quick survey of carers of current program beneficiaries and program staff. Which showed defaulters tend to live further away from the program site than patients that were discharged as cured, suggesting that time-to-travel is a possible cause of defaulting in this program. The estimation of distance was based on a radius of 5 km as per WHO standards.

3.1.6 Defaulters:

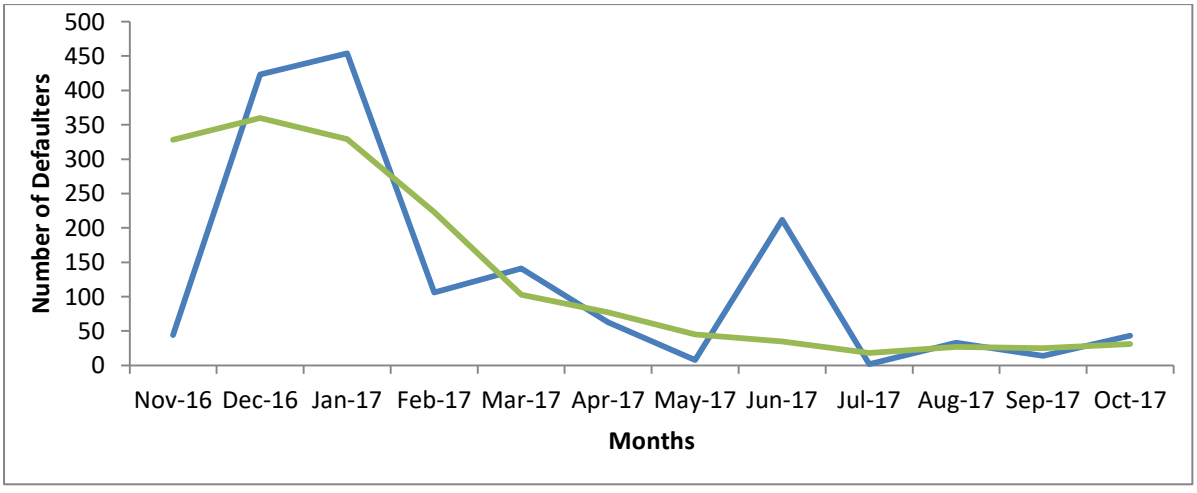


Figure 6: OTP Defaulters over Time

Defaulting was a major barrier to the OTP program. Further analysis was done to establish the major causes of defaulting based on the seasonality, agricultural and livestock activities as well as migration patterns. As indicated in figure 6 above, defaulting spikes were realized in the months of November 2016 to January 2017, this could be attributed to increased workload as well as well as migration by pastoralists as a result of drought.

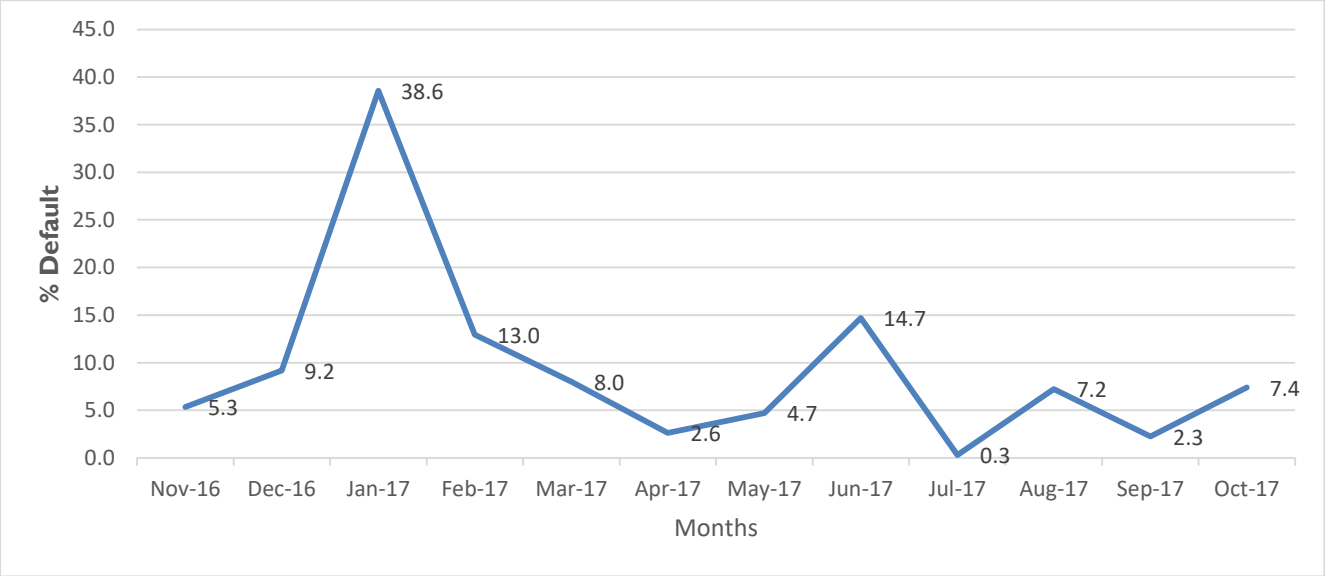


Figure 7: SFP Defaulters over Time

As indicated in figure 6 on OTP defaulting over time, SFP defaulting spikes were realized in the months of November 2016 to January 2017 and attributed to the same reasons as seen in figure 7 above.

3.1.7 Length of Stay:

The information on average length of stay was only available in Mandera south and only for the OTP program and missing and all other sub counties.

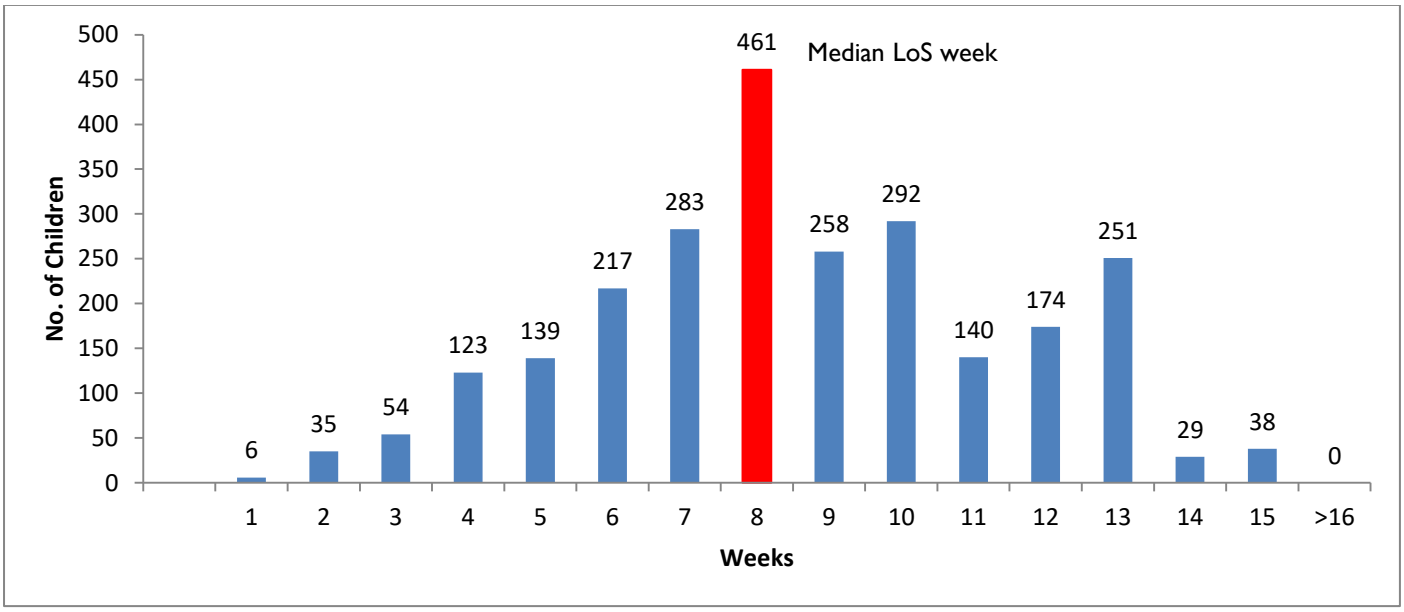
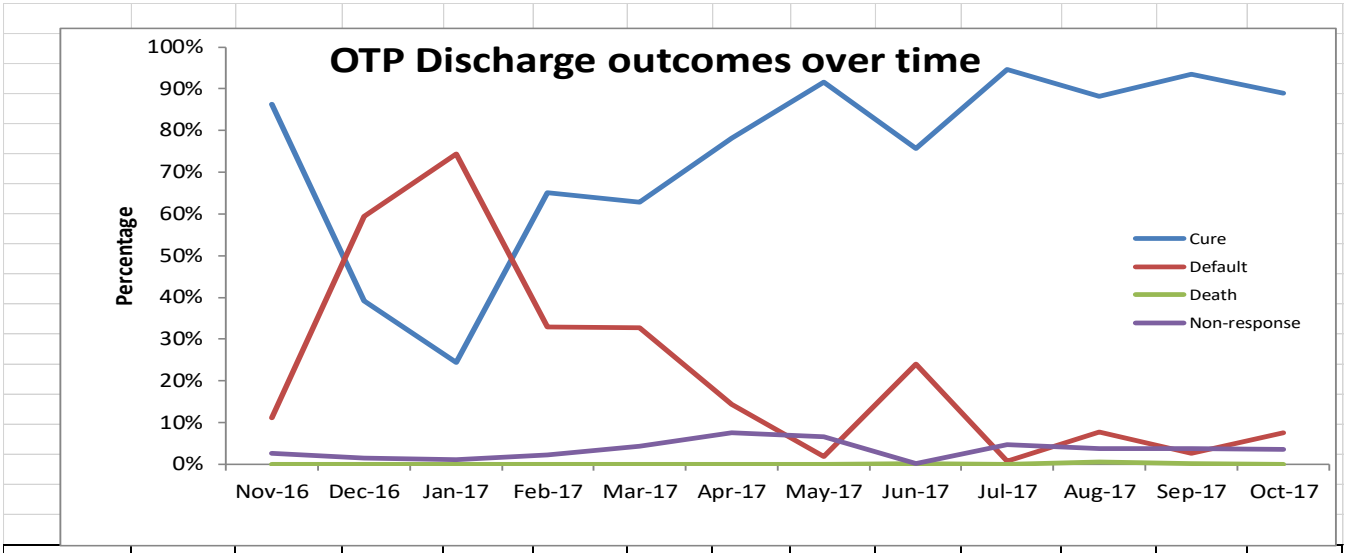


Figure 8: OTP LoS Mandera South

Beneficiaries with long length of stays above week 8 were as a result of sharing of commodities, discharges done as defaulters during stock outs, presence of underlying illnesses and non-adherence to the referral dates and health workers not indicating the outcome results in the register.

