

Republic of Kenya



Ministry of Health



GARISSA COUNTY SQUEAC REPORT, NOVEMBER 2017

DATE OF INVESTIGATION: 21ST NOVEMBER 2017 TO 5TH DECEMBER 2017

TYPE OF PROGRAMME: OTP for SAM and SFP for MAM

IMPLEMENTING ORGANISATION: MINISTRY OF HEALTH, UNICEF, TDH, MERCY USA, IRC



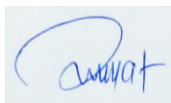
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ABBREVIATIONS

BBQ -	Barriers, Boosters and Questions
CI -	Credible Interval
CMAM -	Community Management of Acute malnutrition
CMN -	coverage Monitoring Network
CHW-	Community Health Workers
CU-	Community Unit
CHMT-	County Health Management Team
HIS -	Health information System
FFA-	Food for Asset
FGD -	Focus Group Discussion
GFD-	General Food Distribution
GAM -	Global Acute Malnutrition
HC -	Health Centers
HF -	Health Facility
HINI-	High Impact nutrition Interventions
IRC –	International Rescue Committee
IEC-	Information Education and Communication
IMAM-	Integrated Management of Acute Malnutrition
ICCM-	Integrated Community Case management
LOS -	Length of Stay
MAM-	Moderate Acute Malnutrition
M&E -	Monitoring and Evaluation
MOH-	Ministry of Health
MUAC-	Mid Upper Arm Circumference
NGO -	Non-Governmental Organization
NDMA-	National Drought Management Authority
OS -	Outreach Site
OTP-	Out patient Therapeutic Program
OJT-	On Job Training
RUTF-	Ready to Use Therapeutic Food
SAM-	Severe Acute Malnutrition
SCHMT –	Sub County Health Management Team
SCNOS -	Sub County Nutrition Officers
SFP-	Supplementary Feeding Program
SQUEAC-	Semi Quantitative Evaluation of Access and Coverage
SC -	Stabilization Centre
TBAs-	Traditional Birth Attendants
THPs-	Traditional Health Practitioners
TDH -	Terres De homes
UNICEF-	United Nations Children’s Fund
URTI-	Upper Respiratory Tract Infection
WHO -	World Health Organization

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EXECUTIVE SUMMARY

The Ministry of health and Nutrition department in conjunction with partners conducted the first coverage assessment for OTP and SFP program in Garissa County. The main objectives of the assessment was to determine the program coverage, establish barriers and boosters for the OTP and SFP program, capacity build the MOH and partner staff on coverage assessment using SQUEAC methodology as well as providing recommendations for future programming. This assessment was carried out in the entire Garissa County between 21st November and 2nd December 2017. SQUEAC methodology was used. Overall single coverage of 62.7% for OTP and 63.1% for SFP program was unveiled by the assessment, which was above the 50%¹ sphere standard for coverage in rural set ups. The main barriers and boosters, as well as the recommendations that realized through the assessment are as summarized below:

Main barriers	Explanation	Recommendations
Distance (due to the vastness of the county)	Outreaches were only scheduled at static villages and no effort was made to reach out to the pastoralists who move with animals during different seasons in search of pasture and water,	Increase number of OTP sites within the accessible areas
Shortage of staff	Some health facilities have only one nurse who provides the entire primary health care package , and in most cases the facility is closed if they are either on leave or training	Lobby for recruitment / deployment of more health workers to bridge gap.
Opportunity cost	Caregivers reported that they would rather take care of all the siblings of the beneficiaries and attend to the family chores instead of spending several hours at the OTP.	Increase number of OTP operational days to everyday Conduct social gatherings for sensitization of benefits and importance of OTP
Long queues at OTP sites	Mothers of OTP beneficiaries reported the overwhelming ordeal of having to wait in line for a long time. They stated that it was amongst the main challenges they faced when they sort for OTP services.	Increase number of OTP team members depending on caseload
Migrations	Majorly in pastoral livelihood zones contributing to high defaulters	Scale up integrated mobile clinics to ensure all clients are serviced
weak community strategy in the county	CHWs in the community have not been trained on IMAM yet they were mostly handling IMAM related activities at the facility level. However weak defaulter tracing mechanism was noted	Scale up CHV training on community nutrition module. Strengthen linkage of CUs in IMAM programming
Poor health seeking behaviour	OTP mothers established that mothers have to seek permission for medical attention from their husbands, while this in most cases might, took longer, the children's condition worsened.	Community mobilisation and sensitization of importance of timely health seeking behaviour whilst increasing male involvement.
Inconsistent supply of (both RUTF and RUSF):	Caretakers and some gatekeepers reported that sometimes there was pipeline break for RUTF and RUSF meaning that sometimes the mothers came for follow up and there were no supplies. This could demotivate the mothers, which could lead to defaulting. On follow up with the health workers, they reported stocks outs in the course of the previous year.	Strengthen LMIS at facility level
RUTF is shared	Most caretakers and community members	Mobilize the entire community through

¹ Sphere standards

amongst children within the household	reported that since RUTF makes children put on weight and become healthy, then they would like to have all their children eat the product. In addition to this, RUTF is readily available for purchase in the market going for as low as Ksh 30 hence people in the community were able to purchase and consume.	engagement of the key leaders who will help pass the information on importance of RUTF as a medicine and not food to the community
Lack of awareness on the admission criterion by some caretakers	Most caregivers were not happy when their children were rejected at the facility level for not meeting admission criteria despite CHV referral thus leading to a negative perception of the programme	Mobilize the entire community through engagement of the key leaders who will help pass the information on admission criteria to the community through Barazas , community dialogues Build the capacity of all CHWs through trainings and mentorship sessions on anthropometric measurement taking
CHWs not motivated	CHVs reported to have worked for long hours without incentives ...	Stimulate the CHWs to scale up active case finding in their respective villages through trainings , regular meetings and awarding system. Adjust the working hours for CHVs based on the analysis of the context

Main Boosters	Explanation	Recommendation
Awareness of malnutrition by both caretakers and other community members	Community members could identify malnutrition and even have local terms to explain the condition; <i>Nafagadara</i> ,	Need to be strengthened and focus on community leader sensitization forums
Appreciation of the program due to good treatment outcomes	This was reported in both SFP and OTP programmes with the community members and caretakers feeling that if it were not for the intervention lives could have been lost.	Scale up community engagement forums to pass on information and experience sharing sessions
Good communication and feedback by the MoH and partners	The community health workers, nurses, and nutritionists reiterated this. This was done through the OJT sessions, quarterly review meetings and facility in-charges meetings.	Scale up the supervision of the IMAM implementation and Involve all staff in the routine OJT sessions to ensure more capacity is build
Community awareness of IMAM programme	Continuous mobilization and screening at the community level has had a positive impact within the community in terms of awareness of the services that the MoH in collaboration	scale up mobilization and screening at community level

1. INTRODUCTION

1.1 GENERAL BACKGROUND

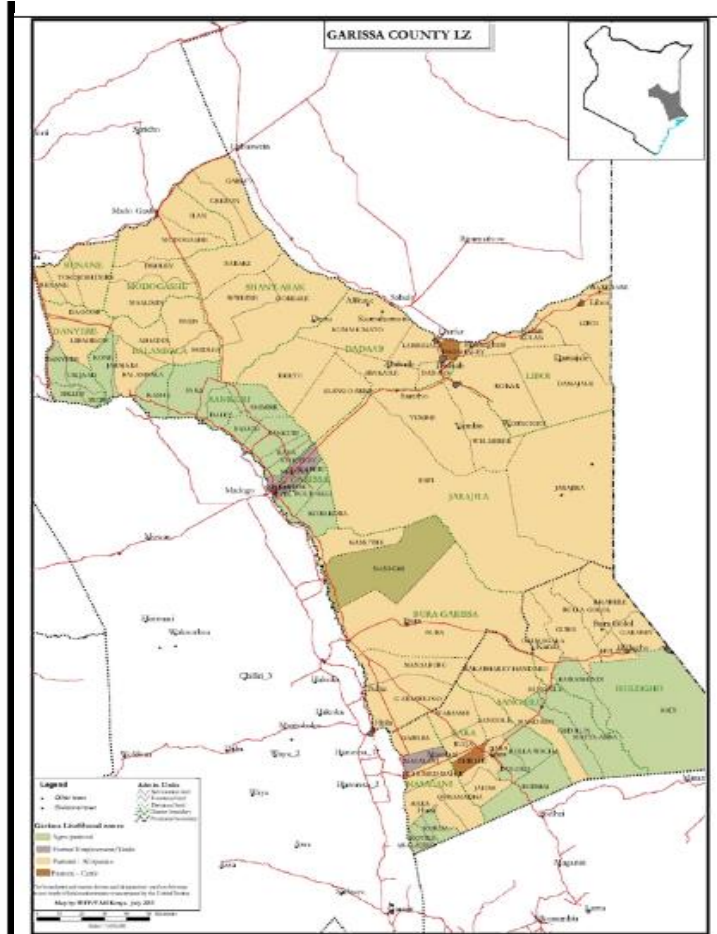
Garissa County is an administrative County in the former North Eastern Region of Kenya. Its capital and largest town is Garissa an area of about 45,720.2 km².

Garissa County is one of the three counties in the North Eastern Region of Kenya. It covers an area of 44,174.1Km² and lies between latitude 10 58'N and 20 1' S and longitude 380 34'E and 410 32'E. The county borders the Republic of Somalia to the east, Lamu County to the south, Tana River County to the west, Isiolo County to the North West and Wajir County to the north

The County is low lying, with altitudes ranging between 70m and 400m above sea level. The area is hot and dry much of the year, receiving scarce rainfall in the range of 150mm -300mm annually. Frequent droughts and unreliable rains do not favour agriculture activities and the growth of pasture for livestock rearing. Tana River runs along the western boundary of the county and is the only permanent natural source of water for Garissa town and the surrounding areas. Seasonal Rivers (laggas) provide water during the wet season for both human and livestock, although they greatly interfere with road transportation. The county also hosts the Boni forest, a section of which is the Boni National Reserve, a protected wildlife conservation area.

Garissa has six constituencies namely: Garissa Township, Ijara, Dadaab, Lagdera, Fafi and Balambala. Garissa County is mostly inhabited by ethnic Somalis.

The County has a population of 850,077², A male population of 408,037 and a female population of 442,040 (census 2009). Garissa County has a child rich population, where 0-14 year olds constitute 48% of the total population. This is due to high fertility rates among women as shown by the percentage household size of 4-6 members at 35%. The lower proportion of 0-4 year olds is due to high infant and under five mortality rates³.



² Projected 2009 Census

³ CIDP 2013 -2017

1.2 NUTRITIONAL SITUATION:

As projected during the short rains assessment in February 2017, nutrition situation deteriorated and the county's food security situation was classified as stressed (IPC phase 2) with a majority of the households having minimally adequate food consumption.

The SMART survey conducted in June 2017 results showed that nutrition situation in the County was **Critical** with a GAM WHZ 16.3% (13.2-20.0 95% C.I) and SAM 1.5% (0.9-2.5 95% C.I.) according to WHO classification. Simply **1 out of 7** children under-five in Garissa County was acutely malnourished.

The LRA report indicated the main factors that could have contributed to the nutrition situation include; decrease in food consumption resulting from high costs of food items in the markets and inadequate household stocks due to poor harvests realized in the previous season and livestock migration. The Coping Strategy Index (CSI) was also found to be relatively higher implying an increase in the frequency and the number of households employing consumption based coping strategies. The most commonly employed coping mechanisms over the period-included reliance on less preferred and or less expensive food, reduction in the number of meals and reduction in portion or size of meals

As per the SMART survey report ,the leading cases of morbidity for both children under five years and the general population in the counties were; Upper Respiratory Tract Infections (URTI), diarrhea, Pneumonia and fever.

Routine Vitamin A and immunization coverage as per DHIS was generally poor across all the clusters, with none of the county achieving the national target of 80 percent. This poor coverage was attributed to poor health seeking behavior. Other underlying factors that affect malnutrition within the cluster include inadequate maternal and childcare practices, low access to safe drinking water and poor hygiene and sanitation practices. It is projected that the situation is likely to deteriorate if the shocks continue.

1.3 HEALTH AND NUTRITION SERVICES:

In Garissa County, health and nutrition services are provided at both outreach sites and static health facilities. In total there are 85 health and nutrition facilities with only 73 facilities offering IMAM services and 125 outreach sites. In all the 85 health facilities, there are nurses, and community health extension workers (CHEWs) in some facilities with community Units, who are salaried by the government and mandated to provide all the health and nutrition services.

There are 21 health centers, 62 dispensaries, 1 nomadic clinic, 8 Sub-County hospitals and 1 county referral hospital. However there are currently 79 facilities which are functional with the remaining 6 closed due to insecurity, staff turnover but there are plans to operationalize the facilities soonest.

In all the IMAM sites there are community health volunteers (Community health workers) who are engaged in screening and mobilizing children under 5 and pregnant and lactating women. The CHVs are trained either through classroom or on-job trainings before commencing on any work in the field. Tools of trade include (MUAC tapes, tally sheets, medication for minor illnesses- fever and diarrhea) are provided to them in line with the community health strategy however there's high CHV turnover hence in most cases newly appointed CHVs either lack training or tools of trade as mentioned above.

