NORTH HORR SUB COUNTY-MARSABIT COUNTY

Semi Quantitative Evaluation on Access and Coverage Report

December 2019

Acknowledgement

North Horr IMAM coverage assessment was made successful through the contribution of a number of partners. The County Department of Health led the assessment.

The County government of Marsabit Department of Health Services is indebted by immense contribution by partners who tirelessly made assessment a success. The department wish to appreciate the contribution of Concern worldwide and UNICEF for financial and technical support, which ensured the exercise, was successfully completed

Special thanks to Marsabit County Nutrition Technical Forum and National Nutrition Information Technical Working group Coverage technical team for their technical guidance during the survey. Last but not least the County government of Marsabit for creating an enabling environment during the qualitative and quantitative data collection exercise and the North Horr Sub County community for taking time to provide information which will be of importance in making informed decisions in the nutrition sector programming.

Acronyms and Abbreviations

BBQ	Barrier Booster Question
BSFP	Blanket Supplementary Feeding Program
CC	Community Conversation
CBRAs	Community Birth Referral Agents
CHV	Community Health Volunteer
CMAM	Community Management of Acute Malnutrition
CNC	County Nutrition Coordinator
CU	Community Units
IMAM	Integrated Management of Acute Malnutrition
LQAS	Lot quality Assurance Sampling
MAM	Moderate Acute Malnutrition
MUAC	Mid Upper Arm Circumference
OFDA	Office of Foreign Disaster Assistance
OTP	Outpatient Therapeutic Program
SAM	Severe Acute Malnutrition
SFP	Supplementary Feeding Program
SQUEAC	Semi Quantitative Evaluation on Access and Coverage
UNICEF	United Nations Children's Fund

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Executive Summary

Introduction

SQUEAC assessment was carried out in North Horr Sub County, which is the largest sub County in Marsabit County. The sub County has over the years suffered the burden of malnutrition. It was worst hit by prolonged drought between 2018 and 2019. Inadequate access to food as well as loss of livelihood (The main source of livelihood is livestock keeping) led to the rise of malnutrition level where the sub County was classified as critical phase in June 2019. The Sub County has 17 health facilities, in which 17 of them offer full IMAM services and implement surge model to monitor the performance of both outpatient therapeutic Program (OTP) as well as the supplementary feeding program (SFP).

The overall objective of the coverage assessment was to estimate the single coverage of IMAM program in North Horr sub County. Specifically the assessment aimed at; estimating the coverage for OTP and SFP program in North Horr Sub County, identifying barriers and boosters to OTP and SFP access, coverage, and coming up with action plan and recommendations on the improvement of OTP and SFP programs coverage as guided by the identified barriers and boosters.

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.

Analysis of routine program data as well as qualitative information unveiled a number of program barriers and boosters. Some of the program boosters identified included; Presence of outreaches, Community acknowledge that program saves life, regular screening of the children at the community, Availability of nutrition commodities. The major barriers to the program were high workload at the health facility, high maternal workload, sharing of the commodities, distance to the health facility and scale down of outreaches.

Stage 2 involved formulation of hypothesis based on the information collected in stage 1. The hypothesis formulated was: *Village Covered with Outreaches 2 Cycles per Month have high IMAM coverage while those with Village Covered with Outreaches 1 Cycles per Month have low IMAM coverage* was formulated. This hypothesis was tested using the Simplified LQAS formula; $d=\lfloor n/2 \rfloor$ in comparison with 50% SPHERE threshold for rural areas. Through a small area study, the hypothesis was confirmed.

Stage 3 involved likelihood (wide area) survey. Before this stage, prior mode was calculated using weighted barrier and boosters, simple BBQ, histogram method as well as concept map positive and negative linkages. Once the prior mode has been finalized and its shape parameters entered into the Bayes calculator (as a recommended sample size will be generated). This represent 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. From the calculations a total of 51 children were to be actively searched in 35 villages for SAM and 56 cases in 22 villages for MAM. The highest among the two (SAM) was used as the overall assessment sample size i.e. 35 villages.

Two-stage sampling was applied in likelihood survey. Stage 1 involved selection of villages (smallest administrative units) based on the health facility catchments. Since a recent village list based on the health facility catchment was available population proportional to size was used in this stage. Each village was linked to a health facility catchment. In stage 2 active case finding was used where MAM and SAM cases were actively searched from the sampled villages. The survey was carried out in 35 villages for 5 days. All children 6 to 59 months had their MUAC measured. Those children who met the admission criteria for SAM (MUAC< 115mm) and MAM (MUAC ≥115mm and < 125mm) and were not in program were referred to the nearest health facility. Seven teams each with 2 measurers were involved in the data collection. One hundred and five (105) SAM cases and 210 MAM cases were identified.

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. Combining prior estimate and likelihood information in the calculator generated a posterior which showed the overall coverage for OTP in North Horr sub County was 66.7% (58.8 – 74.1 95% CI) and for SFP 75.2% (69.0 – 80.4 95% CI).

Chapter one: Context of North Horr Sub County

1.1 Back ground Information

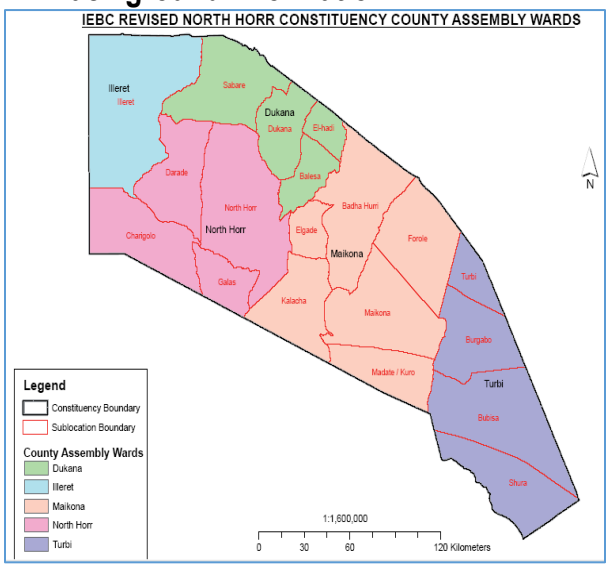

Figure 1: Administrative units for North Horr Sub County

North Horr is one of the sub County in Marsabit County. It is the largest sub County in Marsabit County in terms of geographical size. North Horr sub County borders the republic of Ethiopia to the North, Laisamis Sub County to the Southern Side and Turkana County to the West where it shares Lake Turkana. It also borders Moyale Sub County as well as Wajir County to the Eastern Side.

Administratively, North Horr Sub County is further sub divided in to five Wards, which include; Illeret, Dukana, North Horr, Maikona and Turbi wards. The Sub County has 17 health facilities, in which ALL of them offer full IMAM services and implement surge model to monitor the performance of both outpatient therapeutic Program (OTP) as well as the supplementary feeding program (SFP). Currently there are a number of partners supporting Concern Worldwide, Food for the Hungry Kenya, Kenya Red Cross and Sign of Hope among others. Concern Worldwide through an *emergency nutrition response program* funded by UNICEF supporting the implementation of the Coverage assessment. Concern Worldwide supports outreaches in 25 sites in North Horr Sub County from July 2019 up to February 2020 with funding from UNICEF in order to bring nutrition services closer to the community and improve nutrition coverage. Taking cognizant of the vastness of the villages from health facilities, the floods that affected the communities during the short rains and locust invasion that depleted pasture for the livestock, the community have not recovered fully from those shocks. Concern Worldwide, will continue supporting the North Horr sub county outreach services up to the end of April 2020 with funding from OFDA.

North Horr Sub County has an estimated population of 82,109 people, among them, 12,891 are children aged below 5 years representing 15.7% of the population.

North Horr Sub County was the second with the highest prevalence of acute malnutrition in Marsabit County during the June 2019, classifying the Sub County in the **critical** (IPC phase 4) with an overall wasting prevalence of children aged 6 to 59 months being 25.1% with 3.1% of children being severely malnourished. The prevalence of acute malnutrition based on MUAC was 4.5% while severe acute malnutrition was 0.5%. Based on October 2019, NDMA early warning bulletin, Marsabit County drought situation was at **alarm** with deteriorating trend.

1.2. Rationale of Coverage Assessment

Over the years, Marsabit County and in Specific North Horr Sub County has experienced both acute and chronic food insecurity leading to poor nutrition status. According to IPC analysis and classification, the food security situation worsened in May compared with February 2019. More households face Stressed (IPC Phase 2) and crisis (IPC Phase 3) acute food insecurity levels leading to the worsening and deteriorating nutrition security situation attributed to successive short and long rainfall seasons in the country, there is need to understand IMAM program performance and effectiveness in order for program implementers to know the un-met program needs. In addition, as part of nutrition emergency response in Kenya, Concern Worldwide has been funded by UNICEF to implement assess coverage in Marsabit (North Horr) County to help the county program teams from the ministry of health and partners to understand their program effectiveness (especially during the deteriorating food security and nutrition situation following failed rains) and generate recommendations and action points to improve coverage. Lastly, there was need to assess the progress of implementation of previous (February 2018) SQUEAC assessment recommendations.

Table 1: Recommendations implementation status of 2018

Program Barrier	Recommendation	Status
Distance to the IMAM sites	Establish the nomadic health facilities in the sub county	Beyond Zero supported outreaches in Maikona area until June 2019
Migration to areas not covered by IMAM Difficulty to travel to IMAM sites during rainy season	Re- develop the seasonal calendar and migration pattern guide to be able to manage malnutrition cases during migration period since migration was the main cause of defaulting.	Not Done
No routine case findings at the community	Actively engage CHVs to do active case search as part of their routine activities Provide CHVs with necessary tools e.g. MUAC tapes and referral slips in their daily activities Engage CHAs to actively monitor the CHVs and ensure case finding at the community level is correctly done	CHVs were provided with MUAC tapes and are doing active case finding as part of their routine activities. CHAs are actively involved in monitoring and supervising the activities conducted by CHVs especially screening and referrals. To facilitate active case finding both CHAs and CHVs are given monthly stipends by Concern worldwide on submission of screening reports.
Inadequate services to the client due to long waiting time, and lack of time for counselling	Increase the number of Health workers (Nutritionist) at the health facilities Train the health workers on IMAM	County government of Marsabit recruited nutritionists in North Horr Sub County and all of them have been trained on IMAM.
Referral slips and MUAC tapes are not provided to the CHVs for community screening	Provide CHVs with necessary tools e.g. MUAC tapes and referral slips in their daily activities Engage CHAs to actively monitor the CHVs and ensure case finding at the community level is correctly done	CHVs were provided with referral slips (MoH 100) and MUAC tapes.
No defaulter tracing mechanism in place	Strengthen defaulter tracing mechanism by actively involving community units and CHVs Use local chiefs/elders in defaulter tracing strategies	Defaulter tracing mechanism has been strengthened by listing down all the defaulters and assigning specific CHVs from those villages to trace them. Although current migration in search of water and pasture has limited efforts being made.
Alcoholism	Home visits by the CHVs to ensure children are given RUTF and RUSF Adopt direct observation of treatment (DOT) management	CHVs are conducting regular home visits to follow up on utilization of RUTF and RUSF. However, they are citing sharing is taking place at household.
Negative opinion towards IMAM program	Educate the care givers and the community on the purpose of IMAM program	Continuous sensitization and education of the community members on the purpose of IMAM program is ongoing.