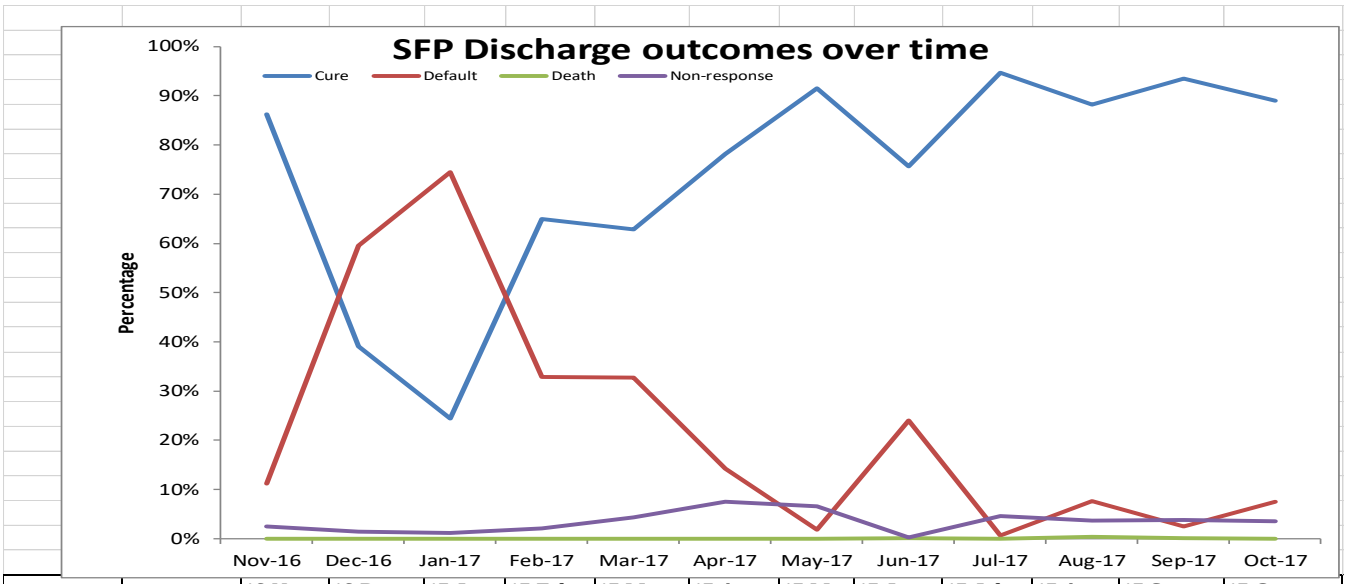
The median average length of stay for OTP program is at week 8. This indicates that where treatment protocols are being observed, clients were curing early and the program was doing good.

3.1 8 Outcome Trends



		16-Nov	16-Dec	17-Jan	17-Feb	17-Mar	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct
Diseases	Diarrhea												
Climate	Rainfall												
	Drought												
Products	Milk												
	Crops												
	Food Availabili												
	Food Price												

Figure 9: OTP Exit Outcome trends



		16-Nov	16-Dec	17-Jan	17-Feb	17-Mar	17-Apr	17-May	17-Jun	17-Jul	17-Aug	17-Sep	17-Oct
Diseases	Diarrhea												
Climate	Rainfall												
	Drought												
Products	Milk												
	Crops												
	Food Availability												
	Food Price												

Figure 10: SFP Exit outcome trends

In both SFP and OTP Program exits graphs, it shows defaulters high during Nov/ Dec due to rains which lead to migrations to original location due to pasture availability. When default rate is high, this automatically affects and reduces the cure rates as observed in the same period.
Cure rates increased in April/ May period due to milk availability and surplus production of mangoes in agro pastoral areas around river Daua.

3.1.9: OTP Length of Stay before default

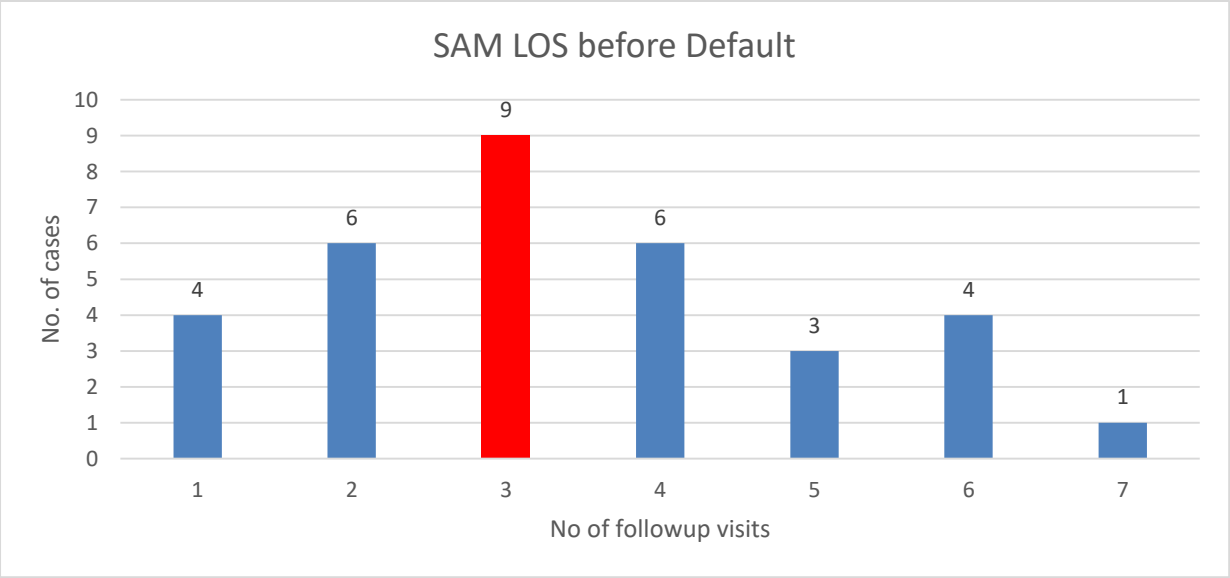


Figure 11: OTP Length of stay before default

The median length of stay in OTP program before default was 3 weeks, meaning beneficiaries defaulting earlier before they are cured. The main reason given for defaulting was distance to the health facilities.

3.1.10: SFP Length of Stay before default

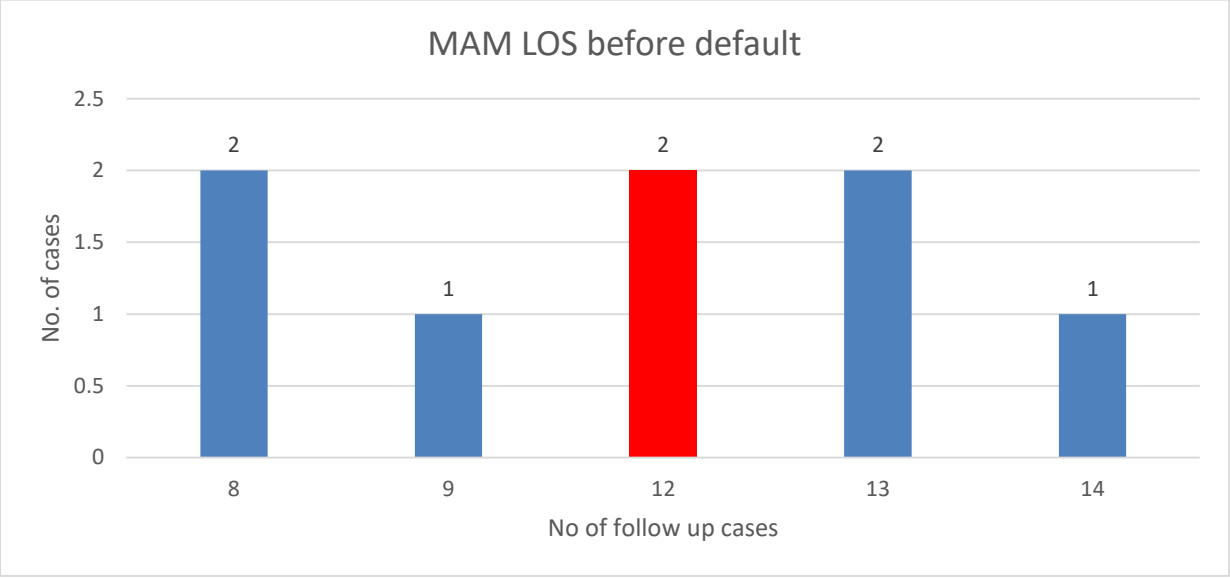


Figure 12: SFP Length of stay before default

In the SFP program, beneficiaries seem to take longer in the program above the minimum recommended period of 8 weeks. The median length of stay before default was 12 weeks. However, there were fewer cases of default in SFP program as opposed to the OTP program.