Management of Malnutrition is guided by the adopted national IMAM guidelines 2009. According to the Guidelines, the admission criteria for **Stabilization Centre (SC): children with Severe Acute Malnutrition (SAM) and medical complications** - Children 6-59 months - WFH < -3 Z-score or MUAC < 115 mm and or presence of bilateral pitting oedema any grade (+, ++, +++), and - poor appetite.

For **Out-patient Therapeutic Programme (OTP): children with SAM without medical complications** - Children 6-59 months - WFH < -3 Z-score or MUAC < 115 mm and or - presence of bilateral pitting oedema +,++ and - good appetite no open skin lesions - children discharged from SC.

Admission criteria for Supplementary Feeding Programme (SFP): Moderate acute malnutrition (MAM) - Children 6-59 months - WFH <-2 Z-score and >-3 Z-score or MUAC >11.5cm - ≤12.5 cm - No bilateral pitting oedema - Children discharged from OTP.

Health workers do assessments at the facility level or at the community outreach sites. Community health workers/volunteers conduct assessments using MUAC at the community level and refer cases accordingly.

The MOH implements IMAM program with support from partners, who include UNICEF; providing ready to Use Therapeutic Food (RUTF) and technical assistance for SAM treatment, Kenya Red cross supports logistics for the distribution of supplies from central stores to peripheries and TDH provides technical support, woman kind and WFP supports in the delivery of MAM supplies.

1.4 Justification

Garissa County has not assessed IMAM coverage before; hence, the assessment was conducted to identify the boosters and Barriers in order to inform IMAM Service delivery. To determine effectiveness of the program in terms of coverage, to implement SQUEAC skills and Knowledge of the Tots trained in Wajir and build the capacity of the MOH in conducting SQUEAC assessments and In fulfillment of the SMART Survey recommendations to undertake a coverage survey in the county

1.5 OBJECTIVES

MAIN 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 Garissa County, using the Semi-quantitative evaluation of access and coverage (SQUEAC) methodology.

SPECIFIC OBJECTIVES

1. To determine coverage for IMAM
2. To identify boosters and barriers influencing IMAM program access and coverage
3. To develop feasible recommendations to improve IMAM program access and coverage

1.5 METHODOLOGY:

The SQUEAC (Semi-Quantitative Evaluation of Access and Coverage) method applied by design in three phases:

Stage 1: Analysis of routine program data to identify possible areas of low and high coverage and qualitative data collection from the target communities, caregivers and health staff and any other relevant data to help build the hypothesis on high and low coverage

Stage 2: Building the hypothesis and testing the hypothesis through a small area survey

Stage 3: Estimation of program coverage using Bayesian techniques

1.4 Challenges and limitations

Insecurity

Some areas were considered to be highly insecure such as Liboi, Hulugho etc. cases of attacks were reported during the assessment period in addition some roads were impassable hence teams could not reach to the areas. Insecurity also meant that supervision of the data collection teams was a challenge.

2.0 STAGE 1

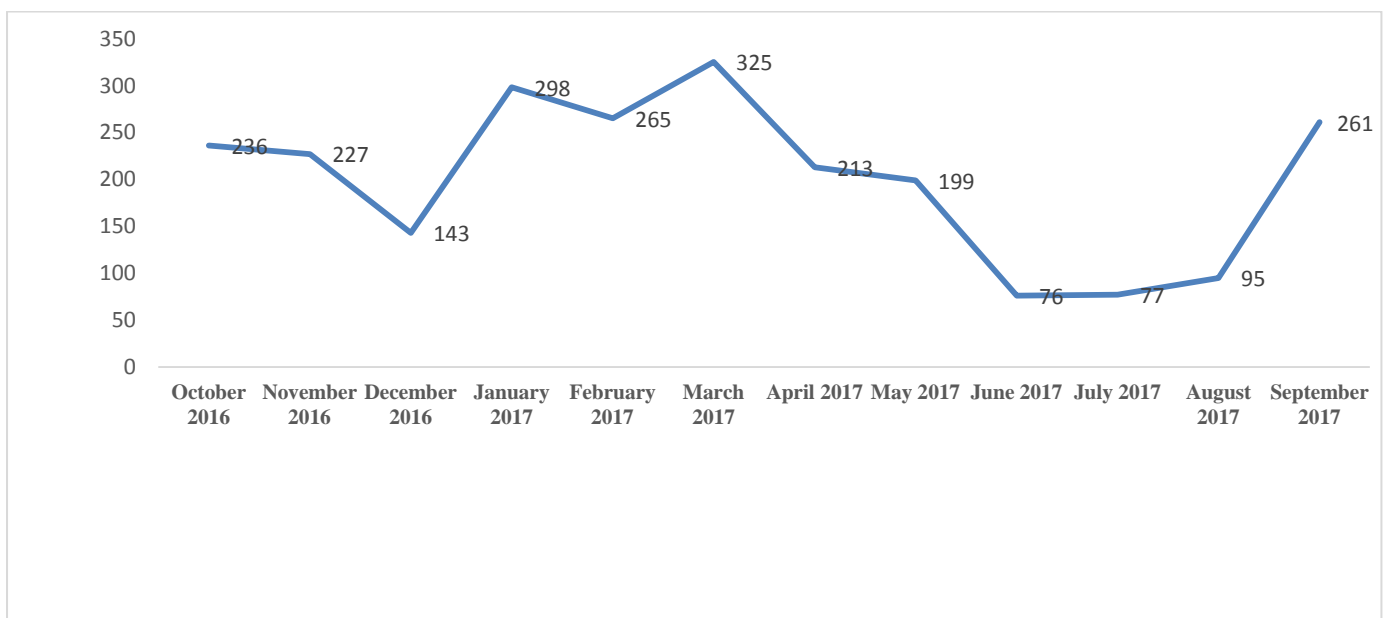
2.1. Quantitative data

This included assessment of routine program data for operational sites in the county from October 2016 to September 2017. These were inclusive of admissions by month (Figure 1), admissions by MUAC (Figure 2), and discharges by MUAC (Figure 3), length of stay (Figure 4).

2.1.1 Admission over time

The admission trends were assessed for the period October 2016 to September 2017 (Figure 1). The year 2016 started with a dip in admissions for December even as diarrhoea incidence was high at the time, admissions continued on a gradual upward trend until March 2017. This could be tied to the effects of the high cases of diarrhoea in the area with very high food prices and prolonged drought. This meant food might not have been readily accessible hence impacting on health and nutrition status. A steep decline from April 2017 onwards could be explained by the industrial nurses strike which led to closure of most facilities, however an incline is noted in August 2017 following an upsurge of outreach support from health and nutrition partners.

Fig 1 Garissa County OTP admissions Trends

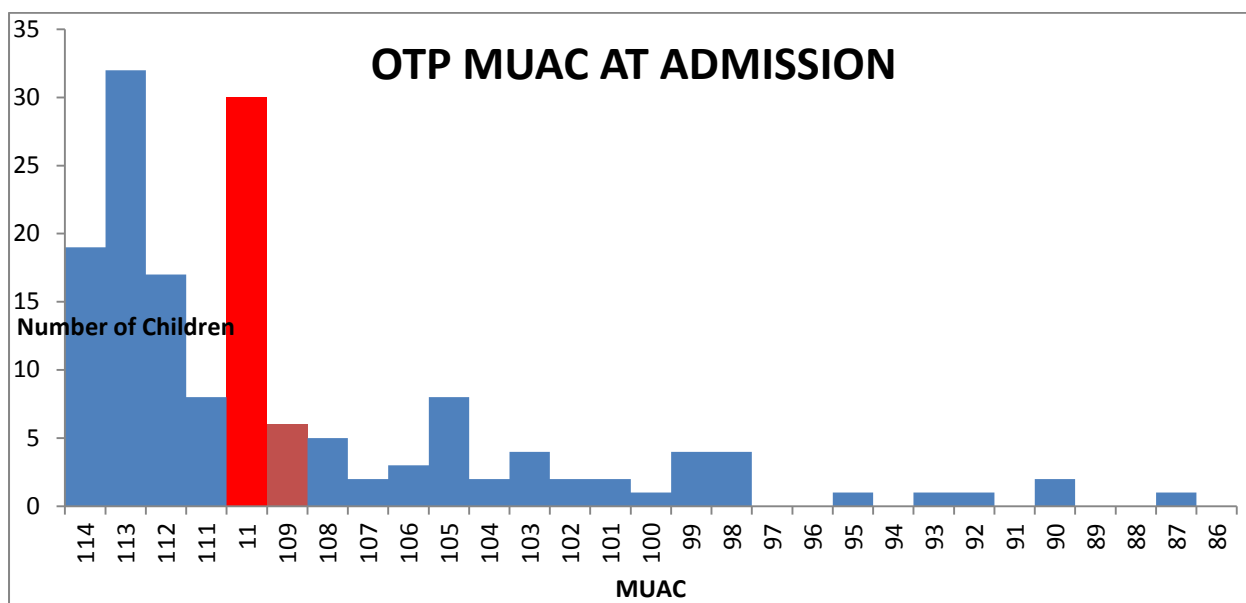


	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
Increase in food prices (Rice and ugali)		█			█				█	█		
Milk Availability	█			█	█					█	█	
Female Herding/ work	█				█				█		█	
Diarrhea	█				█		█					█
Malaria							█			█	█	
ARI	█		█				█					█
Drought	█			█	█			█			█	
Mass screening					█		█				█	
Stock out												

2.1.2 GARISSA COUNTY OTP MUAC AT ADMISSION

The median MUAC was 11.0cm as shown in figure 2 below, 11.0 cm is relatively near the discharge criteria (11.5cm), and this signified a number of admissions were found in time. Similarly, there was a long tail of low admissions and a few that were critical at 87mm, this was a sign of challenged SAM case finding.

Figure 1 : OTP Muac at Admission, Garissa County, Oct 2016 to September 2017

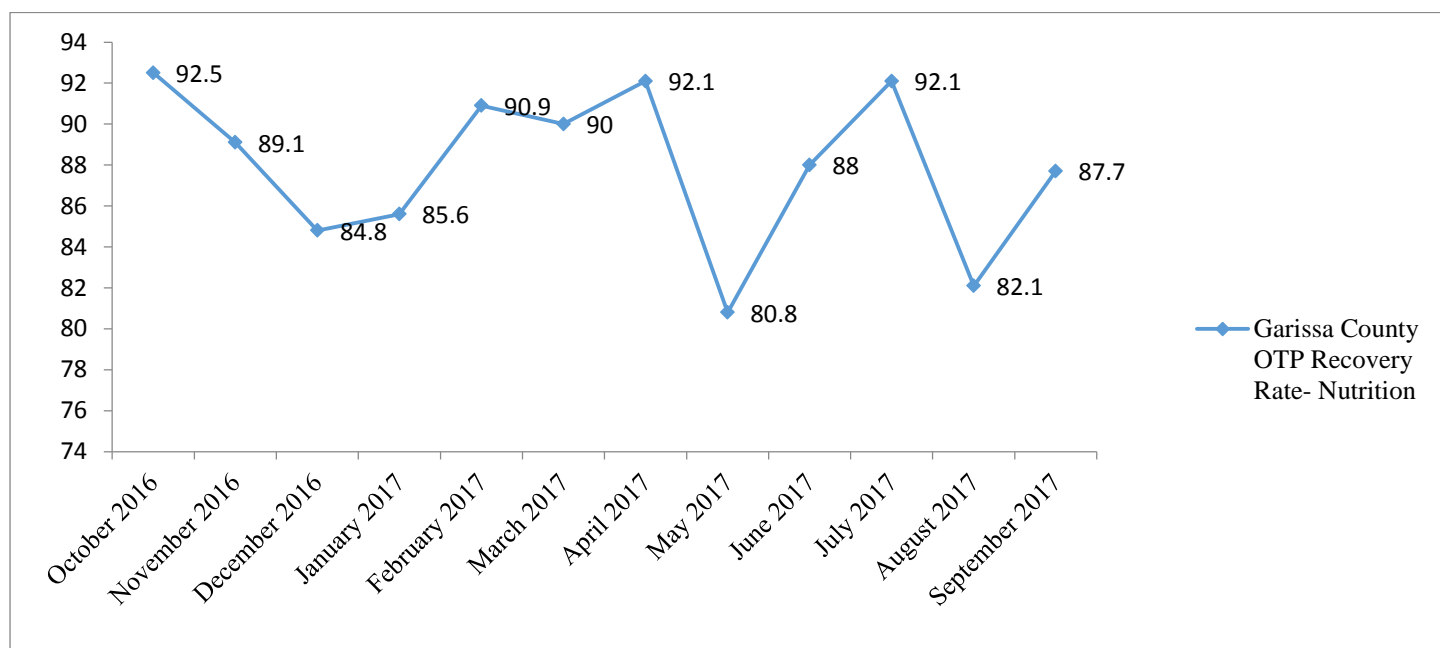


2.1.3 Discharge outcomes

The performance indicators for OTP: cure rate, defaulter rate and death rate, were presented in a graph against the seasonal calendar for comparison (Figure 3). The cured rate has been above the sphere standards of 75% all through the assessment period. As well as default and death rates have been generally below the sphere limit of 15% and 10% respectively.