	Employ more health workers (especially nutritionists) so that the quality of care is improved	County government of Marsabit recruited nutritionists in North Horr Sub County and all of them have been trained on IMAM. Six facilities are still lacking nutritionist
CBRAs have little or no knowledge on IMAM services	Include some components of IMAM in the basic CBRAs Training	CBRAs have been sensitized on identification of malnourished children through observation and referring such cases to nearest facilities.
Negative opinion towards RUTF and RUSF	Educate the caregivers on the usage of RUTF and RUSF	Caregivers are educated continuously on the usage of RUTF and RUSF.
	Train the caregivers on the importance of following up on treatment protocol for maximum RUTF/RUSF benefits	Caregivers are educated on adherence to IMAM treatment protocol.
Food Insecurity	Implementation of livelihood program in the sub County to boost food availability and accessibility	Concern has been supporting food security initiatives by providing seeds to households to establish kitchen gardens.
IMAM services is partners dependent	Advocate for increment on nutrition budgetary allocation by the County government	Ongoing Process
Sharing of RUSF/RUTF	Train the caregivers on the importance of following up on treatment protocol for maximum RUTF/RUSF benefits	Caregivers are educated on adherence to IMAM treatment protocol though sharing RUTF/RUSF is still a major challenge.
Selling of RUTF/RUSF	Train the caregivers on the importance of following up on treatment protocol for maximum RUTF/RUSF benefits	Ongoing
	Liaise with the public health department and engage the local chiefs to take action on those caught selling RUTF/RUSF	Ongoing
High workload at the health facilities	Increase the number of Health workers at the health facilities	Done
Poor documentation	Training and supervision of the Health Workers at the facility level and also increase the number of Nutritionist at the health facility.	Joint monitoring and OJT on documentation by SCHMT and CWW is ongoing.
Lack of IMAM documentation knowledge by CHVs	Involve the CHVs who are based at the health facilities during OJTs	CHVs have been mentored on IMAM documentation though majority of them are still not competent on documentation.

1.3. Coverage Objectives

The overall objective of the coverage assessment was to estimate the single coverage of IMAM program in North Horr sub County. Specifically the assessment aimed at achieving the following objectives;

- To assess the overall coverage for OTP and SFP in North Horr Sub County
- To identify barriers and boosters for OTP and SFP uptake
- To come up with recommendations to improve on OTP and SFP coverage in the Sub County

Chapter Two. Investigation Process

2.1. Introduction

Semi Quantitative Evaluation on Access and Coverage (SQUEAC) methodology was used in the assessment. SQUEAC method is a comprehensive, comparative tool to analyze the barriers and boosters to coverage and gives estimate coverage. SQUEAC also provides succinct actions for improving access and coverage (CMN). The method is a low resource 3 stage model. Stage 1 involved identifying areas of low and high coverage as well as reasons for coverage failure using routine program data, any other existing data and qualitative data. Quantitative routine program data was obtained from the IMAM registers of health facilities from the three Sub- counties. Qualitative information was obtained from various sources that included health facility in charges and nutrition officials, religious leaders, caregivers, health facility nurses, traditional birth attendants (TBAs), Traditional healers, CHWs/CHEWs, program staff, community members and local leaders.

Stage 2 involved confirming the location of areas of high and low coverage and the reasons for coverage failure identified in stage 1. This was done using the small studies, small surveys and small-area surveys.

Stage 3 involved providing an estimate of overall program coverage using Bayesian techniques. The prior mode was computed using the average of the total sum of weighted boosters and barriers plus unweighted barriers and boosters, concept map plus the belief (histogram). This combination both identifies key issues affecting presentation and program uptake real implementation whilst also establishing the actual levels of coverage attained. Vitally, all this can be done in time, allowing the tool to be of immediate practical use to tweak program design and in response to the information obtained (Mark Mayatt 2012).

2.2. Stage One: Identification of Program Low and High Coverage Areas

In order to identify areas of high and low coverage, analysis of routine program data was done. Data was collected in all 17 sites that offer OTP and SFP program in the entire sub county for a period of 12 months (From October 2018 to September 2019). Data collected from the sites included; OTP and SFP admissions per month, admission MUAC , exits (cured, defaulters, deaths, non-responses) on monthly basis, defaulters based on their villages of residence and defaulting visits, disease calendar. The investigation team also developed seasonal calendar during the first stage. Qualitative data was also collected using a number of methods and sources to a point of *sampling redundancy* as it will be described later in the report

2.2.1. Quantitative Data Collection and Analysis

Admission Trends

Analysis was also done for program admission for OTP and SFP program from October 2018, to September 2019. This was plotted as indicated in figures 2 and 3 below. The investigation team developed a seasonal and events calendar. The calendar included all the events that may have contributed to coverage and access of IMAM program in North Horr Sub County.

Low admissions were recorded during the month of November 2018 to April 2019. This was as a result of Cultural Festivals in the Community. This was attributed to the fact that, milk and food was available at the Household level. High admissions were recorded between the months of May and July 2019 due to ongoing emergency response which included integrated outreach activities and mass screening resumed during this period.

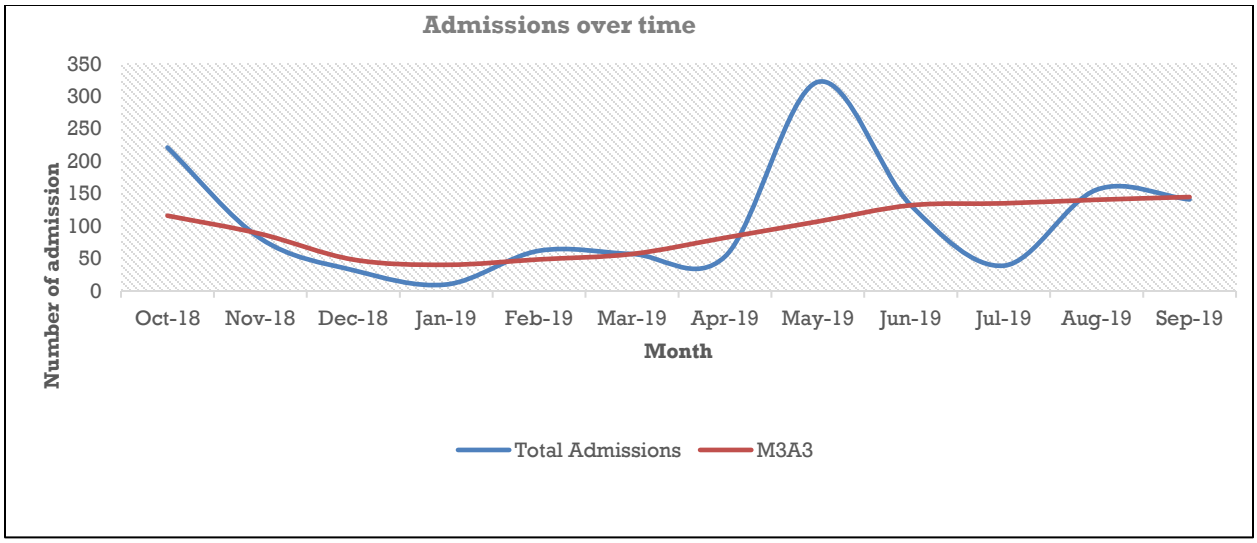

Figure 2: OTP Admission Trend

Table 2: Season and Events calendar

Month	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
Milk Availability												
Diarrhea												
Rains												
Lean Season												
Sorio												
Food Availability												
Rice from Relief												
Cultural Festival												
Migration i.e. Animals												
Migration .i.e. People												
Temperature												
Outreaches												
Malaria Outbreak												
Fetching Water/firewood	++	++	++	+	+	+	+	+	++	++	++	++

Analysis of SFP admission revealed the same trends as OTP as illustrated in figure 3 below, with admission spikes being noted in October and November 2018 as well as May 2019 with similar explanations as the one provided for OTP program. Illeret and Gus health facilities had the highest number of admissions in both OTP and SFP

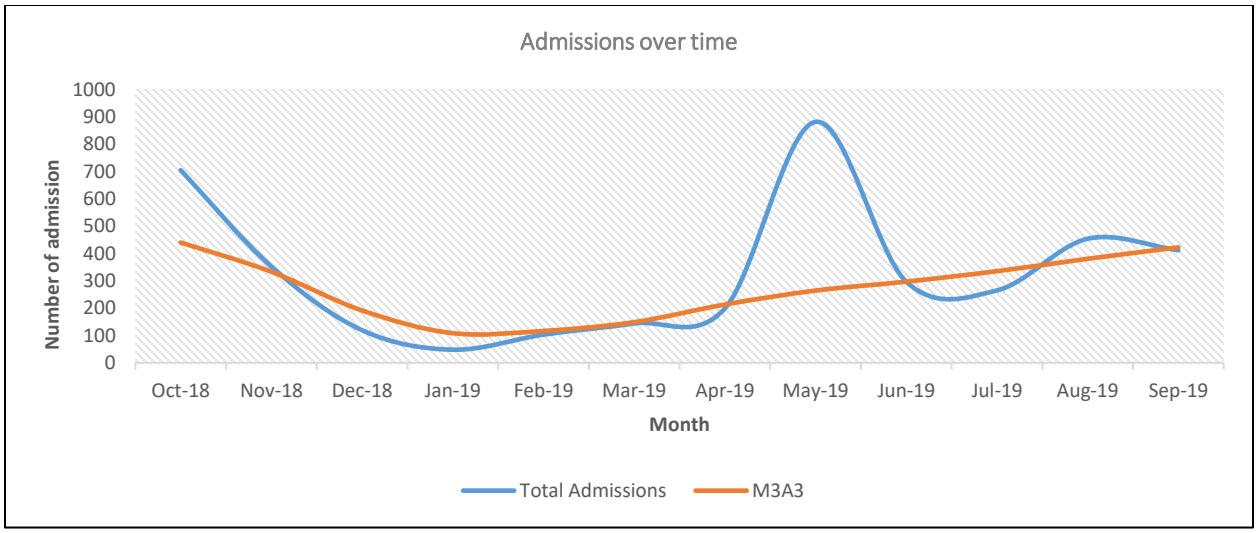

Figure 3: Admission trends; SFP

Month	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
Milk Availability												
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Temperature												
Outreaches												
Malaria Outbreak												
Fetching Water/firewood	++	++	++	+	+	+	+	+	++	++	++	++

MUAC on Admission

Plotting admission overtime is useful but ignores the issue of timeliness of admission. Children with MUAC below the admission criteria (<11.5cm or 115mm), or with nutrition odema should be in the program. If many of these are not in program, then program coverage is low. Children who are admitted to the program after they have met program criteria after a considerable period of time are said to be late admissions. Late admission is associated with the need for inpatient care, longer treatment, defaulting and poor treatment out comes (including death). These can lead to poor program opinion by the host community leading to late presentation and program admission in a negative feedback cycle.

Analysis of OTP admission time indicated that majority of children are admitted in OTP early with the mean median admission MUAC being 112mm as illustrated in figure 4 below. In this regard, children admitted in OTP program are

likely to have good outcome (cure). 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 in this program.