3.2 Qualitative Information

Four methods were used to collect qualitative information. Qualitative information collected was triangulated using different sources. The methods used to collect qualitative information included;

I. **Semi structured interviews:** information was collected from health facility in charge/program staff and CHWs, carers of children in program
II. **Informal group discussions:** by community leaders, TBAs/THPs, pastoralists and care givers in the community.
III. **In-depth interviews:** with caregivers of children in program and defaulting children.

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. The information was analyzed to identify program barriers and boosters as well as areas of high and low coverage. Barriers and boosters were further organized in form of a concept map.

3.2.1 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 analysed and organized in a concept map as shown in figure 13 below.

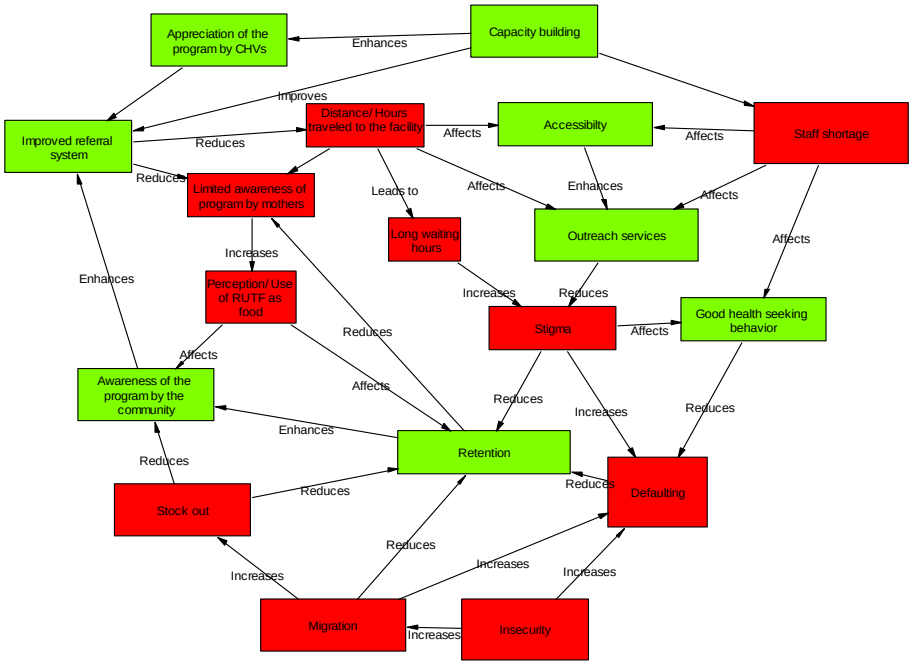


Figure 13: OTP Concept Map

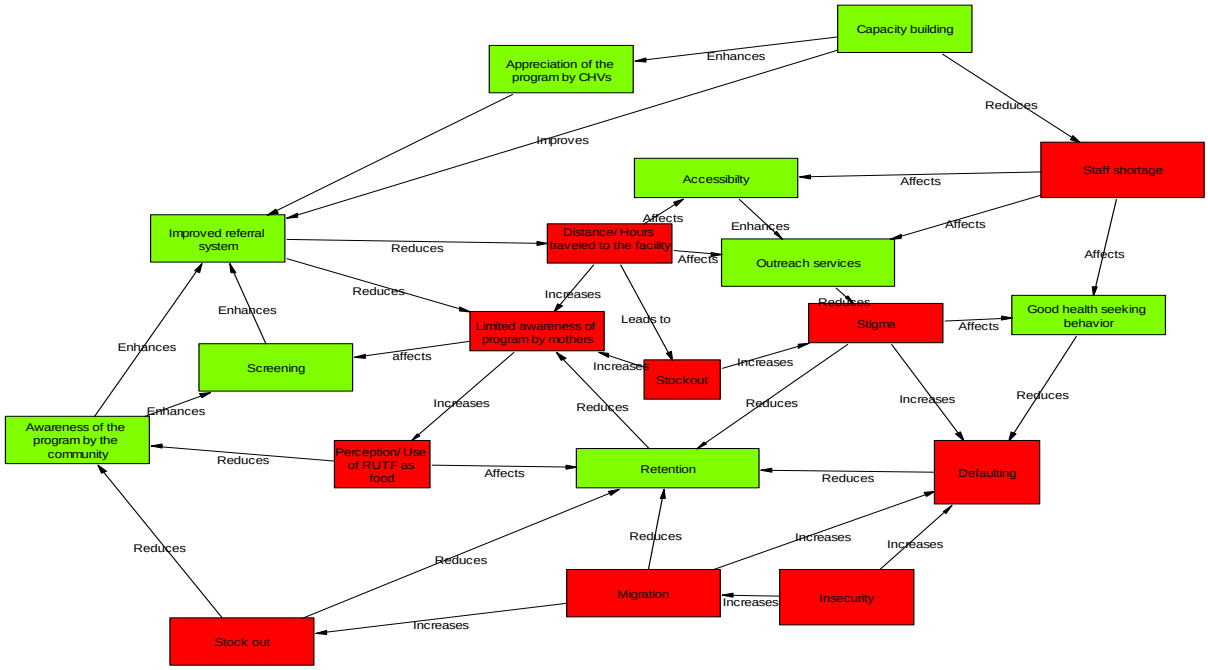


Figure 14: SFP Concept Map

3.2.2 OPT and SFP Programs Barriers / Boosters:

Table 2: OTP Boosters

Nº	Boosters	Key informants	Method
1	**Awareness about malnutrition and malnutrition signs by community**	8,7[1],2[2] 3[1],6[2],,10[2],4[2], 12[1]	B[6],C[7]
	Mothers know Signs of Malnutrition	2[1],4,10,12	C[3],E
2	**Identification/strategy & enrolment**		
	2.1 Identification by CHV		
	CHV active in screening	7[2],2,9,4	B[2],C[1],D
	CHV self-motivated	11	D
	2.2 Identification by health facility staff		
	Early identification of SAM and MAM children	1,7,10	A,B,C
	The program is able to responds and timely to the need for admission	1,2	A,C
	Integration of services	11	D
	Good working relationship between CHV and health worker	7[2],2,4,	B, C
3	**3.1 Appreciation of the service**		
	Good CHV/ community relationship	7,2,3	B C
	Good staff/Client relationship	2,13,9	C[1],D
	Good appreciation of the program by the community	7[1],2[3],3[1],8,6[1],4, 9,10	B, C
	Good attitude of CHV and health worker	2[1],3,10,9	B,C,D
4	**Accessibility/availability of service**		
	4.1 physical accessibility/availability		
	Outreach	4,2[2],6,10	B[1],C[2]
	Distribution of BSFP	11	D
	Proximity of the service	6,2[2],3	B[1],C[1]
5	**5.1 Health seeking behavior**		
	Good health seeking behavior	7,2[1],4[1]	B,C[3]

6	**Capacity to provide a quality service (from health staff)**		
	6.1 Capacity building of the staff		
	Staff trained on IMAM	3,9	D,C
	6.2 Capacity of the CHV		
	CHV well trained on IMAM	7[1],9, 12	B, D
	6.3 Workload		
	Short waiting time	2,4	B, C
	6.4 Supplies and commodities		
	Availability of Commodities (RUTF)	2	C
7	**7.1 Awareness of IMAM program**	2[2],10[2],7[1],8,10[2],4[2], 12[2]	B[6],C[7]
	RUTF is considered as a medicine/treatment	3,4,2	C
	Understand Admission Criteria/MUAC known by community	2[1],4[1],10[1],12	C[5],E
8	**Stigmatization of malnutrition**		
	No stigmatization	2[2],4[2],6	C[4],B[1]
9	**Referral/transfer & Follow up strategy**		
	formal referral system in place	9	D
10	**Retention strategy**		
	10.1 Good defaulter tracing mechanisms	9	D
	10.2 Good performance of the OTP/SC, good indicators of the program(but variables among the Sub-county)	1	A
11	**Communication between key actors (HW-CHV-NGO)**		
	Total		

Table 3: OTP Barriers

N°	**Barriers**	**Key informants**	**Method**
1	**Awareness about malnutrition and malnutrition signs**		
	Mothers does not understand signs & symptom	2	B
2	**Accessibility and Availability of the service**		
	2.1Distance (don't go to the hospital)	7[2],2[4],'3[2],6[1],4[2],9,12	B[6],C[5],D,E
	2.2 No Outreach activities	7	B
	Inconsistence of outreach services	2[1],6	C, B
	2.3 Stigma	4[1],7[1],2[1],3[1],6[1]	B[2],,C[4]
	2.4 Insecurity	11	D
	Non-operational facility	2	B
	2.5 Physical availability of service		
	Insufficient no of outreach	12	B
	2.8 Signs of heterogeneity noted	13	F
3	**Identification/strategy & enrolment**		
	No incentive for CHV/MTMSG	7[1],9	B, D
	No CHV in the village	2,9	B,D
	3.2. Level of activity of the CHV		
	CHV not active/no active case finding	2[3],6,3,	C[2],B[1]
	CHV cannot performing their work well	7	B
	Inadequate number of CHV	7,2,6	B
4	**Appreciation of the service**		
	Bad attitude of staff	2[1]	C
	Negative perception on IMAM by community	6	B