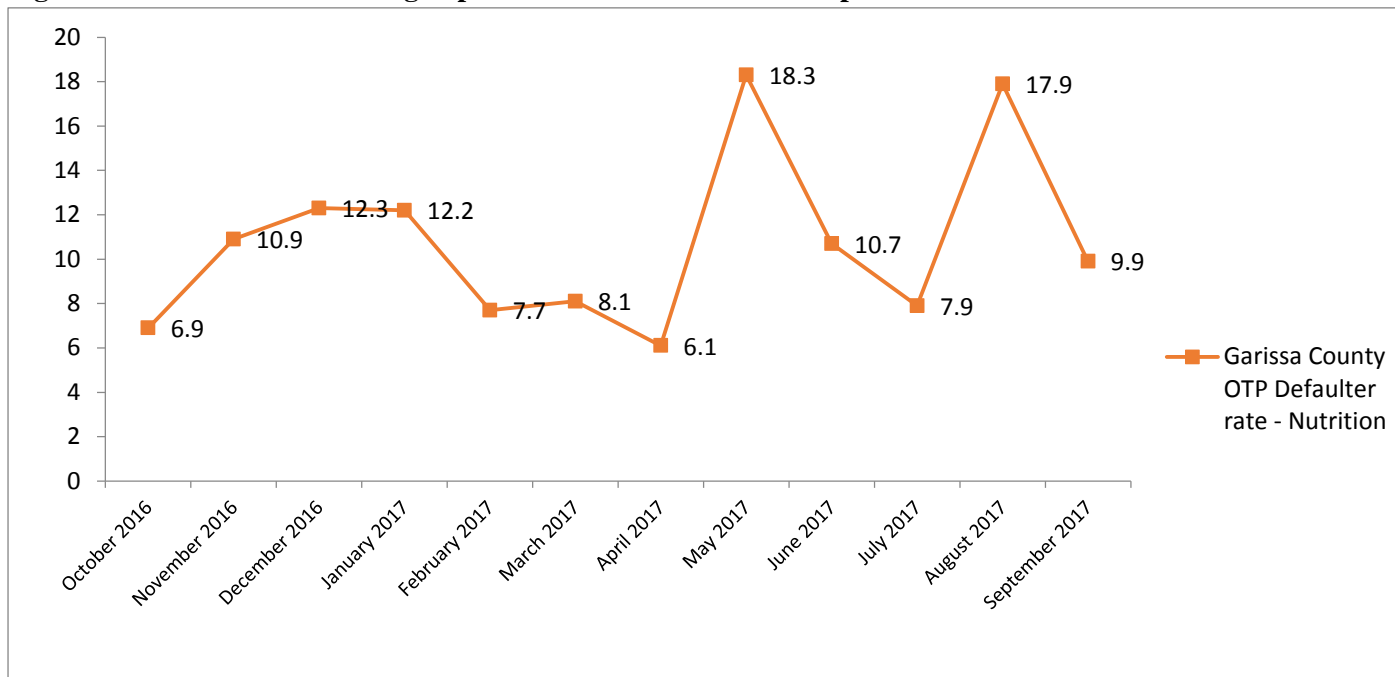
Recovery rates

Figure 3: Garissa County OTP Recovery Rate from October 2016 to Sept 2017



High default rate was noted in May and August 2017 as per figure 4 below. This could have been due to very hot and dry weather posing a challenge to those walking with the sick children outdoors or lack of prioritization of program by the caregivers, similarly others may have been in the hospital for malarial and ARI treatment due to the heightened incidence during the same period.

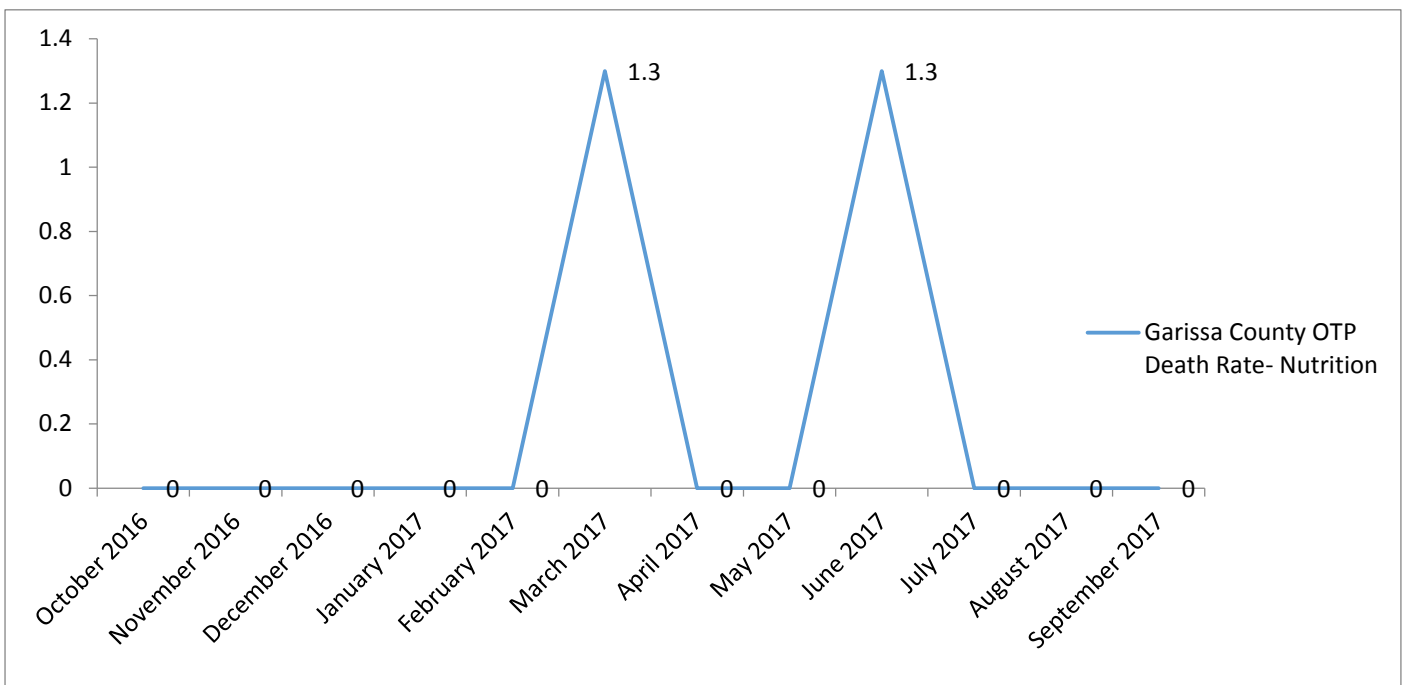
Figure 4: OTP defaulting patterns over time compared with seasonal event calendar



	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
Increase in food prices (Rice and ugali)		█	█	█					█	█	█	
Milk Availability	█	█		█	█	█				█	█	█
Female Herding/ work	█	█	█	█	█	█	█	█	█	█	█	█
Diarrhea	█	█	█	█	█	█	█	█				█
Malaria							█	█	█	█	█	█
ARI	█		█				█	█	█	█	█	█
Drought	█			█	█	█	█	█			█	█
Mass screening					█		█				█	
Stock out												

Death rates:

Figure 5 Garissa County OTP Death Rate from October 2016 to Sept 2017

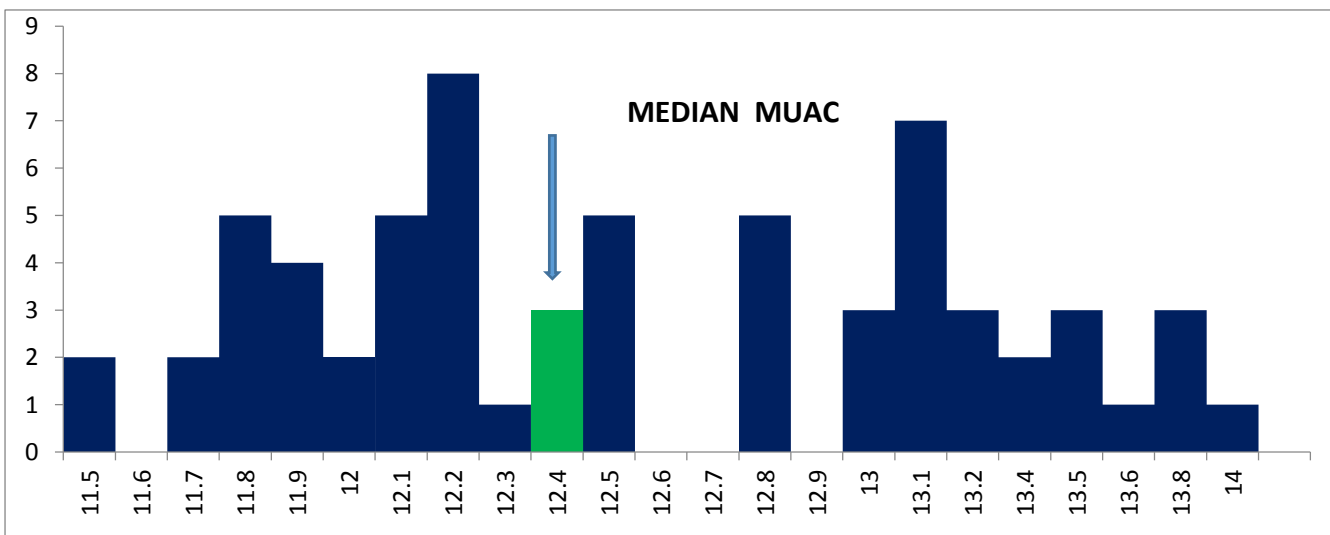


2.1.4 Discharge outcomes by MUAC

OTP MUAC at discharge cured

The Median MUAC at discharge is at 12.4 cm, which is indicative that children were discharged cured with a higher MUAC. Programmatically, this could also mean children were overstay in the program more than the recommended time i.e. more than 8 weeks, this could lead to fatigue by caregivers or cases of defaulting as also depicted in figure 7 below

Figure 6: OTP MUAC at discharge, Garissa County Oct 2016 to September 2017



OTP MUAC AT DEFAULT

The MUAC median at defaulting was 127 mm (in Red). That means 50% of the children by the time they were defaulting from the program were already cured based on the defaulting MUAC of 127 mm. This means the program has long length of stay, which might contribute to the defaulting.

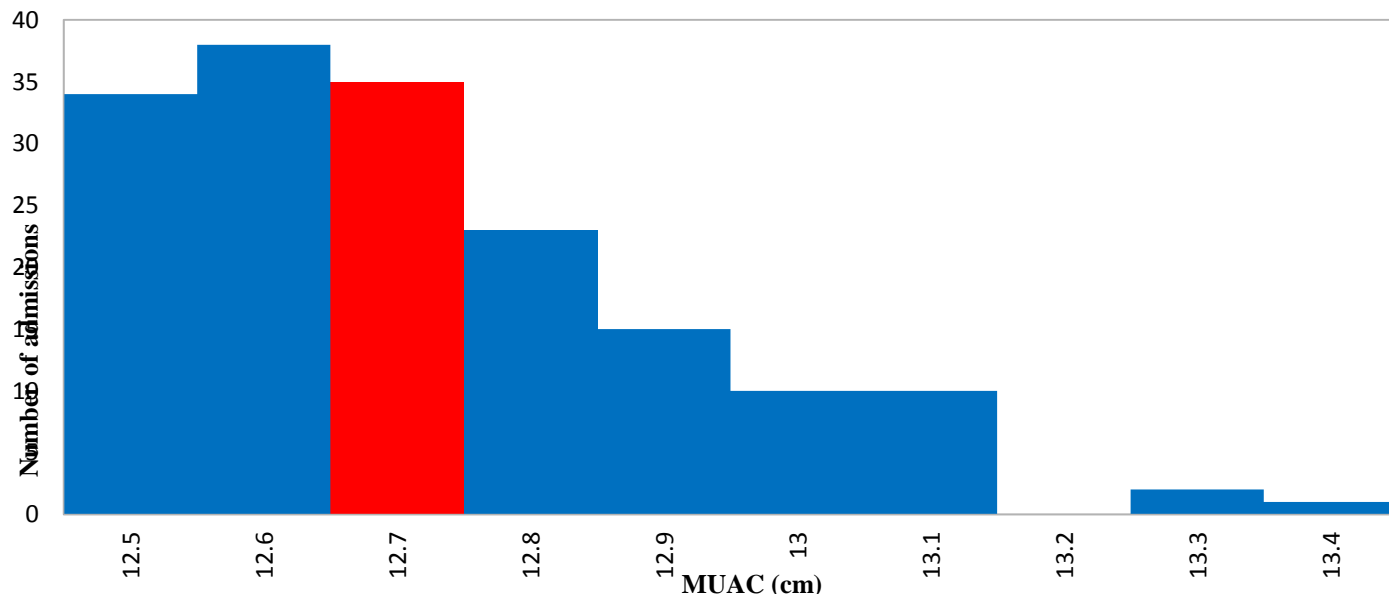


Figure 7: OTP MUAC at default before discharge, Garissa County, KENYA.

OTP length of stay in weeks

The **length of stay before recovery** provides helpful insight into the duration of the treatment episode (e.g. the time from admission to discharge).

In figure 8 below the OTP median length of stay (LoS) for children cured in the County was 8 weeks. That means that 50% of those cured stayed beyond 7 weeks with some staying up to more than 16 weeks. This could be partly attributed to data quality in that there was no tracking of absenteeism with some of the children who could have been discharged as defaulters not being discharged.