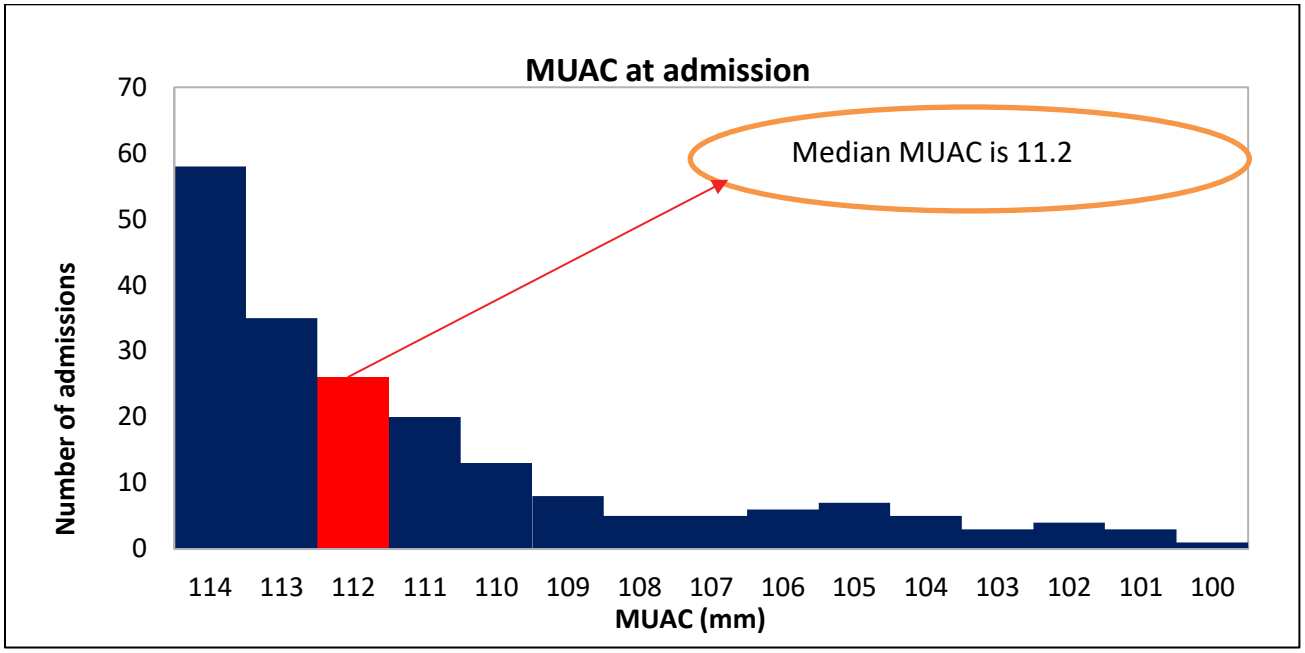


Figure 4: MUAC on Admission OTP

Similarly early admission was also noted in SFP program where the median admission MUAC was 123mm. In case of SFP, the admission where MUAC is the criteria should be 125mm which is attributed to continuous screening by CHVs at the community. Similar benefits as described in OTP will be accrued in case of SFP, ultimately leading to positive opinion by the community.

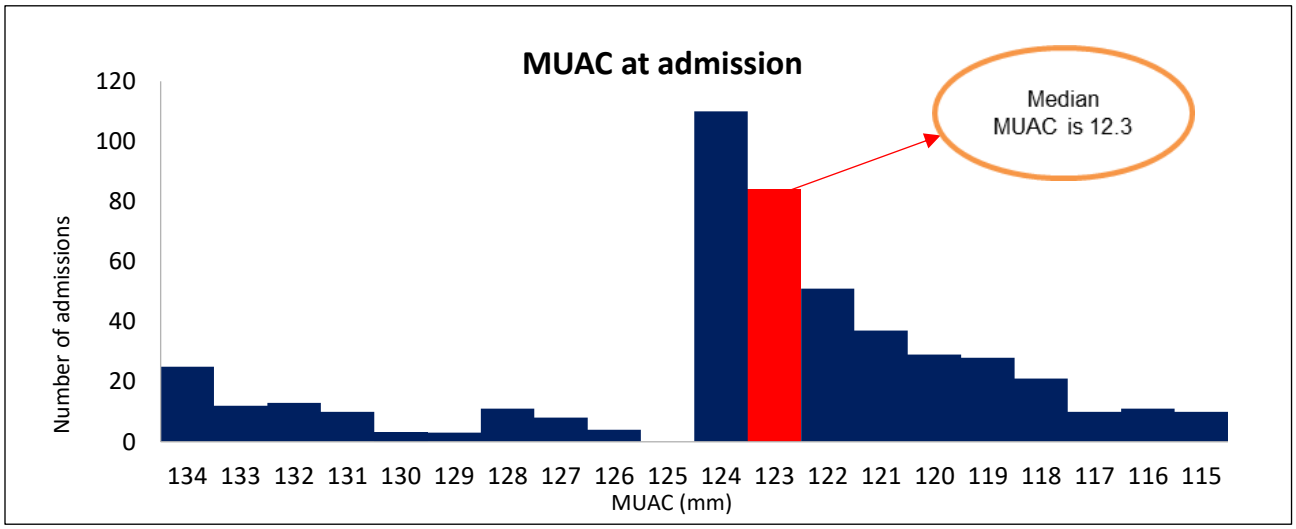


Figure 5: MUAC on admission SFP

2.2.1.1 Standard Program Indicators (Outpatient Therapeutic Program)

High number of admissions does not guarantee a good coverage. Program coverage should be determined by examination of program exists. High defaulting rate is associated with low program coverage. When plotted overtime, a healthy program in which the sphere standards are being met have the cure line along the top of the graph while the

defaulter and the death line at the bottom of the graph in a mirror image. In case the percentage of defaulters is more than 15%, then there is a cause of concern. Cure line should be above 75% while death line should be below 10%.

As illustrated in figure 6 below, the OTP program cure rate over time surpassed the 75% threshold in Nov 2018, Feb 2019 and July 2019 and this is attributed to Milk availability at the community and scale up of Outreaches in July 2019. High defaulter rate were reported in the month of January and March 2019, this is attributed to no outreaches were being conducted. Non response was also on rise in the month of May, August 2019 and October 2018 which is attributed to migration of both people and livestock.

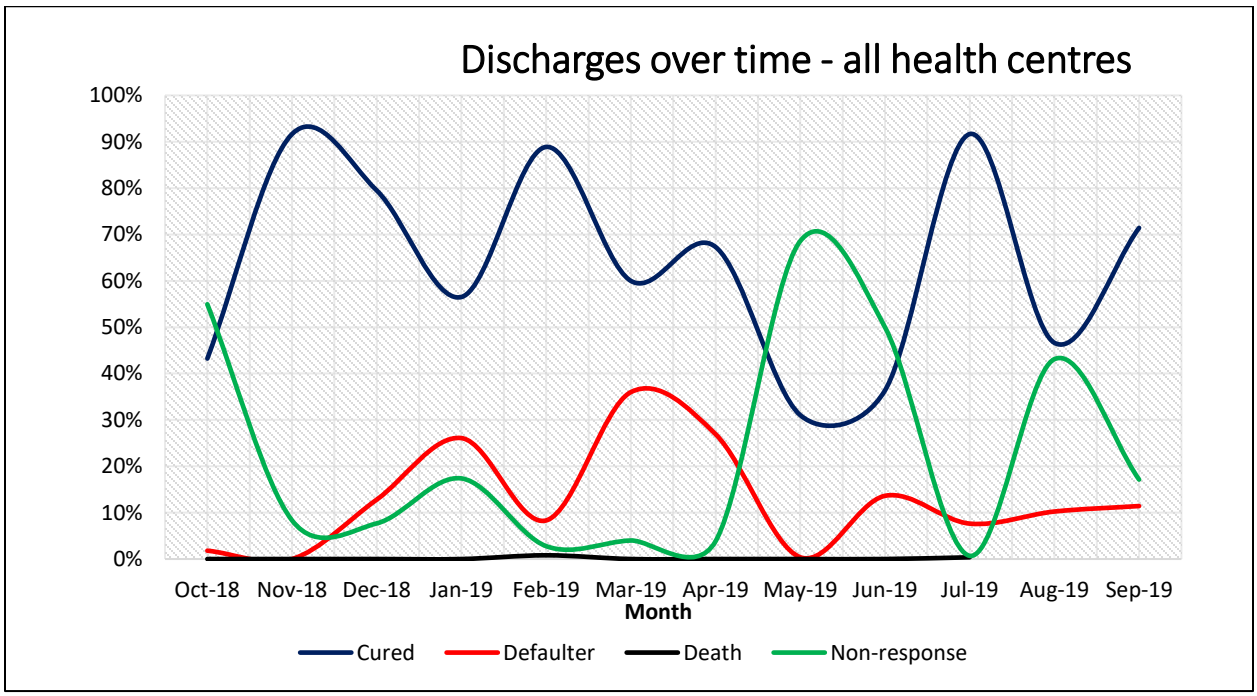


Figure 6: Program Outcome OTP

2.2.1.2 Program Exits (Supplementary Feeding Program)

In case of supplementary feeding program, the program performed below the SPHERE threshold with exception in the month of Dec 2018, Feb 2019 , June 2019, July 2019 and September 2019 which were just slightly above 75%. High defaulter rate was recorded in January 2019 and March and April 2019. This was as a result of lack of integrated outreach services and long distance from the village to health facilities and migrations of people from one community to the other looking for food and pasture. High Non response was reported in May 2019 because of migrations of people from one community to the other looking for food and pasture.

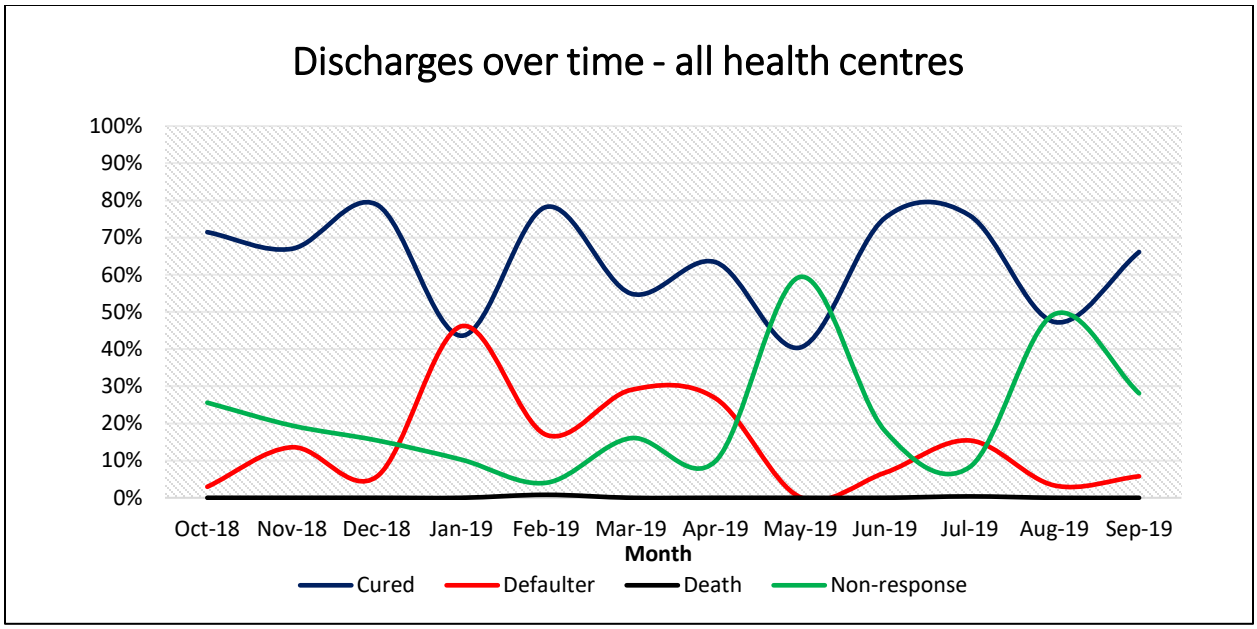


Figure 7: Program discharges (SFP) from October 2018 to September 2019

2.2.1.3. Program Defaulting

Program defaulting is a major barrier to both therapeutic and supplementary feeding programs. Defaulting interferes with program effectiveness as well as contact coverage (people that use a service). Defaulters are children who were enrolled into the programme, but have missed three consecutive visits. High defaulting rates are an indication of poor program coverage. IMAM program indicators should show a consistently low rate of defaulters.