5	**Health seeking behaviour**		
	5.1 Poor health seek behaviour	2,8,10,12	C[1],B,E
6	**Capacity to provide a quality service (from health staff)**		
	6.1 Capacity building staff		
	Staff not trained on IMAM	9	D
	6.2Capacity building CHV		
	CHV not trained on IMAM	9,2	D,B
	6.3 workload health worker		
	Staff Shortage	7[1],2[2],3,6, 9,4	B[4],C,D[1]
	Long waiting hours	3,2[1],6	C
	Low quality of care	13	B
	6.4 Stock out	2[2] 7,9[1],3[2],11,12[1],4[2]	B,C[3], D[1],E[1]
	6.5Limited support supervision by SCHMT	9	D
7	**Awareness of the service**		
	7.1 Awareness of Programme by the community Awareness of service		
	Sharing of RUTF among family members	2[1], 9[1]	C,D
	RUTF not perceived as a medicine (food)	2[1], 9,10,4	C,D
	Migration-no awareness of IMAM (low coverage)	2[3],9,7,11,12,4,6	C[1],B[1], D[1],E
	No information shared on OTP	6	B
	7.2 Awareness of treatment		
	7.3 Awareness of Programme by the service provider		
	IMAM program modalities not known well	7,2[1],6,3	B[2],C
	Partial information at admission	6	B
	No awareness of CHV existence	3	C
8	**8.1 Retention strategy**		
	The program has no capacity to respond to the needs in terms of defaulting	1	A
	No defaulter tracing mechanism		
	Poor retention strategy	2	C
	Absenteeism of MOH staffs from the facility	11	D
	No budgeting for IMAM services in MOH	11	D
9	**9.1 Communication system with community**		
	Poor communication between HW and CHV	12	E
	No coordination meeting among the staffs	9	B
	Total		

Table 4: SFP Boosters

No	**Boosters**	**Key informants**	**Method**
1	Health seeking behavior		
	Good health seeking behavior	7,4[1],2[1]	B, C
3	Awareness of the service		
	3.1 Awareness of the program		
	Awareness of IMAM program	10,7[1],2[2],3[1],6[2],4[2],8,10[1]	B[6],C[5]
	Community preserved RUSF as A medicine	3,4,2	C
4	**Accessibility and availability of the service**		
	4.1 Access to service		

	Proximity of the service	2[1],6	B,C
	4.2 Service availability		
	Outreach	2[1],6,10,4	B, C
5	**Appreciation of the service**		
	Good appreciation of program (child recovered)	7[1],9,6,3,10	B,D,C[2]
	Good attitude of staff	3,2	B,C
	No stigma	2[1],6,4	C[2],B
6	**Communication system with community**		
	Good staff/Client relationship	4,2,12	C[2],E
	Good staff/CHV relationship	7',2	B
7	**Identification /strategy and enrollment**		
	7.1 Community strategy		
	CHV active in screening/Active case finding	7[2],2,4,9	B[2],C[1],D
	CHV motivated by partners	11	D
	Early identification and referral by CHV	7	B
	Good defaulter tracing mechanism	9	D
8	**Capacity to provide a quality service (from health staff)**		
	8.1 Nutrition supplies		
	Availability of Commodities	7	B
	Distribution BSFP	3,4	C
	8.2 Human resource capacity		
	CHV well trained on IMAM	7[1],9	B[1],D
	Staff trained on IMAM	3,9	D,C
	8.3 Program monitoring		
	Integration of services	11	D
	Dedicated MOH staffs	11	D
	Key actor's /community sensitization on health education	6	B
	8.4 Service delivery		
	The program is able to responds to the need in terms of identification and admission	1	A
	Short waiting time	2,4	B,C
	TOTAL		

Table 5: SFP Barriers

N°	**Barriers**	**Key informants**	**Method**
1	**Awareness about malnutrition and malnutrition signs**		
	signs of malnutrition not known	2	B
2	**Awareness of the service**		
	2.1 Poor health seeking behavior	2,4,8,12[1]	C,B,E
	2.2 Sensitization		
	IMAM program not well known	3,6,2	C,B
	Migration- nomadic pastoralists not aware of the program	2[2],4,6,9,7,11	C[2],B[2],D'
	Mothers doesn't understand admission criteria	7,2[2],3,6,4	B,C
	2.3 Knowledge gap on treatment		
	RUSF not perceived as a medicine (food)	2[2],4,9,10	C[4],D
	Sharing of RUSF among family members	2,9	C,D
3	**Accessibility and availability of the service**		

	3.1 Distance	7[1],2[4],3,6[1],4[1],9,12	B[5],C[5],D,E
	3.2 Insecurity	11	D
	3.3 Availability of service		
	Inconsistent outreach	2[1],6	C,B
	Signs of heterogeneity noted	13	F
	No operational facility	2	B
	3.4 Lack of outreach activity	7,3	B,C
4	**Appreciation of the service**		
	Negative perception on IMAM	6	B
5	**Communication system with the community**		
	5.1 Poor communication between community and Health worker	6,2	B
	5.2 Poor communication between community and CHV	7,2	B,C
	5.3 Stigmatization	4,2,6,3	C,B
6	**Identification /strategy and enrollment**		
	Inadequate CHV	7,2,6	B
	No Active case finding by CHV	2[2],6,3,	B,C
	No incentives for CHVs / MTMSGs	7[1]	**B**
	No linkage between traditional healer and health workers	8	**B**
7	**7.1 Capacity to provide quality services**		
	7.2 Human resource		
	No CHV in the village	2	B
	Shortage of staff	7[1],2,3,6,4,9,11	B, C,D
	7.3 Staff capacity		
	Service provider not trained on IMAM	2, 12	A, B
	CHV lack training on IMAM	7,9	B,D
	Staff not trained on IMAM	9	D
	Bad attitude of staff	2[1],4	C,B
	7.4 Field Monitoring		
	Limited support supervision by SCHMT	9	D
	No coordination meeting among the staff	9	D
	7.5 Reporting tools		
	unavailability of reporting tools	9	D
8	**Retention strategy**		
	Poor retention strategy	**2**	**C**
9	**Capacity to respond to need**		
	Stock out	2[1],6[1],4,9[1],3,7,11,12[1]	B[4],C[2],D[1],E
	Long waiting hours	2',4	C
	Poor storage facility	9	D
	Faulty equipment	9	D
	Lack of customized IEC materials	9	D
	TOTAL		

4.0 STAGE 2: Confirming Areas of High and Low Coverage

4.1 **Hypothesis Testing:**

The objective of this stage was to confirm areas of high and low coverage based on the data collected from stage 1. This hypothesis was tested using the Simplified LQAS formula in comparison with 50% SPHERE threshold for rural areas.

Analysis of program data and qualitative information collected indicated the following

- Coverage was high in villages closer to the program site
- Defaulting was noted in villages far from the health facilities in comparison to those that were near the health facilities.
- There was an association between defaulting and distance. Interviews with program staff and CHWs pointed that long distance hinders the program coverage

4.2 Study description:

The objective of this stage was to confirm areas of high and low coverage based on the boosters and barriers identified in Stage one. The hypothesis, "there is High program coverage (>50%) in areas with in <5 radius of the health facilities and 'there is low program coverage in areas > 5km radius (<50%) was formulated. The same hypothesis was developed for both OTP and SFP programs since the team felt that most boosters and barriers to the programs were similar.

4.3 Methodology: Small Area Study

A small area survey was conducted in 3 villages within 5 km radius of facility and 3 villages that are outside 5 km of facility radius using active and adoptive case finding methods which involves active search for cases rather and use of information found during case-finding to inform and improve the search for cases respectively.

The survey was conducted to test and verify the formulated hypothesis. From the list of villages three were purposively selected based on their distance from facility radius of < and > 5km, the teams were divided into two main groups during the data collection process. Data for both OTP and SFP programs were collected. Community key informants participated and assisted in identifying cases through active and adaptive case finding.

4.4 Case definition:

The following standard case definition were used

- MUAC less than 115 mm
- Bilateral oedema
- Aged 6-59 months

Local terminologies used to describe acute malnutrition were used supported by use of visual aids.

4.5 LQAS decision rule:

The following formula was used to confirm the hypothesis; d= [n*p/100]

n=sample size

p = 50% - SPHERE Standards Threshold for Rural areas

d=decision rule

4.5.1 Hypothesis of high coverage results

Table 6: Small Area Study results, High Coverage

Village	N	In program	Not in program
Gither	3	1	2
Hareri	1	1	0
Ashabito	3	3	0

D=n*(p/100) 9*(50/100= 4.5 round down

Since 7>4 our hypothesis of high coverage is confirmed

4.5.2 Hypothesis of low coverage results

Table 7: Small Area Study results, Low Coverage

Village	N	In program	Not in program
Sotowaoro	2	0	2
Jabi East	1	0	1
Qorobo Rasasa	1	0	1

D=n*(p/100) 4*(50/100= 2

Since 4>2 our hypothesis of low coverage is confirmed

4.6 Hypothesis Rejection or Confirmation:

Analysis of program data indicated that coverage was high in villages closer to the program

- Defaulting was noted in villages far from the health facilities in comparison to those that were near the health facilities.
- Qualitative data indicated the association between defaulting and distance.
- Interviews with program staff and CHWs pointed that long distance hinders the program coverage
- In the test of hypothesis exercise for high coverage areas, the following results were found and calculated in order to classify coverage are as follows.

4.7 Prior Development

The analysis of routine program data (quantitative), qualitative data and the findings of small area survey provided a numerical representation of a belief about the program coverage (prior). Program barriers and boosters identified affecting the coverage were listed, ranked and weighted according to their relative contribution to the overall coverage. 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. All the positive and negative factors Positive and negative factors ranked highest were automatically given a ±5% weight while lowest ranked factors were weighted ±1%. Factors ranked in between were given weights of ±3% according to their perceived positive or negative contribution to the coverage.