The national IMAM guidelines define typical LoS should be between 30-40 days (4 to 6 weeks) to a maximum of 8 weeks. In this case the maximum length of stay was >16 week

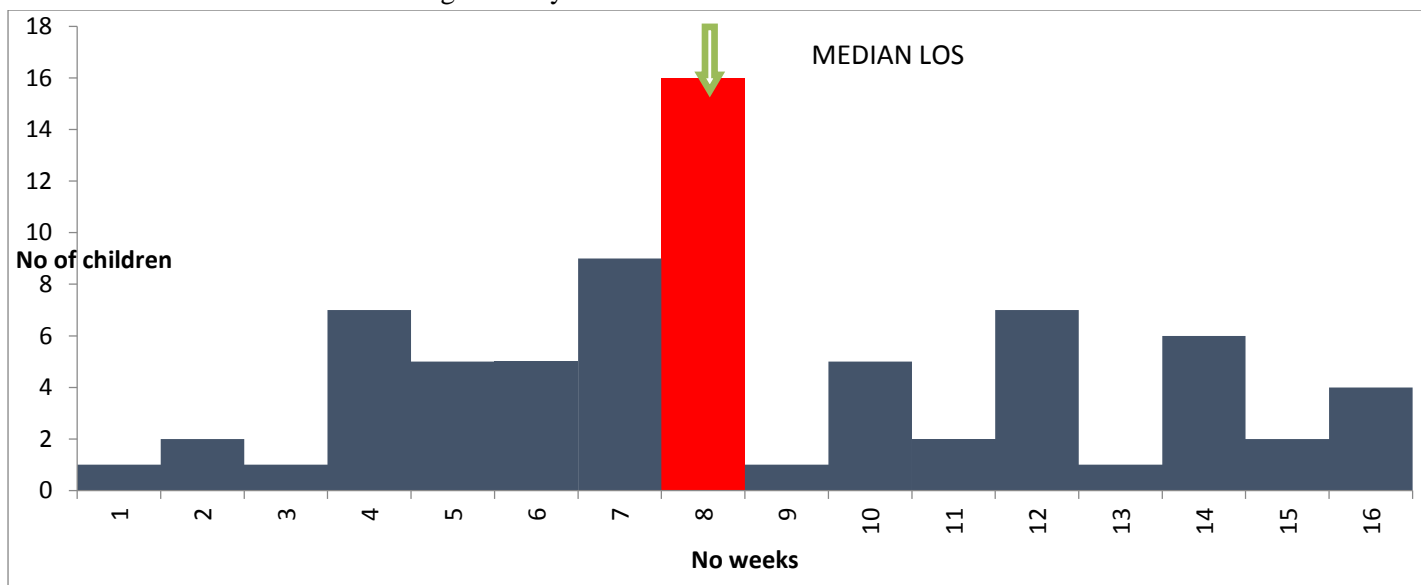


Figure 8: OTP LOS before discharge, Garissa County

2.2 Qualitative data

Information on factors affecting program coverage in Garissa County was collected from different individuals and community groups. Interviews were conducted among members of the community who interact directly or indirectly with OTP. The barrier, boosters and questions (BBQ) tool was used to necessitate areas for further clarification. The

following methods to gather information were used: Focus Group Discussions, Semi-structured interviews, structured interviews, Case studies, Observation.

The different people encountered and the various methods used allowed the investigation team to collect information about the barriers and boosters on IMAM program coverage. The data gathered was recorded on a daily basis using the **BBQ (Barriers, Boosters and Questions)** tool. The findings from the quantitative and qualitative analysis were triangulated to set the knowledge on IMAM program barriers and boosters in Garissa County.

2.2.1 Barriers and boosters

The program barriers and boosters were summarized with the evidence realized throughout the assessment (Table 1 & 2).

Table 1: Triangulated boosters that affect program coverage in Garissa

	Boosters	Explanation	Sources
	Awareness of malnutrition by both caretakers and other community members	Due to the continuous presence of programmes that educate the masses on health and nutrition issues, the community members could identify malnutrition and even have local terms to explain the condition. Self-referral cases were noted	Community leaders, caregivers, OTP caregivers
	Community leader understand the program	The respondents referred to malnutrition using various local terms, out of which the outstanding were <i>nafaqadaro</i> or <i>macluul</i> . Marasmus was referred to as <i>caato</i> , denoting skinny and weak while Kwashiorkor was referred to as <i>cago barar</i> and <i>Calool weynad</i> implying oedema and big belly respectively	Community leader (village elder), caregivers, CHWs
5	Positive opinion of OTP Appreciation of the program due to good treatment outcomes:	Mothers of beneficiaries said they brought children to OTP since they saw their children improve after the RUTF and medicine. caretakers feeling that if it were not for the intervention of the program lives could have been lost	Nutrition officer, CHWs, Program staff, caregivers (both male and female), Sheikhs
	Good communication and feedback by the MoH	This was marked a plus as the community health workers, nurses, and nutritionists reiterated this. Mostly communication was done through the OJT sessions, quarterly review meetings and facility in-charges meetings.	Nutrition officer, CHWs, Program staff
6	Screening is done at the OTP site	Respondents stated that all children who visit the OTP site undergo assessment with MUAC, W/H Z score and checked for bilateral pitting oedema.	Nutrition officer, CHWs, OTP team leaders, Program staff
7	Community mobilisation by sheikhs	Chief gets health related information from MoH and relays it to the community through Barazas that are attended by sheikhs and village elders who pass the information through mosques. Village elders hold meetings with different contact members of community to pass the information. These respondents stated that the community did not view children with <i>nafaqadaro</i> negatively.	Sheikh, CHWs, Program staff, community mobilizers (volunteers)

Table 2: Triangulated barriers that affect program coverage in Garissa

Barriers	Explanation	Sources
----------	-------------	---------

1	Distance	Some caregivers were forced to walk for more than 5 km to access the services from the OTP site. As reported by the staff and CHWs, inaccessibility of some regions due to distance, terrain, and insecurity made it hard for the OTP staff to conduct mobilization or follow up on beneficiaries.	Program staff, Caregivers, observation, CHW
2	Inconsistencies of supplies (both RUTF and RUSF):	Caretakers and some gatekeepers reported that sometimes there was pipeline breakage for RUTF and RUSF meaning that sometimes the mothers came for follow up and there were no supplies. This could demotivate the mothers, which could lead to defaulting. On follow up the health workers reported that there was stock outs in the course of the previous year.	Program staff, Caregivers, volunteers
3	Inadequate OTP staffing	Some health facilities have only one nurse operating them. This means that there are supposed provide the entire primary health care package and for one person it is quite a toll order. As well when they go on leave it means that no one then is left providing services (only CHWs) and therefore the quality of care is not guaranteed.	Program staff, observation, CHWs
5	Late treatment seeking	OTP mothers established that mothers have to have the permission of the father to seek medical attention and mostly by the time they reach the OTP site or the SC, the child was already severely malnourished and possibly with complications. In tandem, there were some late admissions by MUAC (Figure 3).	Program staff, caregivers, CHWs, Nurses in SC,
6	Long queues at the OTP sites	The long queues for the services were quite overwhelming for some caregivers. Mothers of beneficiaries reported this as a major challenge they face when coming for OTP	Program staff, Community volunteers, caregivers,
7	Opportunity cost	Caregivers, especially mothers, said that they would rather take care of their children and attend to the family needs instead of spending several hours at the OTP. Caregivers of beneficiaries stated that defaulting would be high among mothers who hailed from furthest villages and had no one else to care of their other children.	Program staff, community volunteers, CHWs, Village elders, caregivers of OTP beneficiaries
11	RUTF is shared amongst children within the household	Caretakers and community members said that since RUTF makes children put on weight and become healthy, then they would like to have all their children eat the product. In addition to this, RUTF is readily available for purchase in the market going for as low as Kshs 30 hence people in the community were able to purchase and consume	Chws , caretakers ,
12	Long stay in OTP	The median length of stay for those cured through OTP was 8 weeks, however some cases stayed for up to 16 weeks, this was partly attributed to data quality in that there was no tracking of absenteeism with some of the children who could have been discharged as defaulters not being discharged.	Program data, Program staff

3.0 STAGE 2:

Evidence from stage 1 helped identify areas within the intervention zone where coverage was likely to be either satisfactory or unsatisfactory. This information was used to formulate hypotheses about coverage that were tested.

A hypothesis was developed from the evidence that: “There is low coverage in villages far away from the facilities and high coverage in villages near health facilities” this was because:

- 1 Defaulting was noted in villages away from the health facilities in comparison to those that were near the health facilities. Qualitative data showed that the main cause could be distance.
- 2 An analysis of admissions by villages showed some villages had higher admissions than others, hence portraying a probable spatial distribution
- 3 Perceived distance from the OTP site suggested there could be fewer admissions in villages far from the OTP site.
- 4 Mapping of outreaches showed that they are conducted once / twice in a month and there's screening and referral of identified malnourished cases to the nearest OTP site

A small study was employed to test the hypothesis.

3.1 Methodology

To test this hypothesis, a small study was carried out in 24 villages 12 villages perceived to be of high coverage (based on close proximity (<5km) to the health facilities) and 12 villages perceived to be of low coverage (>5km to the health facilities). The 24 villages were randomly selected from all the 7 Sub counties and exhaustive Case finding was done to all the selected villages for 2 days. Information on perceived distance from the facility was also collected.

3.2 HIGH AND LOW COVERAGE AREAS HYPOTHESIS TESTING THROUGH SMALL-AREA SURVEYS

The small-area survey method was used to test the assumption of geographical heterogeneity of coverage. A number of Villages (half of them in which coverage is potentially satisfactory and half in which coverage is potentially unsatisfactory) were selected taking into account the criteria identified to be the most relevant according to the findings from the previous stage.

Cases were searched using the **House-to-House** method.

The **case definition** was "all children aged 6-59 months with the following characteristics: MUAC <115 mm and/or presence of bilateral oedema, or who were currently in the OTP program for the treatment of SAM".

Throughout the small-area survey, two different questionnaires were administered to all mothers or caretakers of the cases detected:

- The first one to covered cases (both SAM and recovering cases currently admitted in the program) – in order to find out if they were former beneficiaries of the program as well as to understand how they were referred to the program;
- The second one to the non-covered SAM cases – in order to further understand the reasons for these children had not received treatment,(Questionnaires were administered, See Annex 4) as this allows for the identification of barriers to access.

All “non-covered” children found (also MAM) during the study were referred to OTP-SFP centres for treatment (see Annex 5)

Analysis of the results was done using **LQAS (Lot Quality Assurance Sampling)** in order to obtain a classification of coverage compared to a specific threshold. The value was set at 40% as the SPHERE minimum standard for rural contexts (50%) was considered very unlikely based on the information collected during stage 1 and discussions with the team.

The number of cases found and the number of cases covered was examined (see annex 2 & 3 for form to gather the data in the field):

- If the number of cases covered was higher than the threshold value (d), then coverage was classified as satisfactory (coverage meets or exceeded the standard).
- If the number of cases covered was lower than the threshold value (d), then coverage was classified as unsatisfactory (coverage did not meet, neither exceeded the standard).

The decision rule was calculated using the following formula:

The Lot Quality Assurance Sampling (**LQAS**) classification technique $d = \lceil n \times p/100 \rceil$ was used to confirm or reject the hypothesis.

Where, **d** =decision rule, **n**= total number of respondents, **p**= expected awareness threshold (in this case, 40% being a rural area). Awareness was to be classified as high if the number of caregivers aware of the program was greater than the decision rule (d), if the number aware was less than the decision rule then awareness was to be classified as low:

Table 3: Analysis and interpretation of the small study results

Villages near the OTP site	LQAS decision rule	Conclusion
Coverage target	40%	n=21 (13 SAM cases were found); 10 SAM cases were in OTP Program and 3 were not covered .Since $18 > 8$ » <i>the hypothesis of high coverage area was confirmed. (18 = Total SAM covered and Recovering)</i> .The hypothesis, “There is low coverage in villages far away from the facilities and high coverage in villages near health facilities “was thus confirmed as coverage was confirmed to be high.
Total sample size	40	
Decision Rule	$d = \left\lceil 21 \times \frac{40}{100} \right\rceil = 8$	
Number in OTP	18	
Villages far from the OTP site	LQAS decision rule	Conclusion
Awareness target	50%	n=18 (7 SAM cases were found); 5 SAM cases were covered in OTP program and 2 cases were not covered Since $2 < 7$ the hypothesis of low coverage is rejected. The hypothesis, “There is low coverage in villages far away from the facilities and high coverage in villages near health facilities” was thus rejected in areas of low coverage
Total sample size	40	
Decision Rule	$d = \left\lceil 18 \times \frac{40}{100} \right\rceil = 7$	
Number covered in OTP	2	

Results from analysis of cases found as well as all the information obtained by the questionnaires of covered and non-covered cases, were added and triangulated with all the barriers and boosters previously identified to complete the global knowledge about factors influencing program coverage.

3.3 Prior formation

The Prior

The prior was constructed by combining the results from stages 1 and 2, that is: routine program data, qualitative data and all relevant findings from the small-area and small sample surveys. The prior was the result of combining four modes:

The weighted and un-weighted barriers and boosters as well as the histogram prior were all used to calculate the prior mode

3.3.1 The Simple BBQ

The simple BBQ is the first and simplest approach to calculating the prior. A uniform score of 5 points was attributed to each element (either a barrier or booster). The total booster and total barrier scores were summed. The total booster score was then added to the minimum possible coverage (0%) and the total barrier score was subtracted from the maximal possible coverage (100%). The coverage estimate was calculated by taking the mean of these two percentages.