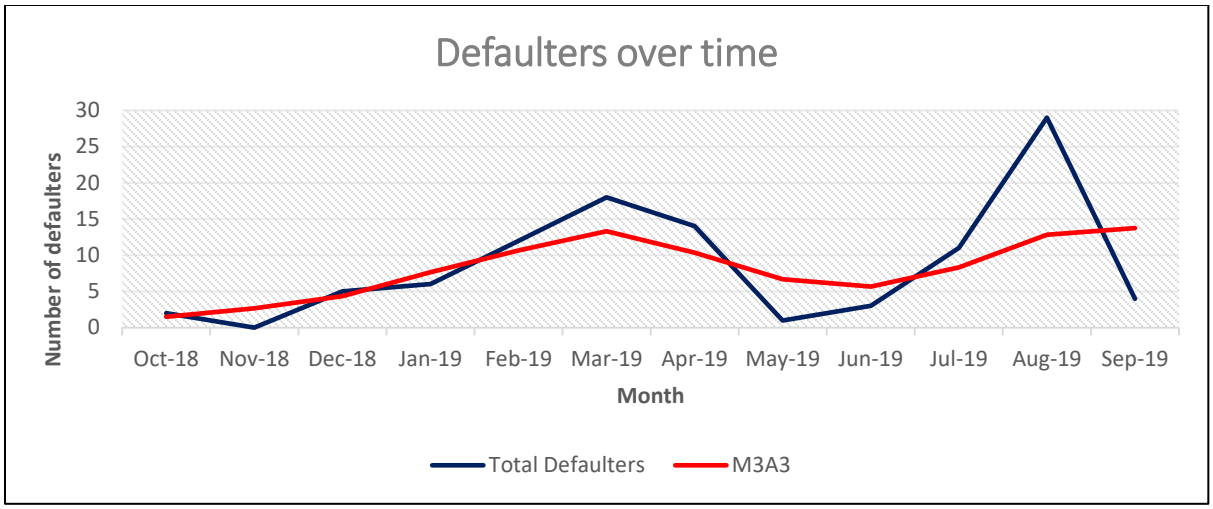
Program defaulter rates might be contributed by various factors; deterioration in the security situation, leading to reduced access and availability of services, impacts of climatic conditions e.g. droughts, floods etc. that affect how populations can access services or patterns of labor demand. Therefore, the graph of the defaulters should be compared to the seasonal calendar of the region.

When the program has a high number of defaulters it will be important to know when the beneficiaries defaulted from the program.

Defaulting Trends

Outpatient Therapeutic Program (OTP)

Comparing the defaulting trends with seasonal and events calendar shows that there was a defaulting spikes in March and August 2019. During this season, there were traditional ceremonies commonly known as s*orio*. During the ceremonies, migration is experience leading to defaulting as illustrated in figure 10 below. The most affected sites included Turbi, Burgabo and Illeret health facilities.



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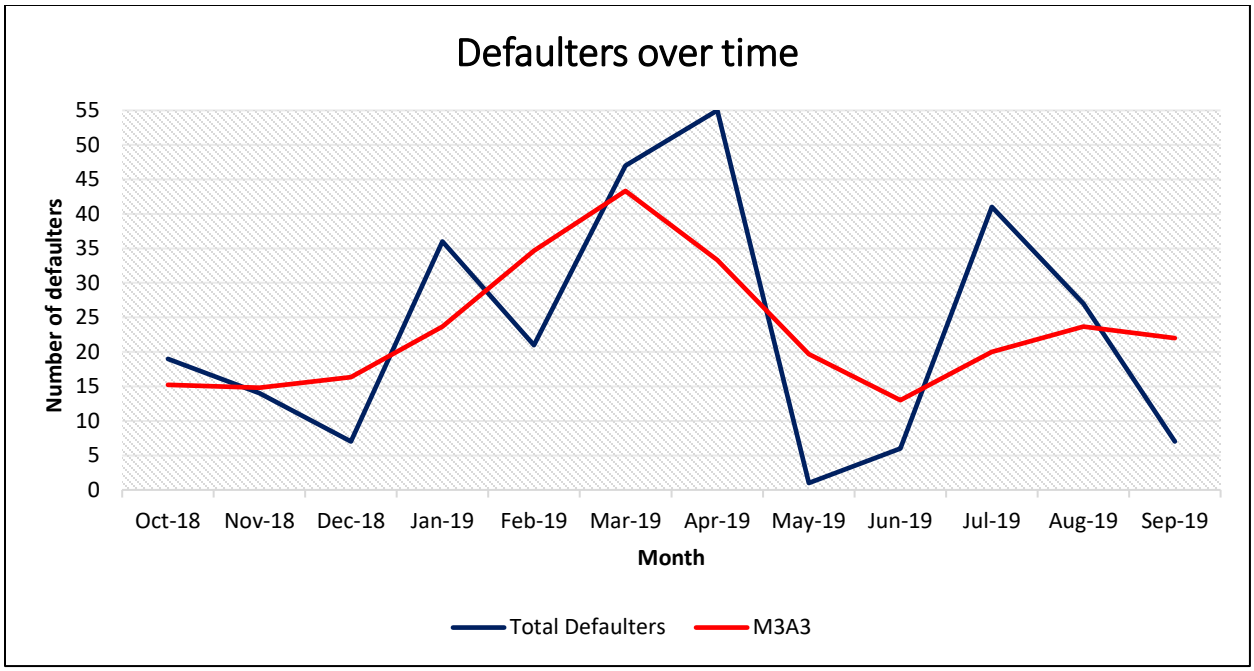
Migration .i.e. People												
Temperature												
Outreaches												
Malaria Outbreak												
Fetching Water/firewood	++	++	++	+	+	+	+	+	++	++	++	++

Figure 8: Defaulting trends in relation to seasonal and events calendar

Supplementary Feeding Program (SFP)

Defaulting was a major challenge in SFP program. Defaulting spikes were noted in January to April 2018. This can be attributed to traditional ceremonies just like in the case of OTP program. Further, there was a great spike in July to August which can be attributed to migration of livestock hence population moves together as they look for pasture and water as illustrated in figure 11 below.



Month	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
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Temperature												
Outreaches												
Malaria Outbreak												
Fetching Water/firewood	++	++	++	+	+	+	+	+	++	++	++	++

Figure 9: Defaulting trends in relation to seasonal and events calendar

2.2.1.4. Length of Stay

Length of stay refers to the duration between the admission and discharge from the program. It is the duration of treatment episode (Mark Mayatt 2011). Long treatment episodes can be attributed to late admission or poor adherence to the treatment protocols. Programs with long treatment episodes tend to be unpopular with beneficiaries and tend to suffer from late treatment seeking and high defaulting rates.

The duration of treatment episode can be investigated using a tally plot. The tally plot makes it easier to see the distribution of the duration of treatment episodes and to calculate the median duration of treatment episodes. The

median is the value that divides the distribution into two equally sized parts. It is not appropriate to use the arithmetic mean to summarize the duration of treatment episodes, since the arithmetic mean is strongly influenced by extreme values. Higher coverage programs tend to have a median duration of treatment episodes of less than or equal to about 8 weeks.

Length of Stay (Outpatient Therapeutic Program/Supplementary Feeding Program)

Analysis of length of stay for OTP indicated that the median length of stay for the program was 6 weeks, which is not appropriate for OTP. Only a few number of children stayed in the program for 12 weeks or more as illustrated in figure 12 below. This means that children are discharged at the earliest week meaning there is high risk of readmission in the OTP Program. The median length of stay for SFP Program was 13 weeks. This is also positive to the program as the program length of stay should be 16 weeks.

Analysis of defaulting cases also showed that the median length of stay before defaulting was also 8 weeks for the OTP Program. This is positive and a booster to the program coverage as such cases are likely to be recovering cases as opposed to those who default early in the program who are likely to be active cases. In case of SFP, the median length of stay was 8 weeks indicating early defaulting, which is negative to SFP showing poor adherence of the IMAM program.

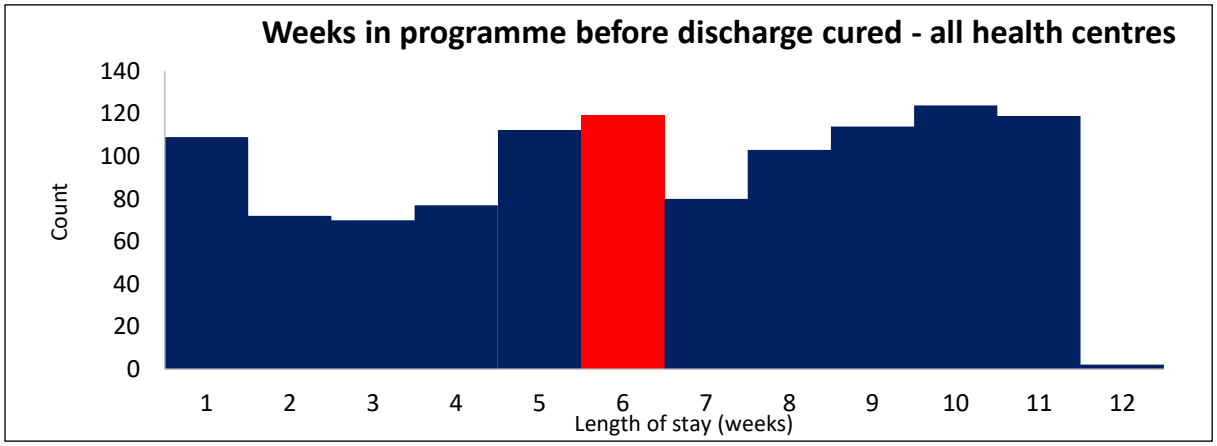

Figure 10: Length of stay for OTP

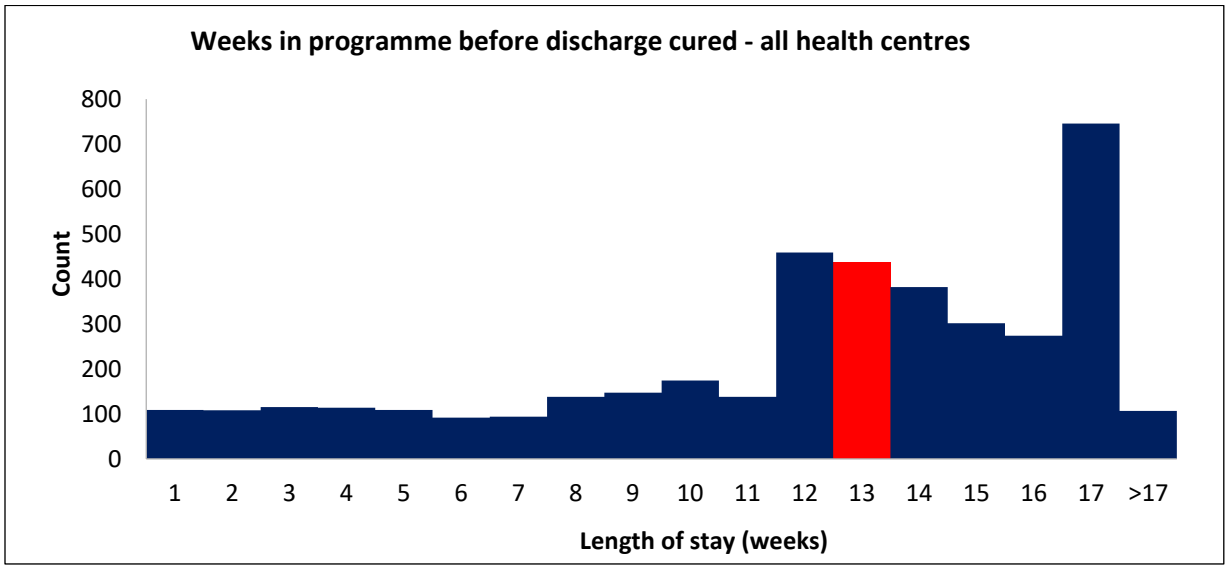

Figure 11: Length of stay (SFP)