4.7.1 OTP Weighted and Simple Boosters and Barriers

Table 8: Weighted and Simple OTP Boosters

No	Boosters	Simple Score	Score weighted

1	**Awareness about malnutrition and malnutrition signs by community**	1	3
2	**Identification/strategy & enrolment**		
	2.1 Identification by CHV	1	2
	2.2 Identification by health facility staff	1	3
3	**3.1 Appreciation of the service**	1	4
4	**Accessibility/availability of service**		
	4.1 physical accessibility/availability	1	3
5	**5.1 Health seeking behaviour**	1	1
6	**Capacity to provide a quality service (from health staff)**		
	6.1 Capacity building of the staff	1	1
	6.2 Capacity of the CHV	1	1
	6.3 Workload	1	1
	6.4 Supplies and commodities	1	1
7	**7.1 Awareness of IMAM program**	1	4
8	**Stigmatization of malnutrition**	1	1
9	**Referral/transfer & Follow up strategy**	1	1
10	**Retention strategy**		
	10.1 Good defaulter tracing mechanisms	1	1
	10.2 Good performance of the OTP/SC, good indicators of the program(but variables among the Sub-county)	1	1
11	**Communication between key actors (HW-CHV-NGO)**	1	1
	Total	**16**	**29**

Table 9; OTP Weighted and Simple Barriers

No	**Barriers**	**Score simple**	**weighted**
1	**Awareness about malnutrition and malnutrition signs**	1	1
2	**Accessibility and Availability of the service**		
	2.1Distance (don't go to the hospital)	1	3
	2.2 No Outreach activities	1	2
	2.3 Stigma	1	2
	2.4 Insecurity	1	1
	2.5 Physical availability of service	1	1
	2.8 Signs of heterogeneity noted	1	2
3	**Identification/strategy & enrolment**	1	2
	3.1. Level of activity of the CHV	1	3
4	**Appreciation of the service**	1	2
5	5.1 Poor health seeking behavior	1	3
6	**Capacity to provide a quality service (from health staff)**		
	6.1 Capacity building staff	1	1
	6.2Capacity building CHV	1	2
	6.3 workload health worker	1	3
	6.4 Stock out	1	3
	6.5Limited support supervision by SCHMT	1	1
7	**Awareness of the service**		
	7.1 Awareness of Programme by the community Awareness of service	1	4
	7.3 Awareness of Programme by the service provider	1	3

8	**8.1 Retention strategy**	1	3
9	**9.1 Communication system with community**	1	2
	Total	**20**	**44**

4.7.2 SFP Weighted and simple Boosters and barriers.

Table 10; SFP Weighted and Simple Boosters

N°	**Boosters**	**Score simple**	**Weight**
1	**Health seeking behavior**	1	3
3	**Awareness of the service**		
	3.1 Awareness of the program	**1**	3
4	**Accessibility and availability of the service**		
	4.1 Access to service	**1**	4
	4.2 Service availability	**1**	
5	**Appreciation of the service**	**1**	4
6	**Communication system with community**	**1**	2
	7.1 Community strategy	**1**	4
8	**Capacity to provide a quality service (from health staff)**		
	8.1 Nutrition supplies	**1**	2
	8.2 Human resource capacity	**1**	2
	8.3 Program monitoring	**1**	3
	8.4 Service delivery	**1**	4
	TOTAL	**11**	**31**

Table 11: SFP Weighted and Simple Barriers

N°	**Barriers**	**Simple score**	**Weight**
1	**Awareness about malnutrition and malnutrition signs**	**1**	1
2	**Awareness of the service**	**1**	
	2.1 Poor health seeking behavior	**1**	
	2.2 Sensitization	**1**	3
	2.3 Knowledge gap on treatment	**1**	**2**
	3.1 Distance	**1**	5
	3.2 Insecurity	**1**	1
	3.3 Availability of service	**1**	**3**
	3.4 Lack of outreach activity	**1**	1
4	**Appreciation of the service**	**1**	1
5	**Communication system with the community**		
	5.1 Poor communication between community and Health worker	**1**	1
	5.2 Poor communication between community and CHV	**1**	1
	5.3 Stigmatization	**1**	2
6	**Identification /strategy and enrollment**	**1**	**4**
7	7.1 Capacity to provide quality services		
	7.2 Human resource	**1**	**4**
	7.3 Staff capacity	**1**	**4**
	7.4 Field Monitoring	**1**	2
	7.5 Reporting tools	**1**	1
8	**Retention strategy**	**1**	**1**
9	**Capacity to respond to need**	**1**	**5**

	TOTAL	**20**	**42**

4.7.2 Concept map Positive and Negative Links

4.7.2a OTP Concept Map

The arrows that represented a negative effect were counted as barriers, while those that symbolized positive effect as boosters. Twelve arrows for boosters were added from 0 while 14 arrows for barriers were subtracted from 100%. After division of the result by two, a prior of 45% was found. (0+12) + (100 - 22) = 78; 90/2 = 45%.

4.7.2b SFP Concept Map

The arrows that represented a negative effect were counted as barriers, while those that symbolized positive effect as boosters. Twelve arrows for boosters were added from 0 while 14 arrows for barriers were subtracted from 100%. After division of the result by two, a prior of 43.5% was found. (0+12) + (100 - 25) = 87; 87/2 = 43.5%.

2.5.3. Prior Mode Development Using Weighted Barriers and Boosters, Unweighted Barriers and Boosters, Histogram and Concept Map

Prior was calculated by adding all the 4 parameters and getting the average between the four coverage estimations: (example)

4.7.3 Histograms SFP and OTP

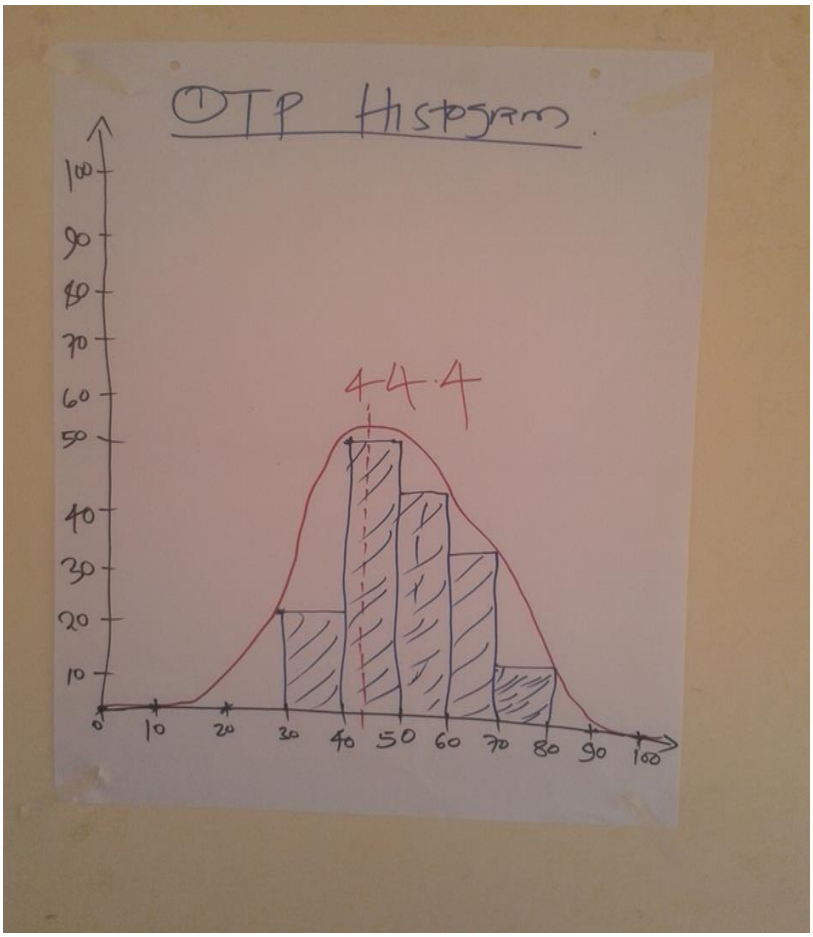


Figure 15: OTP Histogram

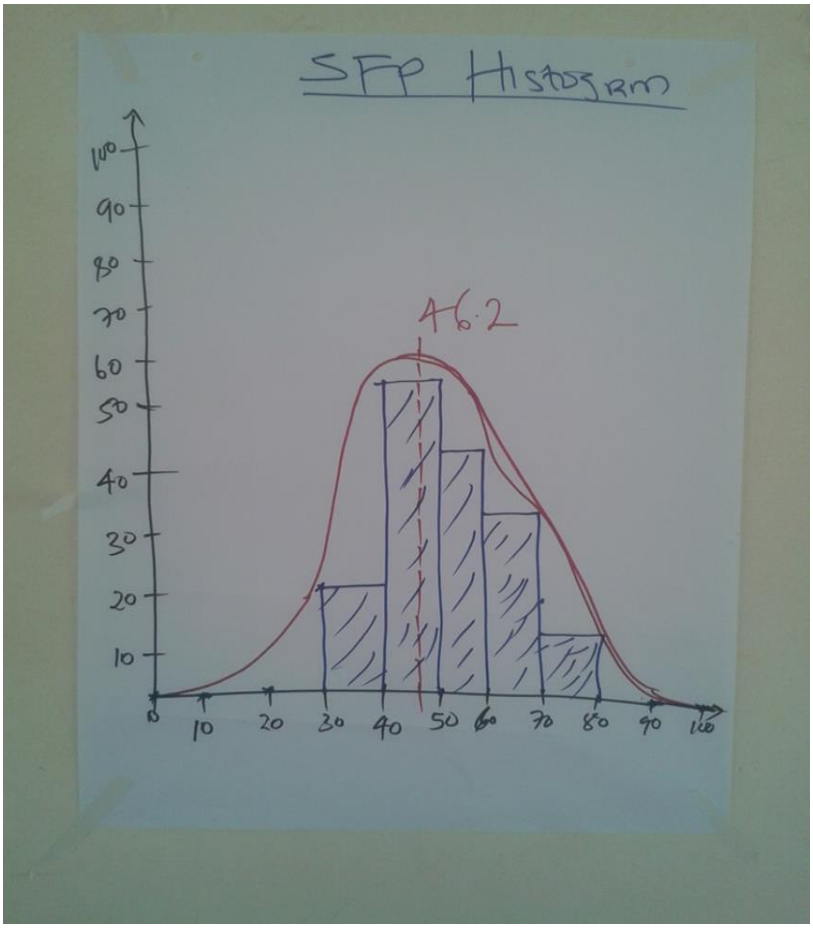


Figure 16: SFP Histogram

4.8 Average Prior Mode Development

	OTP	**SFP**
Histogram	44.4%	46.2%
Simple BBQ (not-weighed)	48%	45.5%
Weight BBQ	42.5%	44.5%
Concept map	45%	43.5%
Average Prior:	**44.97%**	**44.92%**

This was calculated using minimum credibility interval of ± minus 20

The distribution of prior coverage estimate was determined through a beta distribution of the belief of perceived coverage estimates. This was done by using the Bayes SQUEAC calculator14 to plot the mode and all the perceived other possible coverage proportions. An average was calculated and used as the median for a trial distribution curve (Prior) plotted using the Bayes SQUEAC Calculator. The final curve that was generated is shown below.