3.3.2 Weighted Barriers and Boosters

Scores ranging from 1 (weak) to 5 (strong) were applied to all barriers and boosters depending (triangulated evidence) on how much effect was perceived to inflict on program coverage (Table 5). The total sum of the boosters was added to the lowest possible coverage. The weighted prior was thus $(0 + 28\%) + (100\% - 45\%)/2 = 41.5\%$

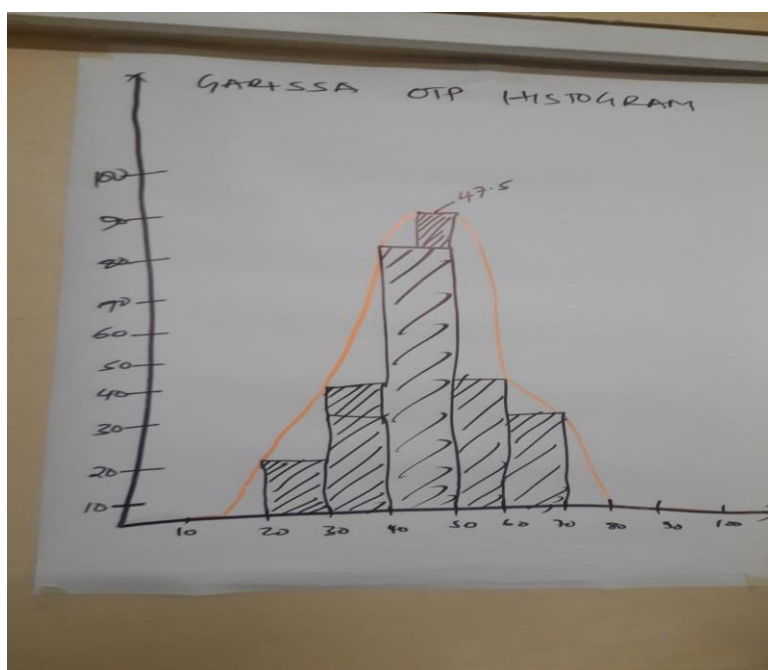
Table 4: Weighted OTP barriers and boosters

Boosters	Score weight
Awareness about malnutrition and malnutrition signs by community	1
Identification by CHV	2
Identification by health facility staff	3
Appreciation of the service	3
Accessibility/availability of service	3
Flexibility in OTP outside OTP day (if the mother didn't come the OTP day)	4
Health seeking behaviour	2
Capacity building of the staff	2
Capacity of the CHV	2
Supplies and commodities/ Reporting tools	3
Existence Of functional CU	3
The Chew Has Team Work With Other Staffs	2
Availability Of Motorbike	1
Awareness of the service	3
Stigmatization of malnutrition	4
Referral/transfer & Follow up strategy	2
Retention strategy	2
Communication between key actors (HW-CHV-NGO)	2
BARRIERS	WEIGHTED SCORE
Does not know signs of malnutrition	3
Accessibility and availability of the service	4
Opportunity cost (mother busy)	4
Deficit of the program	3
Level of activity of the CHV	2
Appreciation of the service	2
Health seeking behaviour	2

Capacity building staff	3
Workload health worker	4
Stock out/Reporting tools	4
Awareness of Programme by the community	4
Awareness of Programme by the service provider	3
Retention strategy	3
Communication system with community	2
Referral/transfer & follow up strategy	3

3.3.3. The histogram

Based on interviews with program staff and routine data, it is believed that the lowest coverage is around 20% and the highest possible coverage at around 70%. By plotting the belief-curve of coverage, the coverage estimate was thought to be approximately 47.5% as shown below **figure 9**



3.3.4 PRIORI PROBABILITY

Next, using the equations presented in methodology 3, the shape parameters ^a prior and ^b prior and were calculated with a prior mode of 45.6% about which the range of uncertainty was 19% and 72% ^a Prior Was 14.2 and ^b prior was 16.9. The distribution of the prior probability density has a mode at 45.6% and a 95% “credible interval” (i.e. the Bayesian equivalent of the 95% confidence interval) as shown in **figure 10** below

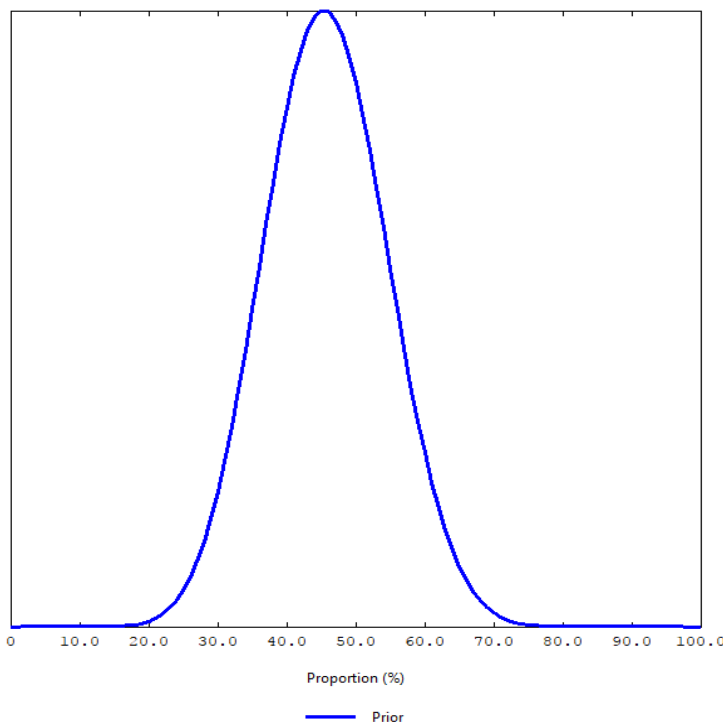
The priori probability was thus produced and then described as a curve using the Bayes Calculator. The parameters of the shape of the curve (the distribution of the *Prior Probability*), α and β , were calculated using a degree of certainty of $\pm 20\%$ and introducing the mode value of *Prior Probability* in the formulas below. The mode corresponds to the value of *Prior Probability* expressed as a proportion.

$$\mu = \frac{\text{minimum} + 4 \times \text{mode} + \text{maximum}}{6}$$

$$\sigma = \frac{\text{maximum} - \text{minimum}}{6}$$

$$\alpha_{Prior} = \mu \times \left(\frac{\mu \times (1 - \mu)}{\sigma^2} - 1 \right)$$

$$\beta_{Prior} = (1 - \mu) \times \left(\frac{\mu \times (1 - \mu)}{\sigma^2} - 1 \right)$$



Prior α 14.2

Prior β 16.9

Precision % 12

Suggested sample size : 35

Use survey data

Denominator 10

Numerator 5

Estimate
** Not Available **

z-test
** Not Available **

Reset

Figure 10: Prior probability for OTP Garissa County 2017

Table 5: OTP program prior probability mode calculation

	BOOSTER	BARRIERS		RESULTS IN %
HISTOGRAM				47.5%
SIMPLE BBQ	30	49	$(0+30) = 30$ $(100-49) = 51$ $30+51 = 81/2 = 40.5$	40.5%
WEIGHTED BBQ	44	46	$(0+44) = 44$ $(100-46) = 54$ $44+54 = 98/2 = 49$	49%
AVERAGE PRIOR			$47.5+40.5+49 = 137/3$	45.6%

STAGE 3

4.0 Building the prior and conducting wide area survey to estimate overall coverage.

The goal of stage three is to calculate the overall coverage estimate. This is done using a Bayesian statistical technique called “beta-binomial conjugate analysis.” Conjugate analysis begins with a beta distributed, probability density called the “prior.” The prior is then combined with a binomial distributed, likelihood function called the “likelihood.” The likelihood was determined through a wide-area coverage survey that was conducted across the entire program catchment area; the mode of the likelihood was, in fact, the point coverage estimate from the survey. Because the prior and the likelihood are mathematically expressed in similar ways (as probability distributions) they can be combined through conjugate analysis, the result of which is the posterior probability density—the “posterior.” The mode of the posterior is the final coverage estimate.

4.1 Sample size and precision;

A sample size of 35 SAM cases was utilized as suggested by use of Bayes SQUEAC calculator when the precision was 12% and the Alpha & Beta (14.2, 16.9). where: n=number of children with SAM to be sampled (35), average village population 1587; percentage population of children 6-59 months (18% under-five population of which 90% approximately are between 6 and 59 months) ; % prevalence of SAM 0.5%

$$n \text{ villages} = \frac{n}{\text{average village population} \times \% \text{population } 6 - 59m \times \% \text{SAM prevalence}}$$
$$= 42 \text{ villages}$$

42 villages were randomly selected.

4.2 Building the likelihood

The likelihood

A wide-area “likelihood survey” was conducted over the entire program catchment area to calculate the coverage estimate.

The active and adaptive case-finding methodology was used to identify the SAM cases.

The case definition used for coverage survey was defined as “a child matching the admission criteria of the programme”. The admission criteria of the Kenyan IMAM programme is children aged between 6 and 59 months with at least one of the following criteria: 1) a MUAC of <115 mm and/or 2) W/H < - 3 Z-scores and / or 3) bilateral pitting Oedema

A simple structured interview questionnaire was used to caregivers of non-covered cases for SAM (Annex 4)

1. Mode: prior value expressed as a proportion.

2. α et β : shape parameters of the prior.

3. Precision: desired precision. In the present case the precision used was 0.12 (12%).

4. SAM prevalence: 0.5% was chosen the prevalence in the last SMART survey in June 2017 (for MUAC admission criteria) in Garissa County.

5. Average village population: 1587 population in Garissa County (based on County health office data, which is projected from the 1999 census since the 2009 data

6. Population between 6 and 59 months: approximately 90% of under five

4.3 Data collection

Six teams each carried out this exercise comprising of 2 MOH staffs and one partner staff. All the 42 villages were visited in 3 days, whereby exhaustive screening was done in each village. The village heads gave permission for data collection as while also allocating the teams a village guide for the whole exercise. The tools used were a tally sheet, MUAC referral slips for referral of non-covered cases (both OTP and SFP referrals) and a standards questionnaire, which were administered to all non-covered cases.

The findings of the wide area survey are as analyzed below;

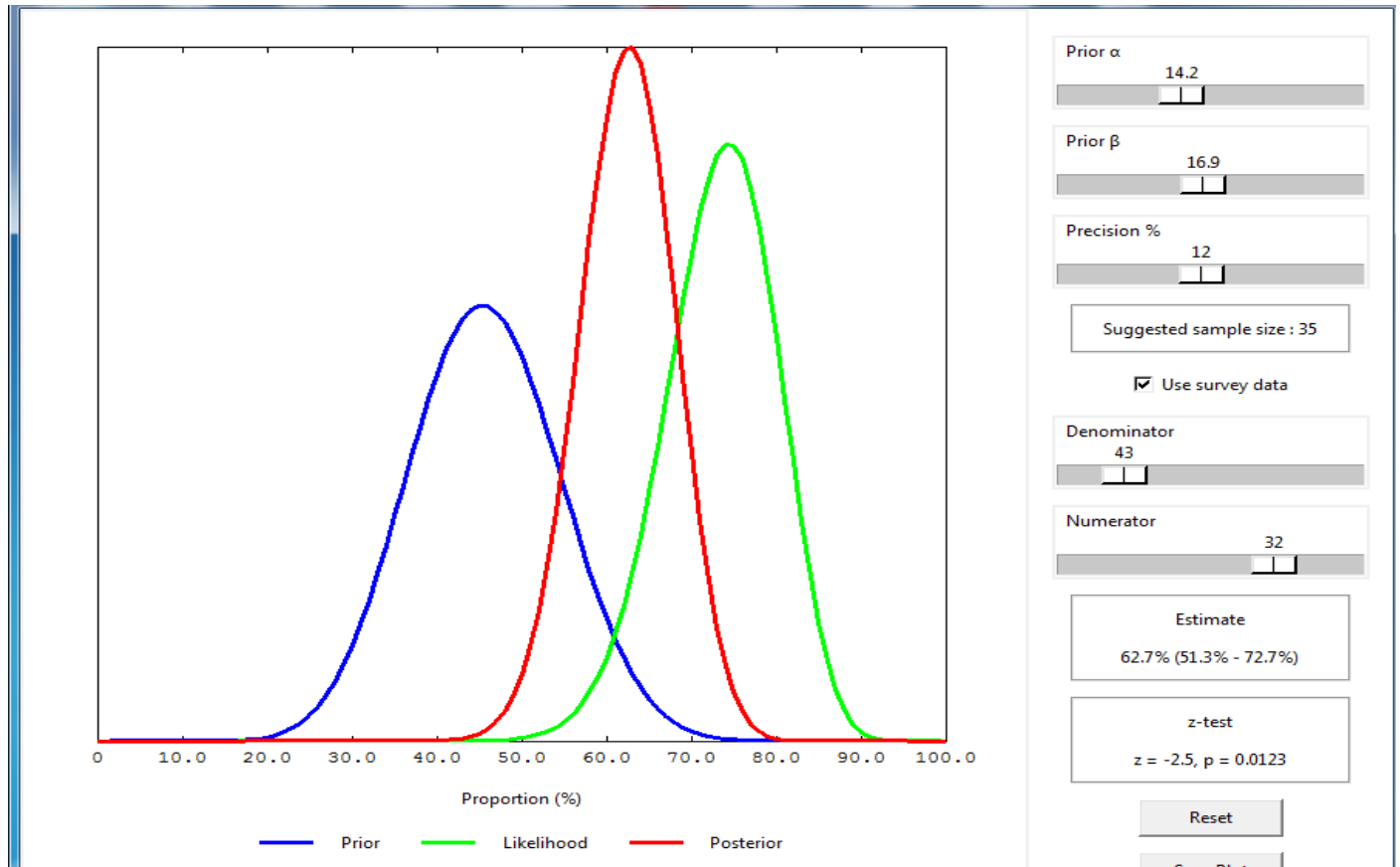


Figure 2: Coverage estimate Results for wide area survey

Table 6 :results for wide are survey

SAM Cases in Program	17
SAM case not in Program	10
Total Active SAM cases	7
Recovering Cases in Program	22
Total Cases	56
Single Coverage	62.7%