2.2.1.5 Outreach Coverage

North Horr Sub County has 68 outreach sites supported by 5 nutrition partners. The partners supporting nutrition outreaches include; Concern Worldwide, Food for the hungry Kenya, CCM, Kenya Red Cross, Sign of Hope, Beyond Zero and County through THS. The longest distance from the health facility to the outreach site was 100 km, while the shortest distance was 6 km. Annex III shows the outreaches supported by the County government and partners in North Horr Sub County as mapped in August 2019. It also shows the distances from the health facilities to the outreach sites.

2.2.2. Qualitative Data (Community Assessment)

Qualitative data was collected from different sources using various methods. These methods included; Informal Group discussions, Semi structured interviews, In-depth interviews and Observation. The data was collected from CHV, Nutritionist, Health worker, Lay people, Health Facility data, and Community leaders, Carers of beneficiaries, CBRAs, Religious Leaders and NGO agent

Four survey teams collected qualitative data from the community level. Each team comprised of 2 members.

2.2.3. Booster, Barrier and Question (BBQ) Development

The BBQ is a simple tool, which allows the assessment team to organize key elements, representing factors with a positive or negative effect on access and coverage, in a table format and triangulate each by source and method. It helps the team to visualize the problematic and its recurrence in key informants' answers. In consequent stages, the factors with the highest periodicity are weighted higher than elements mentioned occasionally.

The use of the BBQ tool was initiated on the first day of the community assessment, revised and modified each following day. BBQ listing was done on daily basis. Upon arrival of all teams from the field, all identified barriers and boosters were presented and discussed during a feedback session facilitated by the team leader. The BBQ is a very organic tool, demanding constant redrafting as teams add new data, combine it or discard invalidated findings. Once the final list of barriers and boosters is established and all sources, methods and demographic information are noted, the team can proceed with the weighting of individual elements in order to prioritize which are the most important barriers and boosters influencing coverage, which comes at the end of Stage 2

Simultaneously, the team leader copied each barrier and booster onto a flipchart paper, adding sources and methods every time they are mentioned by the teams. Owing to the fact that certain barriers and boosters are likely to be cited numerous times, a legend of barrier, booster methods and sources was developed. If, at the end of the day, certain barriers and boosters were mentioned only once, they were shifted to another flipchart entitled Questions. These points were further investigated and should be kept in mind for the next day's data collection.

Table 3: OTP/SFP Boosters

OTP Booster	Unweighted	Weighted score	SFP Booster	Unweighted	Weighted score
Presence of outreaches	1	5	Presence of outreaches	1	5
Registers well Documented	1	3	Registers well Documented	1	3
Community acknowledge that program saves life	1	4	Community acknowledge that program saves life	1	3
Routine Supervision by CHMT/SCHMT/CHAs	1	1	Routine Supervision by CHMT/SCHMT/CHAs	1	3

Capacity Building on IMAM through Trainings	1	4	Capacity Building on IMAM through Trainings	1	4
Sensitization/Awareness of the IMAM Program	1	3	Sensitization/Awareness of the IMAM Program	1	2
Regular screening of the children at the community	1	4	Regular screening of the children at the community	1	4
Availability of essential drugs for malnutrition i.e. Antibiotics	1	2	Availability of essential drugs for malnutrition i.e. Antibiotics	1	3
Community acknowledge that the program benefits all the children through continuous screening	1	1	Community acknowledge that the program benefits all the children especially through screening	1	3
Minimal Waiting time at the Health Facility	1	2	Minimal Waiting time at the Health Facility	1	4
Instructions of usage of Nutrition Commodities is clearly given.	1	1	Instructions of usage of Nutrition Commodities is clearly given.	1	3
Good collaboration between health workers and other staff	1	3	Good collaboration between health workers and other staff	1	3
Availability of Nutrition Commodities	1	4	Availability of Nutrition Commodities	1	5
Good attitude of the Health Worker	1	2	Good attitude of the Health Worker	1	3
Presence of Partners to support IMAM Program	1	3	Presence of Partners to support IMAM Program	1	3
Good Health seeking practices	1	2	Good Health seeking practices	1	2
Good understanding of Malnutrition signs	1	3	Good understanding of Malnutrition signs	1	3
All the community have a common term for Malnutrition	1	2	Incentives for the CHVs,(Training Material and Payment, Review Meetings)	1	2
Incentives for the CHVs,(Training Material and Payment, Review Meetings)	1	2	Early Program Admission	1	3

Early Program Admission	1	3	Positive Opinion on IMAM Program	1	3
Positive Opinion on IMAM Program	1	2	Total	**20**	**64**
Good relationship between NGOs and Health Workers	1	3			
Total	**22**	**59**			

Table 4: OTP /SFP Barriers

OTP Barrier	Unweighted	Weighted score	SFP Barrier	Unweighted	Weighted score
No collaboration with Other Health Staff	1	2	No collaboration with Other Health Staff	1	3
No Sensitization of the IMAM Schedule	1	2	No Sensitization of the IMAM Schedule	1	2
High Workload at the Health Facility	1	4	High Workload at the Health Facility	1	4
High Maternal Workload	1	4	High Maternal Workload	1	3
Sharing of RUTF	1	5	Sharing of RUSF	1	5
Distance from The Health Facility	1	4	Distance from The Health Facility	1	3
Poverty in terms of low income	1	2	Poverty in terms of low income	1	5
Low awareness of IMAM Program	1	2	Low awareness of IMAM Program	1	2
Food Insecurity-Food unavailability	1	3	Food Insecurity-Food unavailability	1	5
Lack of means of transport to the Health Facility	1	2	Lack of means of transport to the Health Facility	1	2
Traditional Substitute of the Nutrition Commodities	1	2	Traditional Substitute of the Nutrition Commodities	1	2
Personalized Stigmatization	1	3	Personalized Stigmatization	1	3
Cultural Belief/taboos	1	2	Cultural Belief/taboos	1	2

Congestion at the Health Facility	1	2	Congestion at the Health Facility	1	2
Delayed Delivery of the Nutrition Commodities	1	2	Delayed Delivery of the Nutrition Commodities	1	2
Community saying Malnutrition is not a disease	1	2	Community saying Malnutrition is not a disease	1	2
No sufficient Tools for screening	1	2	No sufficient Tools for screening	1	1
Sharing of meal- Older children given more food than younger children	1	1	Sharing of meal- Older children given more food than younger children	1	1
Nutrition Commodities contribute to other diseases like Diarrhea and Vomiting	1	2	Nutrition Commodities contribute to other diseases like Diarrhea and Vomiting	1	1
Nutrition Program is not sufficient there is still need for BSFP and CT	1	1	Nutrition Program is not sufficient , there in need for addition of BSFP and CT	1	1
Weighing scale not Functional at the Health facility/Outreaches	1	2	Weighing scale not Functional at the Health facility/Outreaches	1	2
Poor Health seeking Behavior	1	2	Poor Health seeking Behavior	1	2
No defaulter Tracing Mechanism in place	1	2	No defaulter Tracing Mechanism in place	1	2
Migration of the livestock and People	1	2	Migration of the livestock and People	1	3
Scale down of outreaches	1	4	Scale down of outreaches	1	4
No male involvement in decision making on child care	1	2	No male involvement in decision making on child care	1	2
Total	**26**	**61**	**Total**	**26**	**66**

2.2.4. Program Concept Maps

Concept mapping is a graphical data-analysis technique that is useful for representing relationships between findings. Concept-maps show findings and the connections (relationships) between findings (Mark Mayyat 2011). Qualitative and quantitative data collected was further analyzed and organized in a concept map as shown in figures 14 and 15 below. The investigation team linked barriers and boosters in to 2 concepts maps i.e. OTP and SFP

Figure 12: OTP Concept map

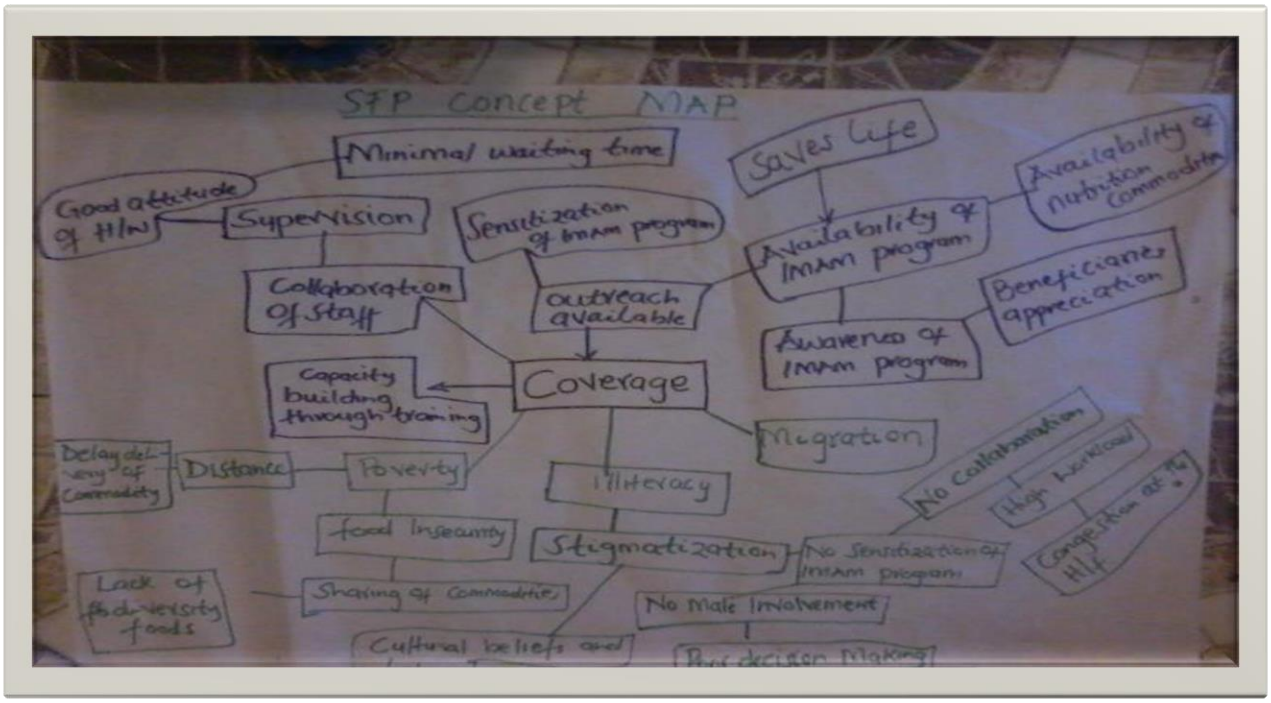

Figure 13: SFP Concept Map

2.3. Stage two: Coverage Hypothesis formulation and Testing

The objective of this stage was to confirm areas of high and low coverage based on the data collected from stage 1.