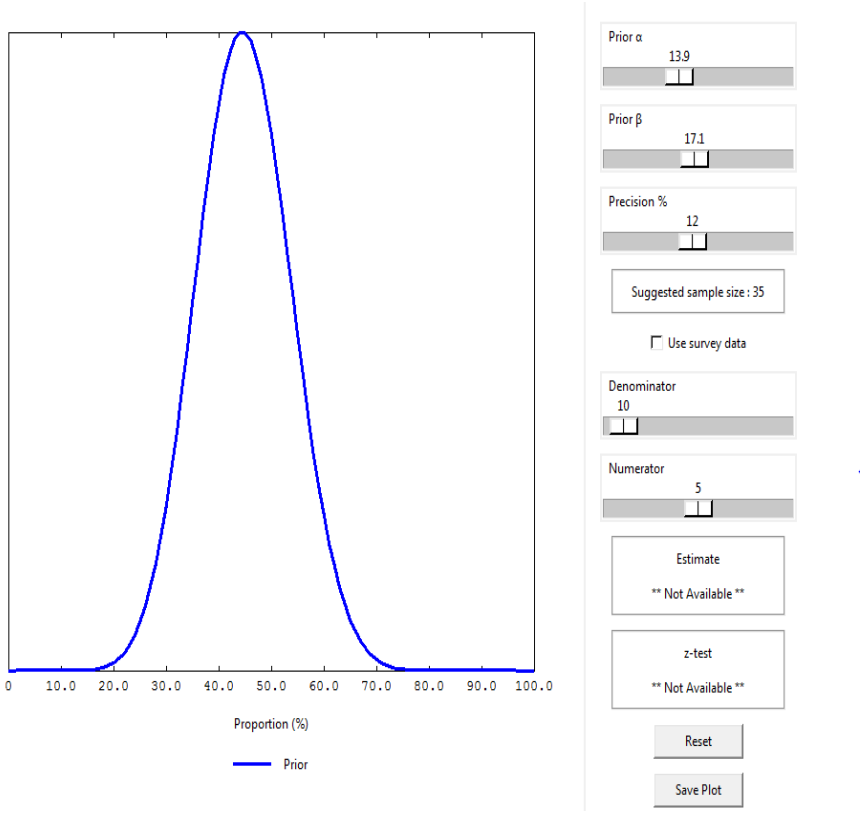


Figure 17: OTP Bayes Plot

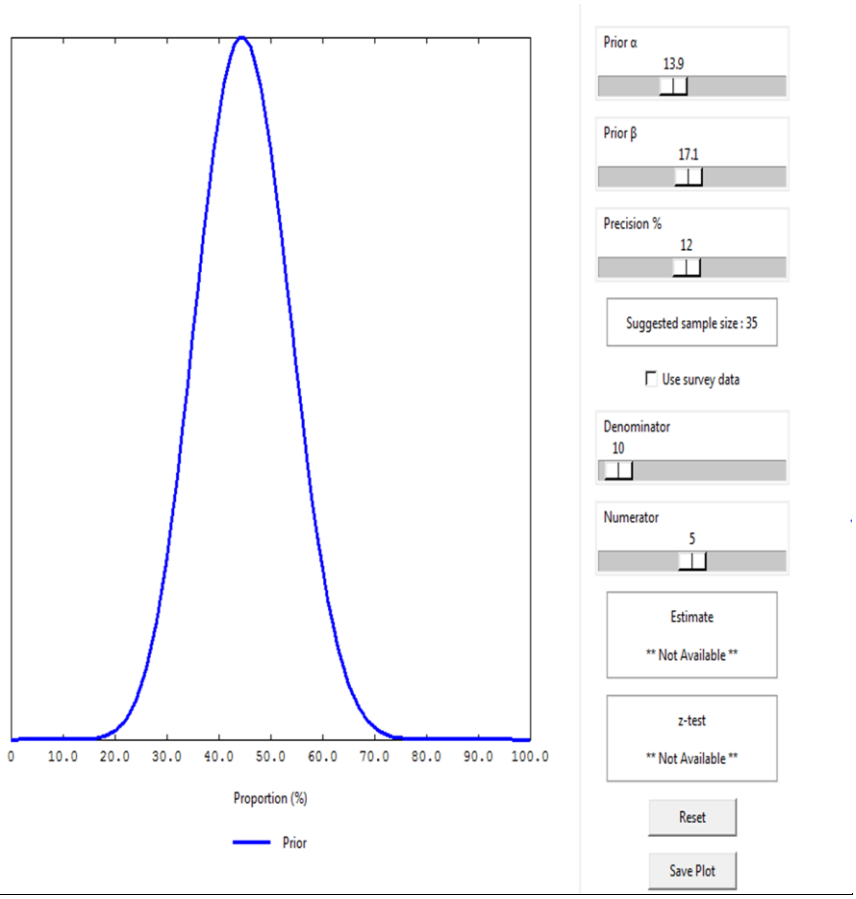


Figure 18: SFP Bayes Plot

5.0 STAGE 3: Wide Area (Likelihood) Survey

Once the prior mode has been finalized and its shape parameters entered into the Bayes calculator (as s, a recommended sample size will be generated. 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.

5.1 Sampling Method

Spatially Stratified Sampling method was used for sampling the villages. This was informed by the fact that there was no clear map of Mandera County with all villages or communities marked. An updated list of all the villages in Mandera County was made. Each village was linked to a health facility catchment and sorted according to distance from OTP/SFP site.

5.2 Sample size Calculation OTP/SFP:

$$n_{villages} = \left\lceil \frac{n}{average\ village\ population_{all\ ages} \times \frac{percentage\ of\ population_{6-59\ months}}{100} \times \frac{SAM\ prevalence}{100}} \right\rceil$$

Using the bayes calculator the minimum Sample Size is 35 for OTP and 35 for SFP. The total number of villages in Mandera County is 348. Average village population size in the county is 1692. Proportion of population for children 6-59 months is 12.9%. The SAM prevalence by MUAC used is 0.8% and GAM prevalence by MUAC used is 7.45 from the SMART survey June, 2017. The number of villages selected to reach the required of sample size (35).

5.2.1 OTP Calculation

$$n = \frac{35}{1692 \times 0.129 \times 0.008}$$

= 20 Villages.

5.2.2 SFP Calculation

$$n = \frac{35}{1692 \times 0.129 \times 0.074}$$

= 3 Villages.

There were 348 villages in Mandera County. This was divided by the number of villages calculated in section above that is 20 villages to obtain a sampling interval of 17. The first village was randomly selected between 1 and 17and the first village selected was village 3 (Dawder) from the list and added 17. The sampling interval was continually applied 17 until all the 20 villages were sampled.

5.3 Data Collection

5.3.1 Case finding methodology:

Data collection was done by 6 teams for 3 -4 days. Each team had 3 members. Active case finding was used to search for SAM cases in the sampled villages. Before data collections begin, the team sought authority from respective village leaders. After the permission was granted, the team with the assistance of village guide visited every household with children 6 to 59 months and measured their MUAC which was recorded in a tally sheet in case the child met the admission criteria (MUAC< 11.5cm or 11.5 to 12.4 cm). Each team had a questionnaire for capturing information for reasons of 'not in program cases as well as referral slip for all cases that met the admission criteria for both OTP and SFP program. A total of 44 children met the admission criteria of SAM and 33 children for MAM as shown in the table below.

5.3.2 Qualitative data framework:

During data collection, questionnaires for care takers with child/children not in the program were administered to collect information on the reasons why a child is not in the program despite the child/children meeting the criteria. This helps to identify all the factors that impede access to program.