$$\text{Single Coverage} = \frac{(C_i + R_i)}{(C_i + R_i + C_{out} + R_{out})}$$

Where

Ri= Recovering cases in program

Ci= Active cases in program

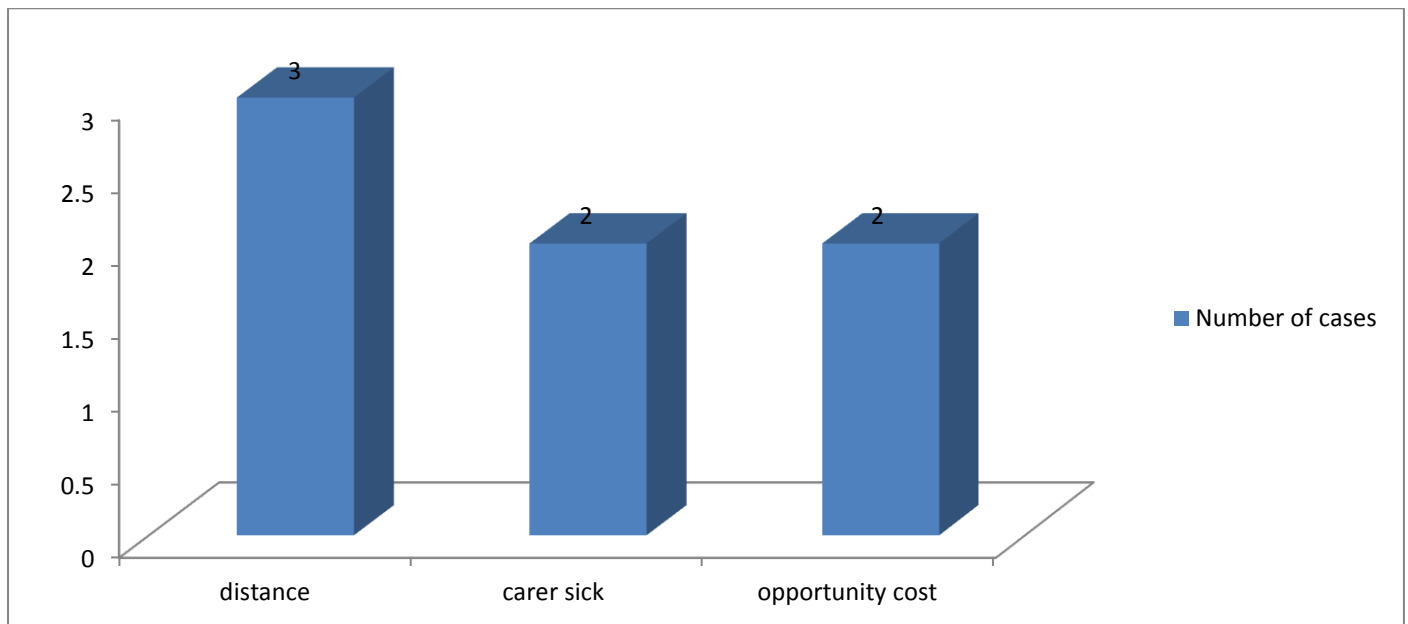
Rout= Recovering cases out of program

Cout Active cases in Program

The overall coverage of the program was **62.7% (51.3%- 72.7%)**.

4.1.4 Reasons for non-attendance.

A standard questionnaire was administered to all non-covered cases to get the reasons for not being in the program. The figure 12 below shows the reasons the caregivers gave for their children not being in program



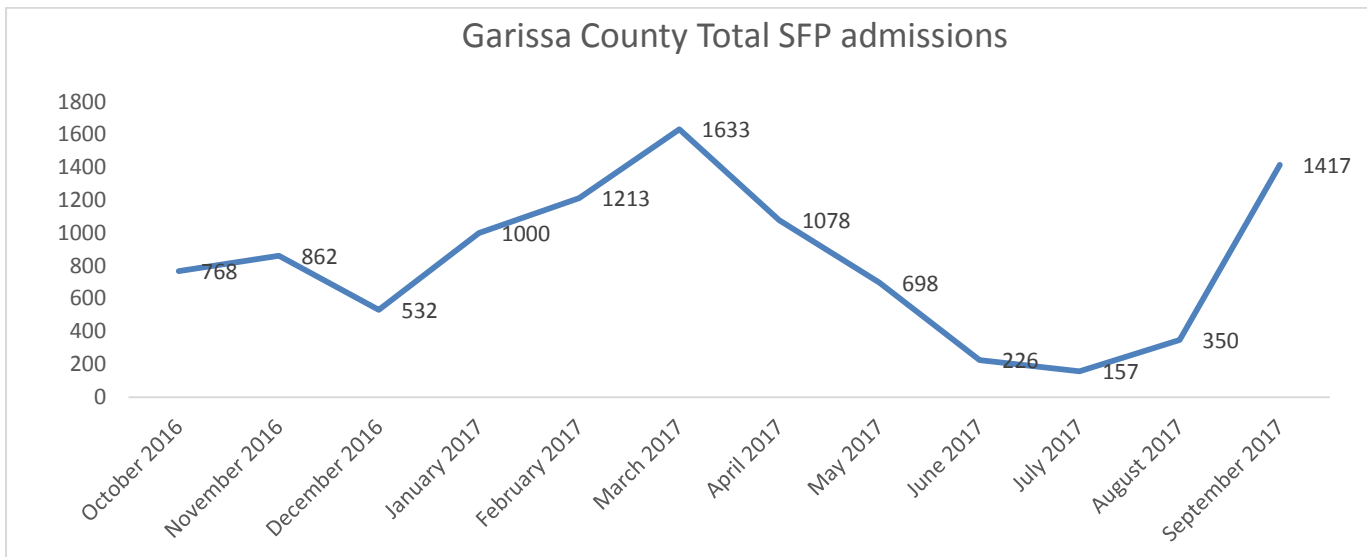
The predominant reason was walking distance from the OTP to the respondents' households being far and the responsibility to care for other children or other household chores

5.0 Supplementary feeding program.

5.1 SFP admission patterns over time compared with seasonal event calendar

The SFP admission for Garissa County was analysed from October 2016 to September 2017 as shown in figure 13 spikes are noted from the month of January through March 2017 and again from August through September, this could partly be due to mass MUAC screening conducted during the same period. Similarly, more admissions were also noted during the drought season indicative of a stressed situation. The drop in the number of admissions from April to July could be related to movements in search of pasture in the pastoral areas. There are movements back to the areas in September in anticipation of the short rains hence the high admissions in the month of September.

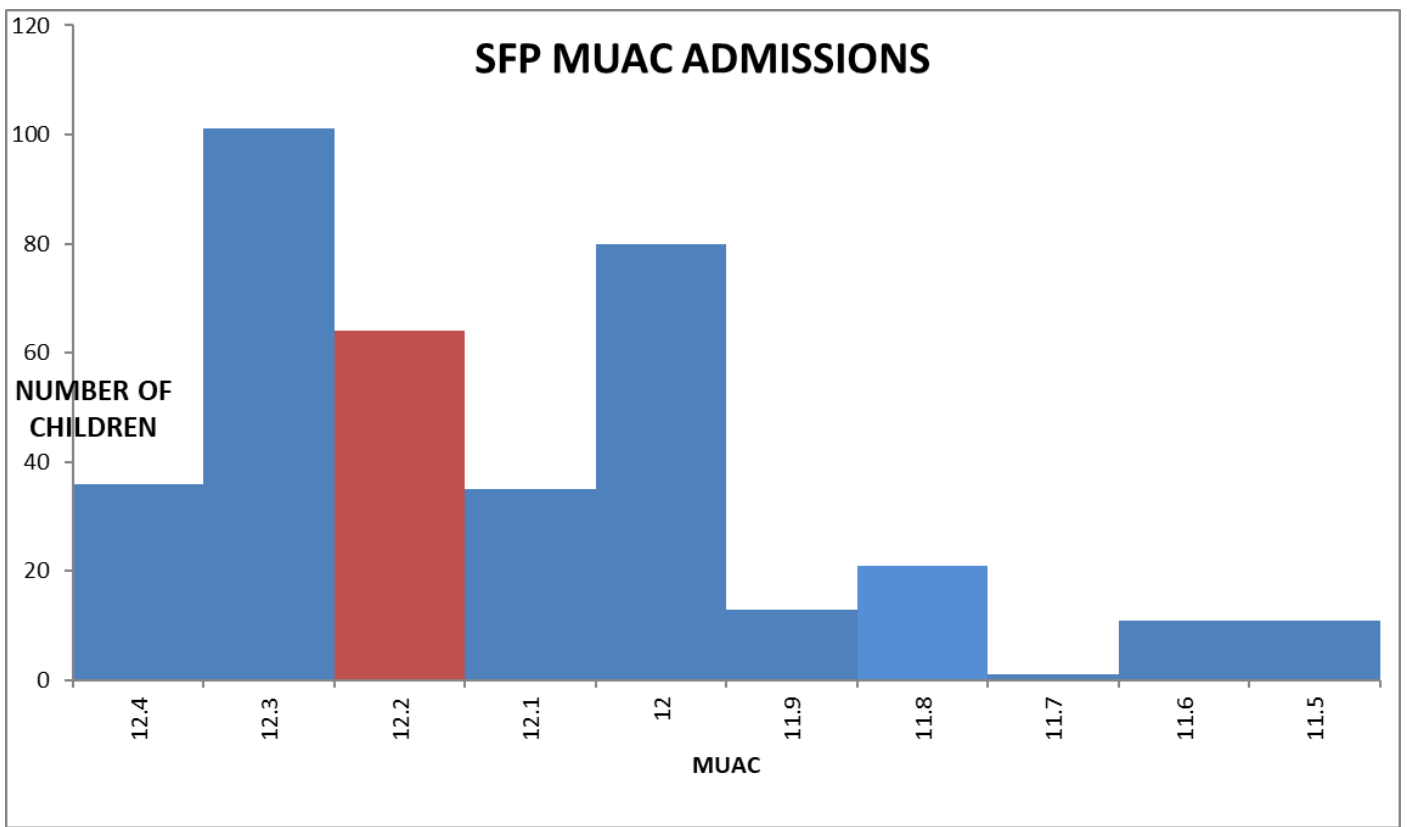
Garissa County Total SFP admissions



	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
Increase in food prices (Rice and ugali)		█	█	█					█	█	█	
Milk Availability	█	█		█	█	█				█	█	█
Female Herding/ work	█	█	█	█	█	█	█	█	█	█	█	█
Diarrhea	█	█	█	█	█	█	█	█				█
Malaria							█	█	█	█	█	█
ARI	█		█				█	█	█	█	█	█
Drought	█			█	█	█	█	█			█	█
Mass screening					█		█				█	
Stock out												

5.1. SFP MUAC admissions

The median MUAC at admission is 12.4cm most children were admitted close to the admission criteria < 12.5cm) as shown in figure 14 below in figure below.



5.2 .SFP outcome performance

The SFP median MUAC for children cured in the County was 127 mm as shown in Fig 15 below. That means that 50% of those cured were discharged from the program cured, though others were discharged with higher MUACs up to 14cm, where this could mean that they overstayed in the program or were responding positively to treatment.