The hypothesis formulated:

Villages where outreaches are supported for 2 cycles in a month have high IMAM coverage while those supported for one cycle per month have low coverage

The rationale for this hypothesis was;

- ✓ Outreaches were frequently done in most health facilities but not done 2 cycles in a month in most of the facilities, these resulted to low response and defaulting especially with the issue of sharing of the nutrition commodities in the community.

This hypothesis was tested using the Simplified LQAS formula; d= I n/2 I in comparison with 50% SPHERE threshold for rural areas.

2.3.1. Small Area Study

A small area study was conducted in four purposively selected villages; Nangolei is one of the villages that was covered by two cycles Outreaches per month. This village was classified as high coverage village. The second villages were Bisiq, Bura and Abdub Tullu were the villages which were covered by one cycle Outreached and was classified as low coverage village. Two teams (each with 4 members), visited the four villages. Each team was provided with a MUAC tape and packets of RUTF and RUSF. When they reached the village, they looked for a key informant who lead them to household of caregivers of children under five years of age where they asked whether they were aware of any program that treat malnutrition. They confirmed by showing them MUAC and RUTF.

Small area Study Results

Table 9 and 10 below summarizes the small area study results

Table 5: Small Area Study Results (OTP)

Purposively sampled villages	Characteristic (s)	No of SAM cases in program	No of SAM cases not in program	Total
High Coverage (Nangolei)	Village Covered with Outreaches 2 Cycles per Month	4	3	7
Low coverage (Bisiq/Bura/Abdub Tullu)	Village Covered with Outreaches 1 Cycles per Month	3	0	3
High coverage Area (Nangolei)	Program coverage Standard) p	50%	Number of SAM cases in program = 4 which is more than 3.	The hypothesis is confirmed
	Decision rule (d)	d= [7/2] = 3.5=3		
	Number of SAM cases in program	4		
Low Coverage (Bisiq/Bura/Abdud Tullu)	Program coverage standard p	50%	Number of SAM cases in program is 0 which is less than 1	The hypothesis is confirmed
	Decision rule d	d= [3/2]=[1.5]= 1		

	No of SAM Cases in program	0		

Table 6: Small Area Study Results (SFP)

Purposively sampled villages	Characteristic (s)	No of MAM cases in program	No of MAM cases not in program	Total
High Coverage(Nangolei)	Village Covered with Outreaches 2 Cycles per Month	28	9	37
Low coverage (Bisiq/Bura/Abdud Tullu)	Village Covered with Outreaches 1 Cycles per Month	9	12	21
High coverage Area (Nangolei)	Program coverage Standard) p	50%	Number of MAM cases in program = 28 which is more than 18.	The hypothesis is confirmed
	Decision rule (d)	d= [37/2] = 18.5= 18		
	Number of MAM cases in program	28		
Low Coverage (Bisiq/Bura/Abdud Tullu)	Program coverage standard p	50%	Number of MAM cases in program is 9 which is less than 10	The hypothesis is confirmed
	Decision rule d	d= [21/2]=[10.5]= 10		
	No of MAM Cases in program	9		

2.3.2. 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 were organized and weighted based on the number of sources. Qualitative data was categorized as booster (positives) or a barrier (negatives) to the program. The prior mode was determined as an average of boosters (build up from 0%) and barriers (knockdowns form 100%) as shown in the table below. Four Methods were used to determine the prior mode. They included; simple barriers, boosters, weighted barriers, boosters, and concept map which were described earlier. Histogram which method was also used. This is a “best” coverage estimate by the investigators as illustrated in figure 16 below.

Figure 14: Histogram for OTP and SFP

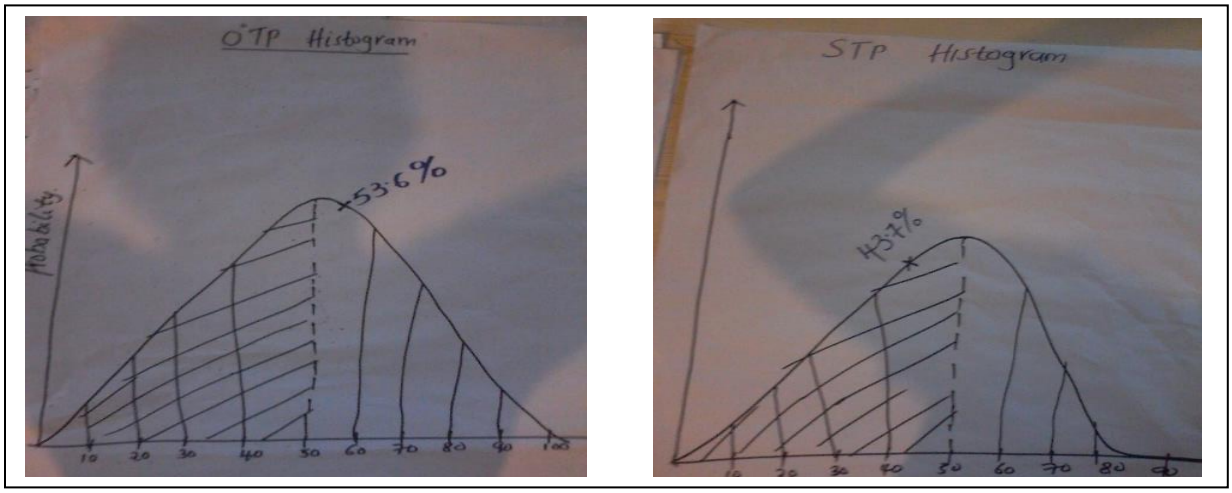

Table 7: OTP prior mode calculation

Method	Boosters	Barriers	Prior Mode (%)
Simple BBQ	22	26	48.0
Weighted BBQ	59	61	49.0
Concept Map	15	24	45.5
Histogram			53.6
Average Prior Mode			49.0

Table 8: SFP prior mode calculation

Method	Boosters	Barriers	Prior Mode (%)
Simple BBQ	20	26	48.0
Weighted BBQ	64	66	45.0
Concept Map	13	16	48.5
Histogram			43.7
Average Prior Mode			46.3

The above information was fed in SQUEAC Bayes calculator to come up with Bayes plots. This was done by adjusting the α and the ß values of Bayes calculator until the prior mode (49.0 and 46.3) was achieved. Figures 17 and 18 below illustrates the Bayes plots for SFP and OTP. The plots are graphical representation of estimated coverages based on the information so far collected in stage 1 and 2.

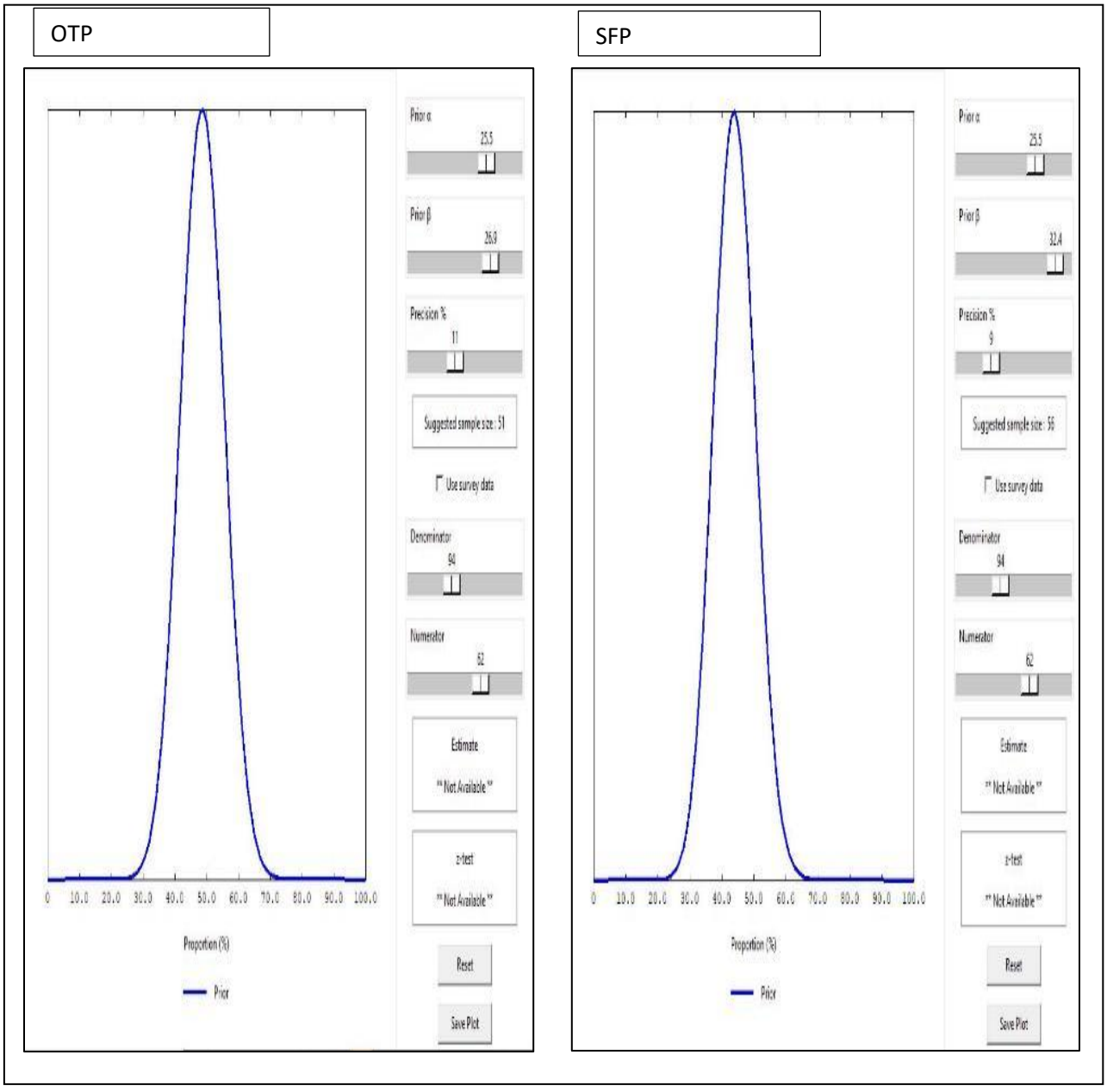

Figure 15: Histogram of OTP and SFP

2.4. Stage three: Wide Area (Likelihood) Survey)

Once the prior mode had been finalized and its shape parameters entered into the Bayes calculator (a recommended sample size was 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.