5.3.3 Quantitative data results:

Table 12: Active and adaptive case finding results

SAM Case	covered	Not covered	Recovering
44	29	15	31

Table 13: Door to door MAM Cases

MAM Case	covered	Not covered	Recovering
33	26	7	6

Quantitative of the results tabulated. Reasons given for NOT attending programme displayed in column/bar chart ranking from smallest to largest

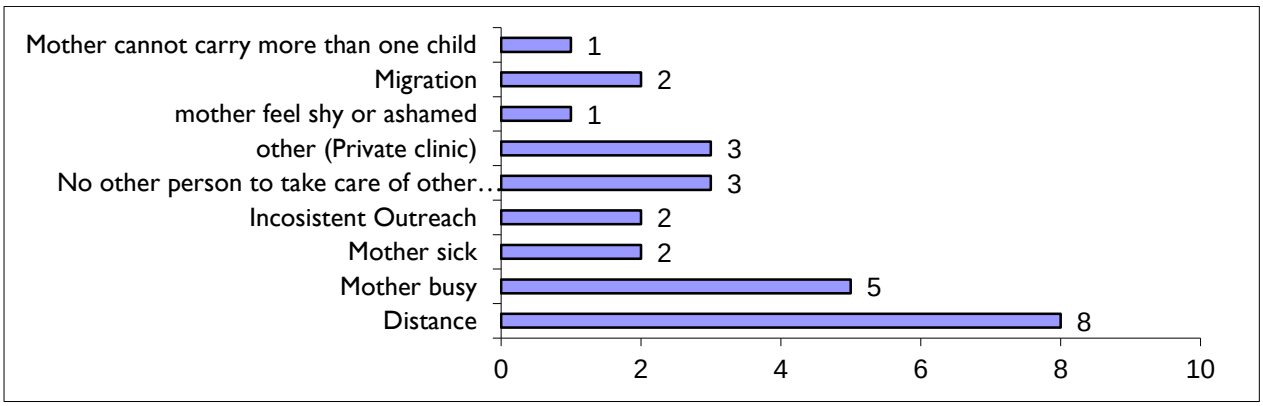


Figure 19: Qualitative data results OTP

Qualitative data tabulated or graphed (reasons for Not attendance or default)

5.4 Reasons for Defaulting

Distance still remains a challenge as was quoted as the main reason for defaulting as shown in the figure 20.

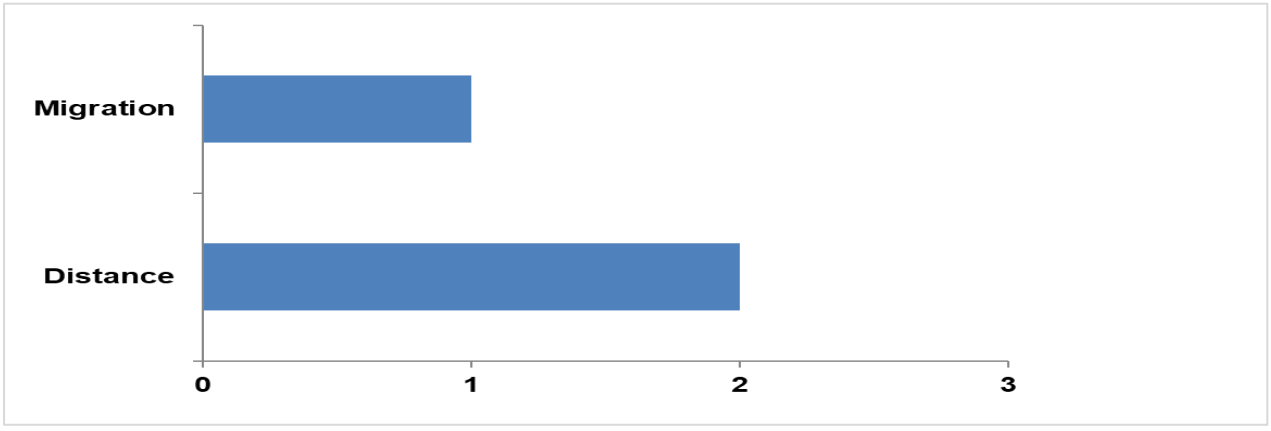


Figure 20: Reasons for Defaulting

5.5 BAYES COVERAGE ESTIMATE:

Bayes plot: Graphic indicating prior, likelihood & posterior with shape parameters, numerator and denominator

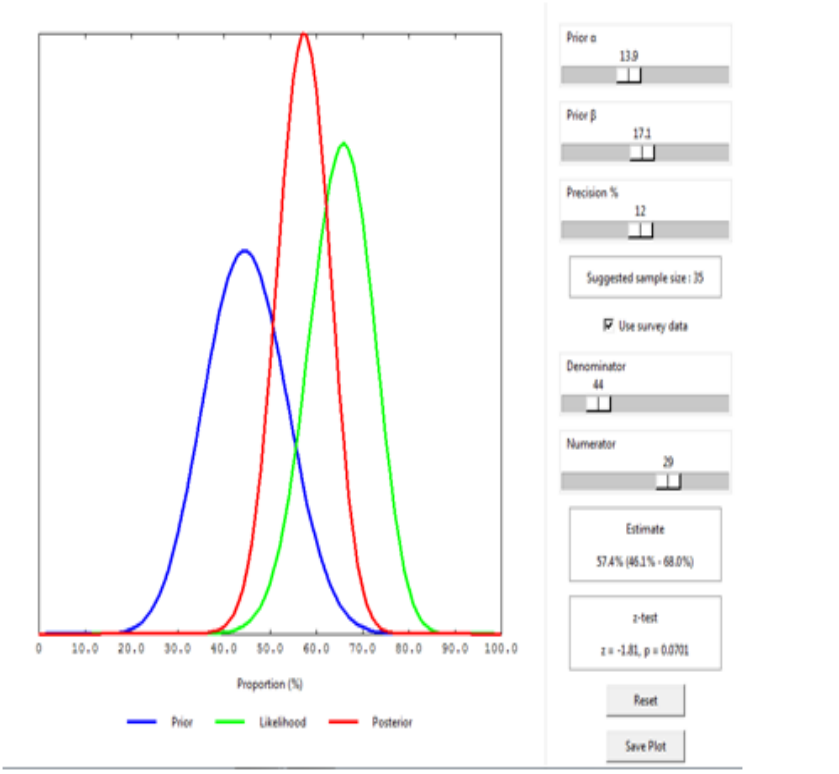


Figure 21: Bayes plot OTP with Prior, Likelihood and Posterior

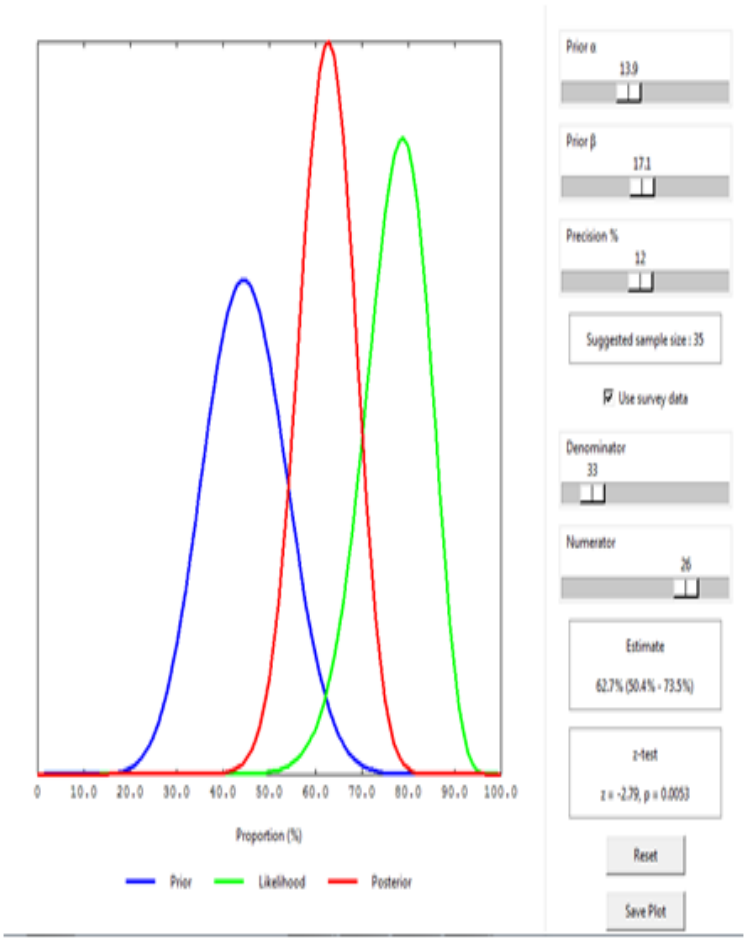


Figure 22: Bayes plot SFP with Prior, Likelihood and Posterior

5.6 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 and hence produces unbiased estimate of the overall performance of the programme using the formula below.

$$\frac{C_{in} + R_{in}}{C_{in} + R_{in} + C_{out} + R_{out}}$$

Where;

Cin= Active cases in Program

Rin= Recovering cases in program

Cout= Active cases not in Program

Rout= Recovering cases not in program

For OTP program sum of Active and recovering cases in program was used as the numerator (60) while Active and recovering cases in and out of OTP program (81) was used as a denominator. SFP program used sum of active and recovering cases in program was used as the numerator (32) while active and recovering cases in and out of SFP program (40) 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 and SFP in Mandera County as 66.3% (56.8 - 74.4) and 65.1% (53.6 – 75.1) respectively, as illustrated above.

5.6.1 Interpretation of Bayes plot:

Describe if prior & likelihood are coherent or in conflict. Interpret with rationale.

6.0 DISCUSSION & RECOMMENDATIONS

6.1 Conclusion

Coverage estimate was arrived as a single coverage SQUEAC assessment which was 66.3% for SFP (56.8 - 74.4) and 65.1% (53.6 – 75.1) for OTP respectively which met the Standard SPHERE coverage for rural areas which is 50%.

The main reason for low OTP coverage included weak defaulter tracing coupled with inadequate community screening and active case findings. The main reason for this was due to the fact that CHVs were not given incentives as they used to be given until Jan 2016 when the donor funding stopped.

Lack of CHVs incentives lead to weak defaulter tracing strategies in the County as well as weak case findings. This can be attributed to early program defaulting as it was noted in program data analysis.