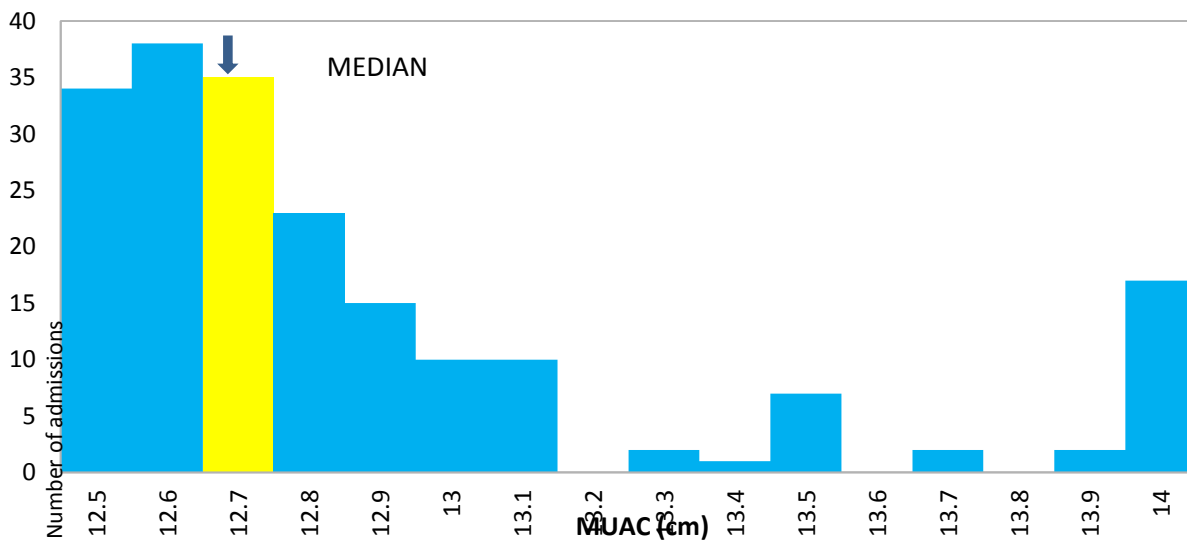
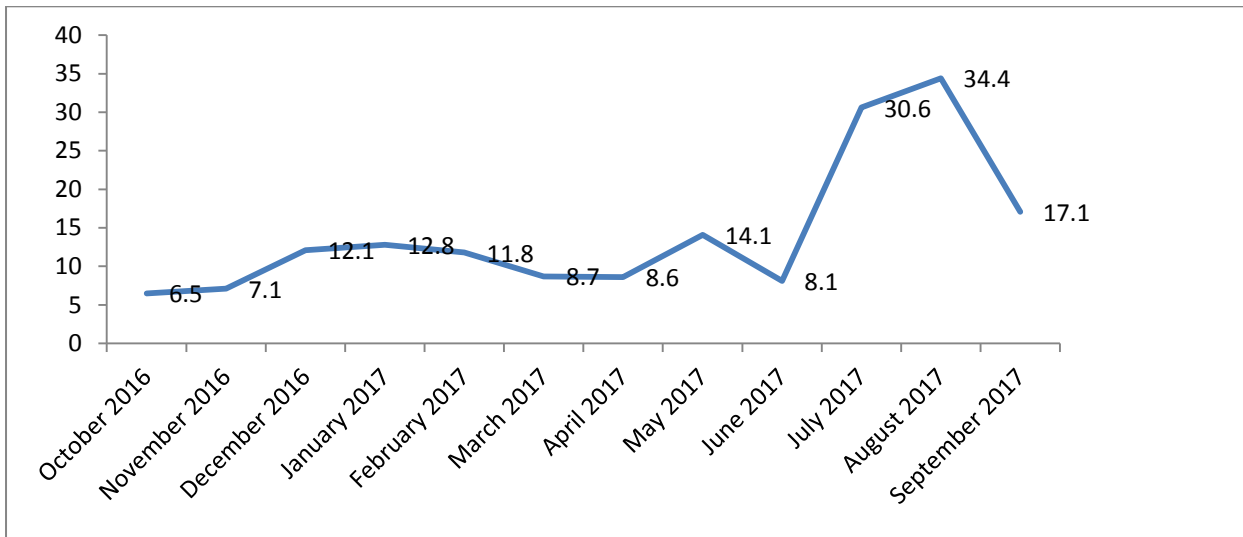


Figure 15 SFP MUAC at discharge, Garissa County

5.3 SFP defaulting patterns over time compared with seasonal event calendar, Garissa



	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
Increase in food prices (Rice and ugali)		█	█	█						█	█	
Milk Availability	█	█		█	█	█				█		█
Female Herding/ work	█	█	█	█	█	█	█	█	█	█	█	█
Diarrhea	█	█	█	█	█	█	█	█				█
Malaria							█	█	█	█	█	█
ARI	█		█				█	█	█	█	█	█
Drought	█			█	█	█	█	█			█	█
Mass screening					█		█				█	
Stock out												

Figure 16 SFP defaulting patterns over time compared with seasonal event calendar, Garissa

5.4 SFP MUAC at default

The MUAC median at defaulting was 123 mm (in yellow) as shown in figure 17 below. We deduced that quite a number of children are defaulting on admission or 1st follow up visit, which could mean the program has poor follow up; poor defaulter tracing which might contribute to the defaulting.

In addition the nomadic pastoral way could be a contributing factor to defaulting since there is no proper follow up mechanism.

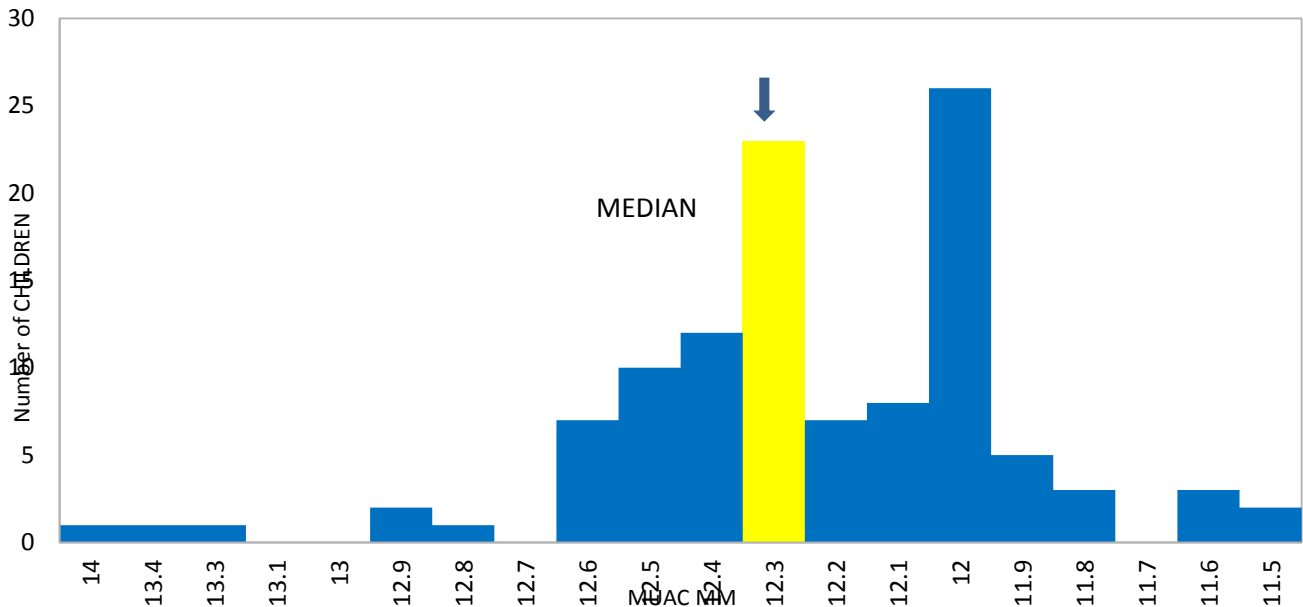


Figure 17 SFP MUAC at default before discharge, Garissa County, KENYA. Oct 2016 to September 2017

5.5 Length of stay

The figure above shows The SFP median length of stay (LoS) for children cured in the County was 8 weeks. That means that more than 50% of those cured stayed beyond 8 weeks with some staying up to 24 weeks. This could be partly attributed to data quality that there was no tracking of absenteeism with some of the children who could have been discharged as defaulters not being discharged. The IMAM guideline defines LOS to be 8 – 12 weeks .In this case the maximum length of stay was 24 weeks.

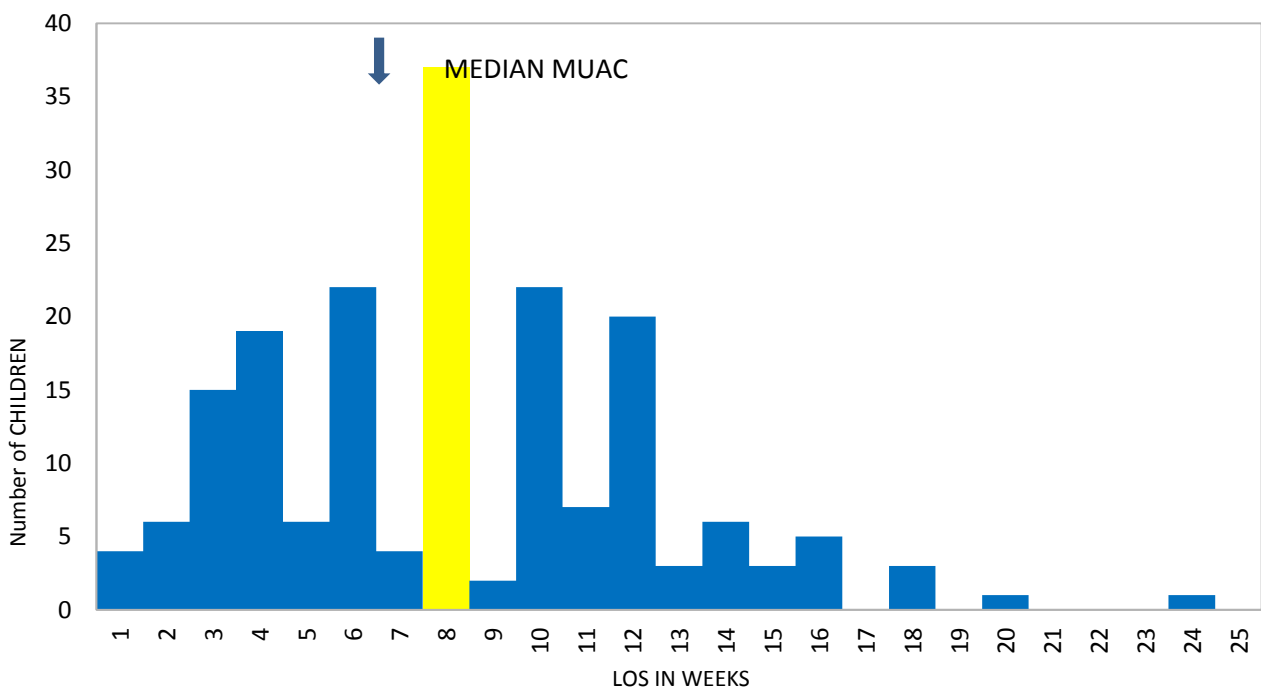


Figure 18: SFP LOS before discharge, Garissa County, KENYA. Oct 2016 to September 2017

6.0 Developing the prior for SFP

The prior mode for SFP program was calculated using the mean of the 3 coverage estimates:

1. The simple BBQ Weighted SFP Barriers and Boosters BBQ
2. The weighted BBQ (weighed by 5);
3. The histogram prior as shown in the table below

6.1.1 Simple BBQ

Mohamed to add notes

Table 7: Weighted Barriers and Boosters

SFP BOOSTERS WEIGHTED	SCORE WEIGHT
Health seeking behavior	3
Awareness about malnutrition	3
Awareness of the service	4
Accessibility and availability of the service	4
Appreciation of the service	3
Identification /strategy and enrollment	3
Capacity building of the staff	4
Capacity of the CHV	3
Supplies and commodities/ Reporting tools	4
Referral/transfer & Follow up strategy	4
SFP BARRIERS WEIGHTED	SCORE WEIGHT
Awareness about malnutrition and malnutrition signs	2
Accessibility and Availability of the service	4
Deficit of the program	3
Level of activity of the CHV	3
Health seeking behavior	2
Capacity building staff	3
Capacity of the CHV	3
workload health worker	4
Stock out/Reporting tools	4

6.1.3. Histogram

Figure: 19

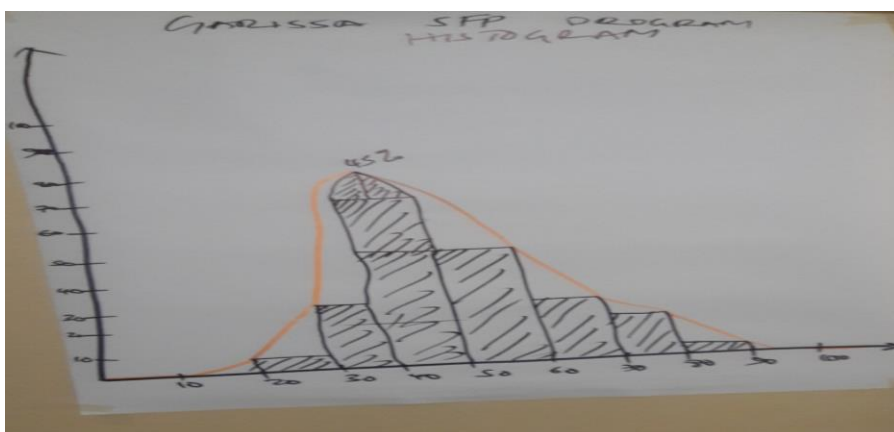


Table 8: SFP program prior probability mode calculation

	BOOSTER	BARRIERS		RESULTS IN %
HISTOGRAM				45%
SIMPLE BBQ	24	38	$(0+24) = 24$ $(100-38) = 62$ $24+62 = 86/2 = 43$	43%
WEIGHTED BBQ	35	39	$(0+35) = 35$ $(100-39) = 61$ $35+61 = 96/2 = 48$	48%
AVERAGE PRIOR			$45+43+48 = 136/3$	45.30%

Next, using the equations presented in methodology 3, the shape parameters and were calculated with a prior mode of 45.3%. ^a Prior Was 14.0 and ^b prior was 17.0. This distribution of at a 95% “credible interval” (i.e. the Bayesian equivalent of the 95% confidence interval) is shown in