2.4.1. SAM Sample size calculation

According to the Bayesian calculator, the sample size for SAM cases was 51 and MAM cases was 56.Since it was logistically impossible to search the cases in the entire sub county, it was prudent to randomly sample a number of villages where such cases were to be found. The number of villages was depended on the number of cases, average population per village, proportion of children 6- 59 months in the population as well as the current estimate of SAM prevalence by MUAC as summarized in the formula below.

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

Where n = 51

Average village population = 519

% children 6 – 59 m = 13.9

SAM prevalence by MUAC = 0.2%

MAM Prevalence by MUAC=3.6%

Therefore;

$$n\ villages = \frac{51}{[519 * (0.139) * 0.02]}$$

$$n\ villages = 35$$

In case of MAM;

$$n\ villages = \frac{56}{[519*(0.139)*0.036]} = 22\ villages$$

2.4.2. Sampling Method

Two-stage sampling was applied in likelihood survey. Stage 1 involved selection of villages (smallest administrative units) based on the health facility catchments. Since a recent village list based on the health facility catchment was available, Population Proportional to size was used in this stage to avoid bias. Each village was linked to a health facility catchment. In Total, there were 160 villages in North Horr Sub County. The number of villages calculated in section 2.5.1 divided this. That is 35 (The highest between SAM and MAM) villages. The villages were selected using the updated population estimate from KNBS into ENA for SMART and 35 Villages were selected.

In stage 2 active case finding was used where MAM and SAM cases were actively searched from the sampled villages. The survey was carried out in 35 villages for 5 days. All children 6 to 59 months had their MUAC measured. Those children who met the admission criteria for SAM (MUAC< 115mm) and MAM (MUAC ≥115mm and < 125mm) and were not in program were referred to the nearest health facility. Four teams, each with 2 measurers were involved in

the data collection. One hundred and five (105) SAM cases and 210 MAM cases were identified as summarized in table 13 below.

Table 9: Likelihood survey Results

	OTP	SFP
Covered in the prog (Cin)	53	143
Non-covered out (Cout)	18	30
Recovering in the program (Rin)	17	15
Recovering Out of the prog (Rout)	17	22
Total	**105**	**210**

2.5. Single Coverage Estimate

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

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

Where Ci= Active cases in program

Cout= Active cases not in program

Ri= Recovery cases in program

Rout = Recovery cases not in program

Sum of Active and recovering cases in program was used as the numerator (70 for SAM and 158 for MAM) while Active and recovering cases in and out of OTP program (105 for SAM and 210 for MAM) was used as a denominator. This information was fed in a Bayes Coverage Estimator Calculator. Combining prior estimate and likelihood information in the calculator generated a posterior which showed the overall coverage for OTP in North Horr Sub County as 66.7% (58.8 – 74.1 95% CI) and for SFP 75.2% (69.0 – 80.4 95% CI). as illustrated in figure 19 and 20 below.

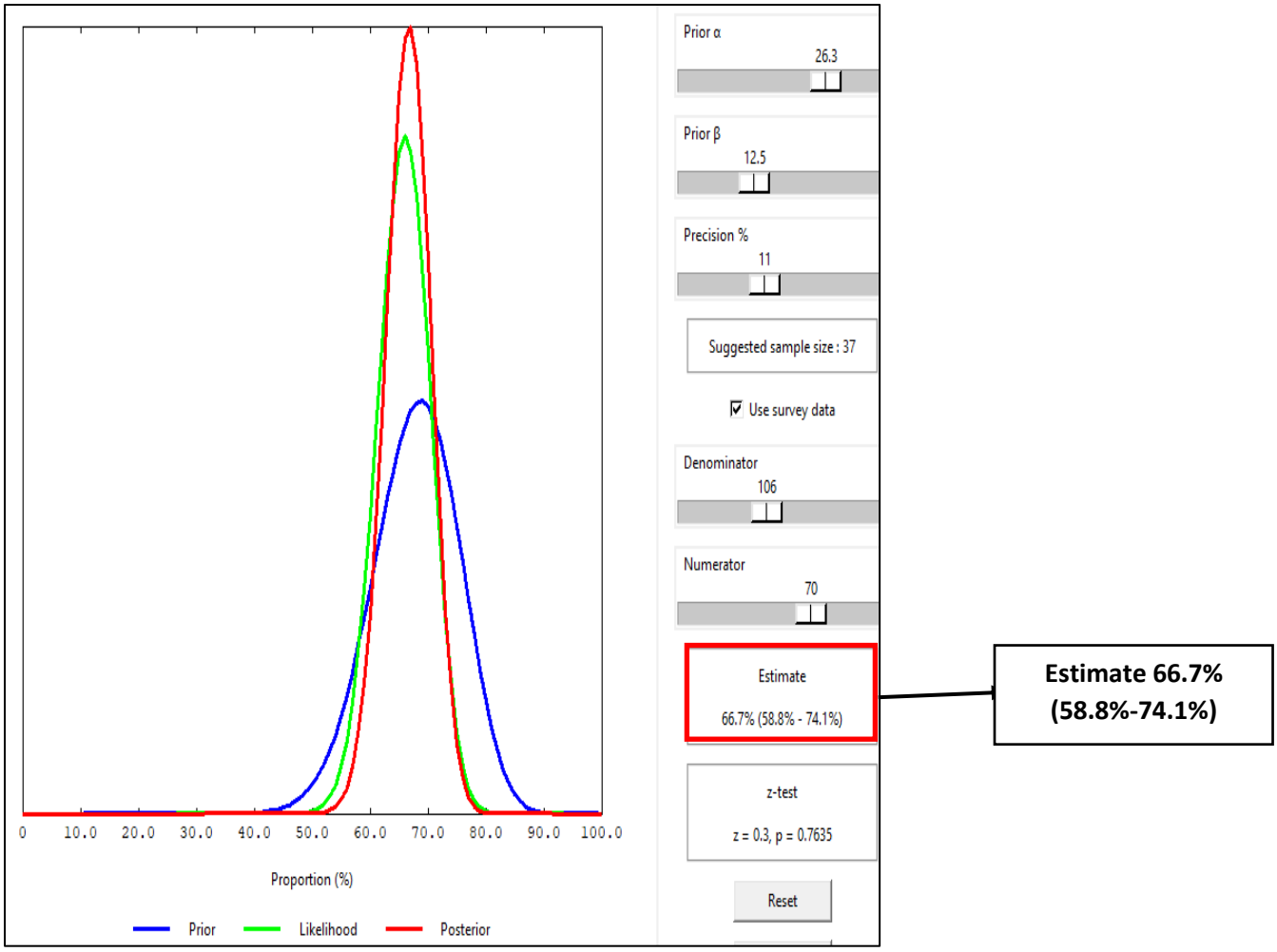

Figure 16: Single Coverage Estimate for OTP

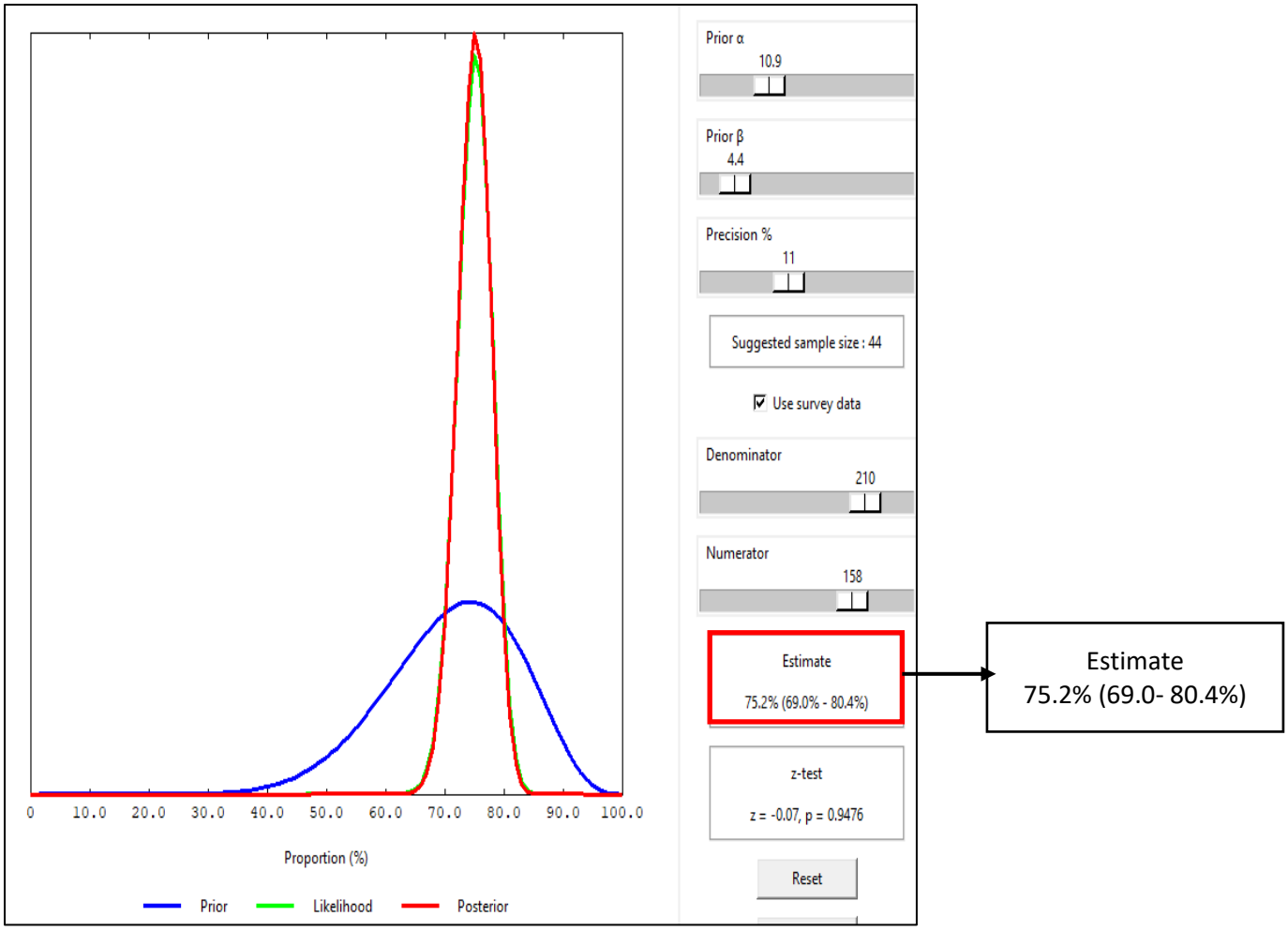

Figure 17: Single Coverage Estimate (SFP)

2.6 Reasons for Non Attendance

For those children who were not admitted in the program, a questionnaire was administered to the caregivers to establish why they were not admitted in the program. Majority of the caregivers said that they are ashamed to enroll in the program and Non-availability of means of transportation to deliver them to the nearest facility. Secondly they said distance was also an issue and non-availability of financial resources for the treatment as shown in the table below.

Table 10: Reasons for Nonattendance

Reasons for child not being in program	SAM
Distance	22.2%
Ashamed to enrol in the programme	33.3%
Non availability of means of transportation	33.3%
Non availability of financial resources for the treatment	11.1%

Quite a number of caregivers (7) thought their children were not ill which means still the community are not able to identify Malnutrition among their children.