Migration during drought season led to low program coverage because caregivers could not reach the service delivery sites as they were engaged in search for water for domestic and livestock to defaulting. Inaccessibility to the OTP sites as a result of distance.

Although there RUTF stocks were available at the KRCS warehouse, there were notable gaps in the distribution. The County government had leveraged Save the Children and KRCS in the distribution of RUTF but these efforts have not been sufficient due gaps in documentation, affecting the ordering of stock there was notable stock outs in the OTP (remote health facilities).

Poor documentation was noted in a number of health facilities. This was attributed to inadequate workforce coupled with lack of incentives for CHVs working in health facilities. Staff turnover has been an issue as staff are trained on IMAM leading to capacity gap among new health workers recruited.

Met need: Met need = Coverage x Cure rate / interpret result

Table 14: Major boosters and barriers that should be prioritised for action

Barriers	**Boosters**
Distance	Awareness about the program by the community.
Stock outs	Appreciation of the service by the community
Poor health seeking behaviours	Health workers capacity to identify and provide quality care.

6.2 Recommendations

Table 15: Recommendations:

Barrier	**Recommendation**	**By who**	**By when**
RUTF stock outs at the health facilities	• Improve reporting by health facilities. • Preposition of buffer stocks in all Sub Counties.	• CHMT&SCHMTs. • KRCS/SCI	Jan 2018
Weak Defaulter tracing mechanisms	• Engage CHVs to conduct defaulters tracing. • Educate the community on the signs and symptoms of malnutrition.	• CPHO/SCPHOs. • SCNFPs, SCPHOs/health workers.	Feb 2018 Ongoing
Inadequate staff due to turn over	• Train more staff to avert capacity gaps. • Recruitment of more health workers based on need. • Redistribution of staff.	• CHMT/SCI/KRCS. • County government • CHMT/ Health HR unit	Feb 2018 April 2018
Early Defaulting	• Educate community and caregivers on importance of continuing with treatment.	• SCNFPs, SCPHOs/health workers.	Ongoing
Inadequate community screening and active case findings	• Quarterly mass screening in the County.	• CHMT/SCHMT/SCI/KRCS	Feb 2018
Distance	• Operationalize more health facilities. • Establish outreaches in hard to reach areas.	• County government. • County/SCI/KRCS	April 2018 Based on funds availability
Migration due to	• Develop outreaches in mobile	• County/SCI/KRCS	Feb 2018thro

drought	settlement by linking to migration patterns		Beyond zero
Lack of knowledge on malnutrition signs	• Educate the community on the signs of the malnutrition. • Establish community units.	• SCNFPs, SCPHOs/health workers. • SCI/County	ongoing
Poor health seeking	• Conduct health and nutrition education in the community and health facilities.	• SCNFPs, SCPHOs/health workers	routine
Poor documentation. Incomplete registers.	• Support capacity development of health workers on health records keeping.	• SCHMT/CHMT/Partners	Ongoing
No incentives for CHVs	• Advocate for allocation of funds to support CHVs incentives.	• SUNCSA/partners.	March 2018

7.0 ANNEXES

ANNEX 1: List of People Trained During the SQUEAC Assessment

NAME	GENDER (M/F)	POSITION	ORGANISATION	EMAIL ADDRESS
Abdirashid Abdi Issack	M	HRIO	MOH	
Hassannur Mohamed Abdinur	M	SCNO	MOH	
Abdikadir Billow Hussien	M	Nutritionist	MOH	
Agnes Jemaiyo Rotich	F	HRIO	MOH	
Fatuma M Issack	F	PHO	MOH	
Hawa Maalim Hassan	F	SCNO	MOH	
Hussien Oyaw Ali	M	Nurse	MOH	
Abdi Mohamed Ali	M	Nutritionist	MOH	
Alibashir Issa Adon	M	Nutritionist	MOH	
MachukaO Rodgers	M	HRIO	MOH	
Ismail Adaw Dubow	M	SCNO	MOH	
Mohamed Ibrahim Farah	M	Nurse	MOH	
Khalid Ahmed Wethow	M	Nutritionist	MOH	
Nurdin O. Adan	M	PHO	MOH	
Mohamed M Abdi	M	Nutritionist	MOH	
Shueb Salad Mohamed	M	OT	MOH	
Yussuf Aliow Salat	M	HRIO	MOH	
Khadija Hussein Adan	F	Nutritionist	MOH	
Ibrahim A Mohamed	M	PHO	MOH	
Hassan A Abdirahman	M	HCO	MOH	

ANNEX 2: Chronogram of Training and Assessment

Period	Task	By Who
16th Oct –Nov 10th 2017	Training of County SQUEAC teams (ToTs)	Valid International Consultant
15th-25th Nov 2017	Pre SQUEAC data collection	SCMTS
9th-12th Dec 2017	Training for enumerators	Trained ToTs
13th-15th Dec 2017	Quantitative data collection	Enumerators
16th-18th Dec 2017	Small area survey	Enumerators
19th-22nd Dec 2017	Large area survey	Enumerators
Data analysis &Report writing	29th Dec -10th Jan 2018	Survey Coordinators
Validation at NITWG	30th Jan 2018	CNC/SCI

ANNEX 3: QUESTIONNAIRES _KII, IDI, FGD

Survey Questionnaire for caretakers with cases NOT in the programme – OTP / SFP (circle)

Team No: _____

Sub-county: _____ HF: _____ Village: _____

Child Name: _____

1a. DO YOU THINK YOUR CHILD IS SICK? IF YES, WHAT IS HE/SHE SUFFERING FROM? _____

_____

1. DO YOU THINK YOUR CHILD IS MALNOURISHED?
   □ YES □ NO

2. DO YOU KNOW IF THERE IS A TREATMENT FOR MALNOURISHED CHILDREN AT THE HEALTH CENTRE?
   □ YES □ NO (stop)

3. WHY DID YOU NOT TAKE YOUR CHILD TO THE HEALTH CENTRE?
   □ Too far (How long to walk? ……..hours)
   □ No time / too busy
   Specify the activity that makes them busy this season _____
   □ The mother is sick
   □ The mother cannot carry more than one child
   □ The mother feels ashamed or shy about coming
   □ No other person who can take care of the other siblings
   □ Service delivery issues (specify ……)
   □ The amount of food was too little to justify coming
   □ The child has been rejected. When? (This week, last month etc)_____
   □ The children of the others have been rejected
   □ My husband refused
   □ The mother thought it was necessary to be enrolled at the hospital first
   □ The mother does not think the programme can help her child (prefers traditional healer, etc.)
   □ Other reasons: _____

4. WAS YOUR CHILD PREVIOUSLY TREATED FOR MALNUTRITION AT THE HC? Which programme?
   SFP OTP/SC (circle)
   □ YES □ NO (=> stop!)
   If yes, why is he/she not treated now?
   □ Defaulted, When?……..Why?……..
   □ Discharged cured (when? ……)
   □ Discharged non-cured (when? ……)
   □ Other:_____

   (Thank the mother/carer)

SQUEAC: Active Case Finding Data collection - SAM **Sub-county:** _____

HF: _____ Village: _____ Team: _____ _ Date : _____

Child's name	Age (Months)	MUAC (mm)	Oedema (+, ++, +++)	SAM Case Y/N	SAM Covered	SAM Not covered	Recovering	Verification with Health Card / RUTF (tick)
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
								☐ Health
Total								

ANNEX 4. Local terminologies

NO.	GARREH TERMS	ENGLISH
1.	Malado	Plumpynut/Malnutrition
2.	Laaif	weak
3	Aptii	Too weak
	Lalafa	emaciated
	Qonchoro/udu marriqa	baggy pants
	Itii/bosbos	Oedema
	Gara qariba	Pot belly
	Reyf	Very very weak

	Kala	Thin
	Uqa	Wasted
	Ilman hasa	Too thin
	filfilki	Brown hair
	KEY ACTORS	
	Chirdes	Traditional healer
	Ako	TBA
	Sheeq	Religious leader
	Dakhtari bulaa	CHW
	Chief	Chief
	AT RISK	
	Yatin	Orphan
	Laku	Twins
	Tadi	No child spacing
	Tao	Delayed milestone
	Goldow	Child with one or without parent
	Miskin	Children of poor persons
	Ilman muchi inon	Child not breastfeed.
No.	**SOMALI TERMS**	**ENGLISH TERMS**
I	Lacif	Weak
	Nafaqodaro	Malnourish
	Malado	Plumpynut
	Haas	wasted
	Tima cadaan	Hair colour change
	Luga baraar	Swollen legs
	Tiniqtiniq	Very very thin
	KEY ACTORS	
	Daktar CHW	CHW
	Umulisa	TBA
	Maallin duksi	Religious teacher
	Hoyo	Mother
	Faalow	Fore teller
	Sheikh	Religious leader
	Ayeyo	Grand mother
	Maqaar duub	Traditional ritual
	Chief	Chief
	AT RISK	
	Ilma jiran	Sick children
	Cama/Curyan	Disable
	Fadhiita	With delayed milestone
	Xararug/sakaraad	About to die
	Tacban	Very weak
NO.	**Rahanweyn terminologies**	**English terminologies**
1.	Lithithi/hashi	Thin
	Laciif	Weak

	Malado	Malnourish
	Hadig hadig yanagidi	Too weak
	Feera qalinyi	Prominent ribs
	Magarshe tashuuq tashuuq yangidii	Oedema
	Dabithi qonjoriti	Emaciated buttock
	AT RISK	
	Mintaani	Twins
	Ogoon	orphans
	Goldow	Child without one or both parents
	Unug jirolow eeh	Child with chronic illness.
	KEY ACTORS	
	Bulaad tarktarshe	CHV
	Naas nujis	Breastfeeding mother
	Umuulis	TBA
	Jeef	Chief
	Sanaalow	Traditional healer