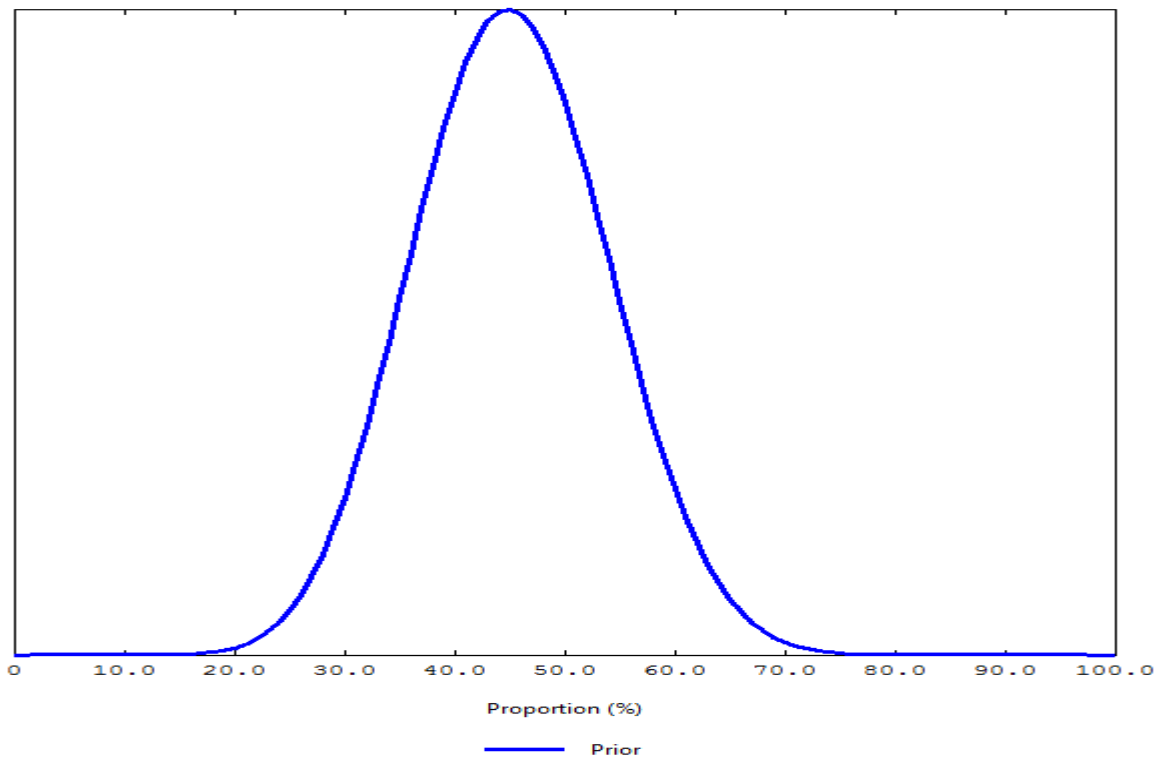


Figure 20 SFP prior coverage (binomial probability density), Garissa County, KENYA November 2017

7.0 The likelihood for SFP

Sample size

Using the formula already described on methodology, a precision of 0.12 (12%) was used giving a sample size of 35. The same villages that were selected for SAM were also the ones where MAM cases were looked for.

Mass screening

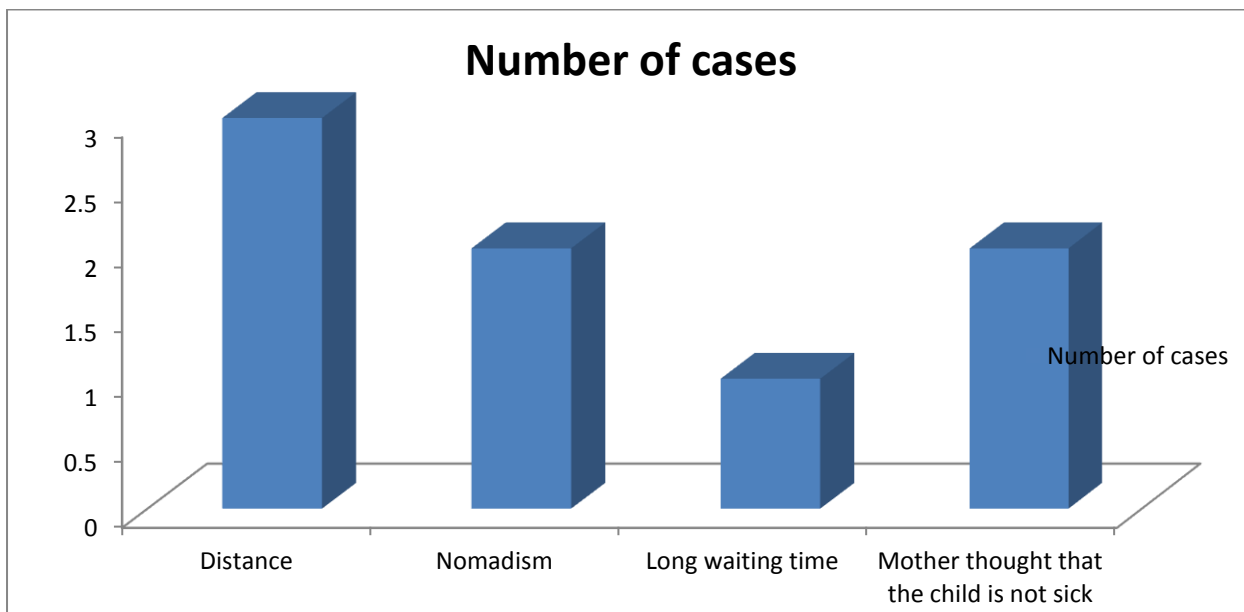
Since MAM, cases are hard to get through active case finding. House to house was conducted in the 9 villages that were selected. In total 19 cases were found 11 were in the program while 8 were not.

The final precision for the MAM survey in Garissa County was 12 %.

MAM cases	MAM Cases covered	MAM cases not covered	Recovering cases	MAM
19	11	8	27	

A questionnaire was administered to caregivers of the 8 non-covered cases to find out why their children were not in the program (Annex 4). The reasons why they did not take their children to the SFP program are detailed in **figure 21** below;

Reasons for non-attendance



The posterior SFP

For the same reasons highlighted in the SAM program it was agreed that point coverage would be reported on.

By method of Bayesian beta-binomial conjugate analysis the prior probability density was combined with the likelihood function to calculate the posterior—the final coverage estimate was:

63.1% (52.1%-72.7% 95 CI)

Figure 22 below is a graph of the three probability densities.

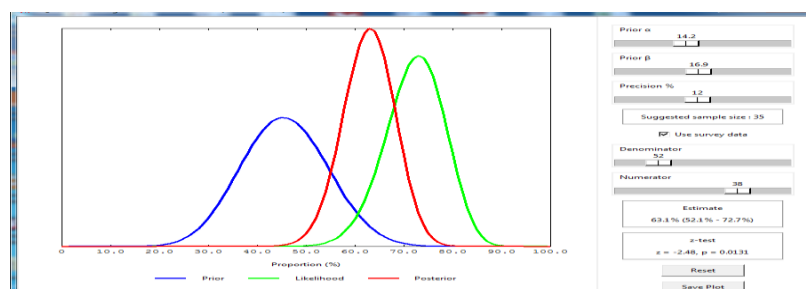


Figure 3 MAM program posterior coverage, Garissa County, Kenya. November 2017.

8.0 DISCUSSION

The SQUEAC investigation in Garissa County showed a single coverage estimate of **62.7% (51.3%-72.7% 95% CI)** for OTP and **63.1% (52.1%-72.7% 95 CI)** for SFP. The recommended coverage in the SPHERE standards for a rural population is (>50%). This shows case coverage for both SAM and MAM are above the required standards. Therefore, the program is adequately meeting its intended need. However; a lot needs to be done to strengthen its effectiveness and maintain coverage at this high levels. The program data revealed high defaulting rates, which negatively affect the effectiveness of the program, as well as lowering the program coverage.

The study identified several barriers, which greatly lower the coverage of the OTP and SFP program as summarised in table 1 and 2 above. Distance came out as a key barrier thereby contributing to high defaulting rate; this is also heightened by the nomadic lifestyle in some parts, which further amplifies the distance.

Mothers are the key caregivers in the pastoral communities. They prioritize their family labour demands and care for other family members at the expense of the OTP / SFP client; therefore, there is great need to increase men involvement in family matters regarding their children's health.

The high coverage was bolster by ongoing outreaches supported by partners; however, the findings revealed the outreaches were inadequate and inconsistent, which has also contributed to the defaulting cases. Some community leaders and members reported lack of program awareness hence the need to strengthen community mobilisation and involvement of community leaders.

9.0 RECOMMENDATIONS

Barrier	Recommendations (Actions to be taken)	Who is responsible	Timelines
Distance	Increase number of fixed and mobile OTP sites within the accessible areas	UNICEF and Implementing organization	Quarterly
Inadequate OTP staffing	Increase number of OTP team members depending on caseload	UNICEF, Implementing Organization and OTP supervisors	Quarterly
Opportunity cost	Increase number of operational OTP days to everyday	MOH	Continuously

Program awareness	conduct social gatherings (Barazas) for sensitization of benefits and importance of OTP Health Messaging, create awareness of the program through media, community leaders etc. Strengthen community health strategy platforms	MOH and partners	Continuously
Long waiting time	Increase number of OTP team members depending on caseload Increase number of OTP operational days to everyday	MOH	Continuously
Capacity building	Train CHVs and health workers on IMAM and MIYCN Conduct OJT on IMAM at facility level	MOH and IPs	Biannually Quarterly
Staff work load	Improve human resource for health ;through recruitment and retention strategies	MOH	Yearly
Stock out	Strength LMIS to improve commodity and supply management	MOH and Partners	Quarterly

ANNEXES

ANNEX 1: LIST OF PEOPLE TRAINED DURING SQUEAC

FIRST NAME	SURNAME	GENDER (M/F)	POSITION	ORGANISATION	EMAIL ADDRESS
Abdimalik	Ibrahim	M	SCNO	MOH	malikabdi71@yahoo.com
Onesmus	Mutie	M	CHPPC	MOH	mutiemuti@yahoo.com
Elizabeth	Ndungu	F	SCNO	MOH	lizmtc@yahoo.com
Fiona	Temesi	F	SCNO	MOH	fionatemesi@yahoo.com
Madaraka Victor	Kiptoo	M	SCHRIO	MOH	madarakavictor@gmail.com
Mohamed	Hussein	M	PM	TDH	hpm.ke@tdh.ch
Shahmat	Yussuf	F	SNO	MOH	shahmat1930@hotmail.com
Weli Ahmed	Maah	M	SCNO	MOH	welimaah2010@yahoo.com
Anthony	Njunguna	M	SCHRIO	MOH	anthonynjuguna@gmail.com
Abdirahim	Idle	M	SCNO	MOH	idleknun@gmail.com
Caroline	Chiedo	F	NSO	UNICEF	CarolineC@unops.org
Lorraine	Ombogo	F	PM	IRC	Lorraine.Ombogo@rescue.org
Hassan	Hussein	M	NO	IRC	

ANNEX 3: House to House Data collection - MAM

Sub-county: _____ **HF:** _____ **Village:** _____ **Team:** _____ **Date:** _____

Child's name	Age (Months)	MUAC (mm)	MAM Case Y/N	MAM Covered	MAM Not covered	Recovering	Verification with Health Card / RUSF (tick)
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
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							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
							<input type="checkbox"/> Health Card <input type="checkbox"/> RUSF
Total							

ANNEX 4: 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?

2.

YES NO

3. DO YOU KNOW IF THERE IS A TREATMENT FOR MALNOURISHED CHILDREN AT THE HEALTH CENTRE?

YES NO (stop)

4. 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: _____

5. 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)

ANNEX 5: CHW REFERRAL SLIP



**CHW REFERRAL SLIP
MINISTRY OF MEDICAL SERVICES
SUB COUNTY HOSPITAL/HEALTH CENTRE**

**REPUBLIC OF
KENYA**

Name of Child Date/...../.....
Name of Mother/Care giver _____
Bulla/Address of Child _____
Village /Bulla Elder _____

- Reasons for referral
- MUAC < 11.5 cm (Red color)
 - MUAC < 12.5 Cm (Yellow color)
 - MUAC <13.5 cm

Any other Reason _____
Name of Referring CHW _____ Sign _____

.....



**CHW REFERRAL SLIP
MINISTRY OF MEDICAL SERVICES
SUB COUNTY HOSPITAL/HEALTH CENTRE**

**REPUBLIC OF
KENYA**

Name of Child Date/...../.....
Name of Mother/Care giver _____
Bulla/Address of Child _____
Village /Bulla Elder _____

- Reasons for referral
- MUAC < 11.5 cm (Red color)
 - MUAC < 12.5 Cm (Yellow color)
 - MUAC <13.5 cm

Any other Reason _____
Name of Referring CHW _____

ANNEX 6. Local terms for Malnutrition

S/NO	TERM	SOMALI
1.	VERY THIN	WEYT/CAATO
2.	SICK	HANUN
3.	SWELLINGS	BARAR
4.	THIN LEGS	LUGADUBAN
5.	DISTENDED STOMACH	CALOL WEYNAT
6.	WEAK	LAIF
7.	DEHYDRATION I.E LOSS OF WATER IN THE BODY	BIYALAN
8.	BROWN HAIR	TIMA CADAD
9.	THIN ARMS	GACMA DUB
10.	MALNUTRITION	NAFAQADARA
11.	ORPHAN	AGOON
12.	POVERTY	SABOOL/FAKIR
13.	CHILD MOTHER DIED	RAJO
14.	CHILD NOT BREASTFEED	NAS MOGA
15.	DIARRHOEA	SHUBAN
16.	VOMITING	MATAQ
17.	FEVER	QANDA
18.	PLUMPY NUT	BUSKUT
19.	TWINS	MATTAN
20.	DISABLE CHILD	CURYAN