Chapter three: Discussion, Conclusion and Recommendations

3.1. Discussion

Overall, the IMAM coverage was above 50% SPHERE threshold in North Horr sub County. The overall coverage was 66.7% and 75.2% for OTP and SFP respectively. From Bayes calculator, the p value for OTP and SFP was 0.7635 and 0.9476 meaning there was no conflict between the prior and the posterior

The main program boosters that contribute to a relative high coverage included; the presence of integrated outreaches in all IMAM sites attached to them. In all the outreach sites, IMAM services were offered to children under 5 years as well as pregnant and lactating women. The presence of partners to support outreach services was also a booster to IMAM program. Five partners who collaborated included Concern Worldwide, Food for the Hungry Kenya, kenya Red cross, CCM, Sign of Hope, Beyond Zero and County through THS, had made financial commitment to support the 68 outreaches in North Horr Sub County. Since some of the sites are as far as 50 to 100km, there is need to have nomadic clinics or long term outreaches in order to reach out the communities leaving in those areas. Establishment of nomadic clinics as well as non-emergency outreaches will go along in addressing the barrier of migration, which greatly affected the program access and coverage.

CHVs support where they conduct regular screening of the children at the community came out as a strong program booster. In this regard, there was good relationship between CHVs and the health workers and the community.. The community appreciated the CHVs since they sensitize on IMAM program. The CHVs also received support in terms of cash (for facilitation- lunches and transport) from the partners supporting IMAM program in North Horr although not a strong one since a few indicated that the facilitation has stopped which made it difficult for them do their work at the community.

Availability of nutrition commodities was cited as a strong program booster. The community appreciated that children are getting required number of sachet for RUTF and RUSF, which encourage mothers to take their children to the facilities. Community acknowledge that the program saves life especially during the drought period where the children under five and pregnant and lactating women are highly affected and IMAM program provide great support by providing required treatment for Malnutrition.

The major barriers to the program were sharing of RUTF/RUSF, high workload at the health facilities, high maternal workload, personalized stigmatization which make them ashamed to enroll in the IMAM program and scale down of the outreaches especially due to funding which affect the community living very far from the health facility.

Although the outreach coverage was high, defaulting was high in two occasions, during the drought peak season, during the traditional cerebrations commonly known as s*orio*. The major factors in this case was migration or movement of the communities to places where there were pastures and water as well as to areas where traditional ceremonies were conducted. As such, the health workers could not reach them and since there was no proper defaulter tracing initiatives in place, it resulted to surge in the number of defaulters recorded.

Semi structured interviews with health facility staff, nutritionists, NGO agent as well as informal group discussion with carers of children in program indicated that, high work load at the health facilities was a major barrier to the IMAM program. High work load lead to inadequate service to the clients, which included long waiting time as well as lack of counselling by the health workers. This could also be the reason for poor documentation in a number of health facilities.

High maternal workload also mentioned as a barrier to the coverage since most women in the community they go out to search for firewood, water and food. In addition, the same women are tasked with building houses, which reduce the time for childcare.

Finally, IMAM Program was majorly dependent on donor funding that compromises the sustainability of the program. Most of the outreaches were donor funded, the distribution of IMAM commodities also depended on partners as well as payment of CHVs.

3.2. Conclusion

The *single coverage estimates* for OTP and SFP was 66.7% (57.6 – 75.7) and 75.2% (69.4 – 81.1) respectively as calculated by the Bayes Calculator. The **single coverage estimate** for OTP within the SPHERE standard for rural coverage. Comparing with the previous Survey conducted the single coverage estimates for OTP and SFP was 60.0% (50.2 - 68.6) and 66.5% (58.2 - 73.7) respectively which shows no improvement even after emergency responses which involved integrated outreaches and continuous availability of nutrition commodities. **Effectiveness of the Nutrition program** for both OTP and SFP are **38.1%** and **47.8% respectively;** below the 50% minimum SPHERE standard for rural area, indicating low cure rate and high coverage hence the program is not effective since it is failing to meet need attributed by sharing of the Nutrition Commodities, high workload at the health facilities and high maternal workload.

3.3. Recommendations

Table 11: Recommendations

Areas of Gaps	Recommendations
Poor data recording, staff not conversant with discharge criteria and poor understanding of the IMAM protocol for OTP and SFP clients	• Close and continuous visit to facilities for DQA, OJT and JSS and specifically check how documentation and reporting done by the officers. • A one day review meeting for Data recording, discharge criteria and poor IMAM protocol focusing on officers with this challenge only should be considered as not all has the same problem. • Partners to support in printing of some of the reporting materials so as to enhance proper reporting mechanism
-0TP length of stay- Most of our children are being discharged too early and some too late (12^{th} week) -Same for SFP clients as there is long stay of our client's e.g. 13weeks	• Do regular analyzation of OTP and SFP length of stay and give feedback during review meetings and on other formed forums like WhatsApp. Task affected officers to improve and do follow ups.
Discharge criteria for MUAC is not being followed in that clients are defaulting after being cured	• SCHMT to ensure that the updating of OTP registers is done twice in a month(End/ or beginning and middle of the month) by reminding them through existing forums/ meetings and when visiting them, as this challenge is due to lack of consistent updating of registers by officers.
Children being discharged because mothers felt that their children have cured	• Curing of children should be determined by the health work through nutrition assessment. Officers should be tasked to do what is required to the latter.
High defaulter rate was recorded in January 2019 and March and April 2019, due to lack of integrated outreach services and long distance from the village to outreach sites. migrations of people from one community to the other looking for food and pasture	• Ensure consistent outreaches throughout the year as they address a challenge of access by 3/4s. • The County to Operationalization the facilities that are not operational to reduce distances.Some of the facilities in North Horr that require operationalization to take services closer to people are Qorqa, Elbeso, Toricha and Balesaru dispensaries

3.4. Action Plan

	ACTION POINT	WHO	WHEN	MONITORING	MONITORING TOOL
1	Continuous mapping out priority areas for outreach services	SCHMT/Implementing Partners	Continuous	Quarterly	Activity Reports
2	Pass key messages to caregivers when distributing RUTF/RUSF especially on sharing of the commodities	Health Workers	Continuous	Monthly	Supervision records/book
3	Check and verify all the data collection and reporting tools during JSS to check on documentation.	SCHMT/ Implementing Partners	Continuous	Monthly	Registers/JSS Reports
4	Partners to support in printing of some of the reporting materials so as to enhance proper reporting mechanism	Implementing Partners	Continuous	Quarterly	Reporting Materials
5.	Operationalization of the Health Facilities to reduce Distance	CHMT/SCHMT	Ongoing	Quarterly	Activity Report

Annexes

Annex I: List of SQUEAC assessment Participants

Name	Gender	Position	Organization
Mary Njagi	F	Nursing Officer	Maikona Health Centre
Talaso Matta	F	Community Officer	Kalacha Level 4 Hospital
Ado Botu	F	Nutrition Officer	Balesa Dispensary
Hawo Kiya	F	Nutrition Officer	Dukana Health Centre
Midina Doko	F	Community Officer	North Horr Health Centre
Midina Bonaya	F	Community Officer	Turbi Dispensary
Chuluqe Jarso	F	Community Officer	Gus Dispensary
Richard Komen	M	PHO	North Horr Sub County
Lelo Guyo	F	Community Officer	Malabot Dispensary
Joseph Adano Abudo	M	Community Officer	Gus Dispensary
Adano Guyo	M	Nutrition Officer	Shurr Dispensary
Mercy Busuru	F	Sub County Nutrition Coordinator	North Horr Sub County
Felicity Munene	F	Survey and surveillance Officer	Concern Worldwide
Mark Araman	M	Manager Health and Nutrition	Concern Worldwide

Annex II: Data Collection Tools

EN Qualitative Questions.doc

Annex III: List of Outreaches in North Horr Sub County

	RESPONSE GAP ANALYSIS					
				PRIORITY RANK (1st priority/ 2nd priority/ 3rd priority)	Partners supporting	
SNO.	NAME OF THE HOTSPOT SITE	NAME OF LINK FACILITY	Distance from the link facility (Km)		Cycle 1	Cycle 2
1	**Barambate 1 /Barambate 2**	Gus	15	1st -	Concern	Concern
2	Elgufu		25	2nd	Concern	Concern
3	Elboru Magadho		10	1st -	Concern	Concern
4	**Wano/Sarimo**		90	3rd	**No support**	**No support**
5	Barambate 2/Umbathe		15	2nd	**Concern**	**Concern**
6	Elbuka/Wormo	Malabot	40	1st	FHK	**No support**
7	chorte/korbo/Qancho ra		11	2nd	FHK	**No support**
8	Kilkile/Yaa Algana	Balesa	28	2nd	CCM	**No support**
9	Kalesa/Yaa Sharbana		12	2nd	CCM	**No support**
10	Baranbate		10	3rd	CCM	**No support**
11	Marime	Elhadi	15	2nd	CCM	**No support**
12	Arkor		20	2nd	CCM	**No support**
13	Malbe Mara		45	3rd	CCM	**No support**
14	Birchabis		15	2nd	CCM	**No support**
15	El Boji/El Guracha	El gade	10	3rd	Concern	Concern
16	Yaa Mangutho		14	1st	Concern	Concern
17	**Dakane**		30	2nd	Concern	Concern
18	Araqesa/Kutur	Kalacha	10	3rd	Concern	Concern
19	Rage/Arerite		16	2nd	Concern	Concern
20	Olom		35	1st	Concern	Concern

21	Boqe/Tullu dimtu		25	2nd	Concern	Concern
22	Kurawa /Rangi		25	2nd	Concern	Concern
23	Toricha /	Maikona	45	1st	**KRCS/Beyond zero**	**no support**
24	Iyole/Wara		20	1st	**KRCS/Beyond zero**	**no support**
25	Katamura		60	1st	**KRCS/Beyond zero**	**no support**
26	Basbalesa		10	1st	**KRCS/Beyond zero**	**no support**
27	Koronder	Turbi	40	1st	FHK	FHK
28	Roba umuro/diba doti		50	1st	FHK	FHK
29	Yaa Galbo/Tigo		45	1st	FHK	FHK
30	Irinda/Wario wato/Kambi Nyoka	Bubisa	18	2nd	Concern	Concern
31	Dadach Manye		30	1st	Concern	Concern
32	Yaa Odhola		37	1st	Concern	Concern
33	Demo		100	1st	FHK	FHK
34	Mudhe/Oronderi		20	1st	Concern	Concern
36	Katamura	Burgabo	15	1st	FHK	FHK
37	Jiba Adhele/Lag Wachu		25	1st	FHK	FHK
38	Bisiq		15	1st	FHK	FHK
39	Saru	Dukana	32	1st	FHK	Sign of Hope
40	Gof Dukana		22	1st	FHK	Sign of Hope
41	konye		50	1st	FHK	Sign of Hope
42	Garwole/Guba yibo		44	1st	FHK	Sign of Hope
43	Diid Gola 1		20	1st	FHK	Sign of Hope
44	Diid Gola 2		20	1st	FHK	Sign of Hope
45	Lag Wata		30	1st	FHK	Sign of Hope

46	kubi adhii		72	1st	FHK	Sign of Hope
47	Durte/kabdho		17	1st	FHK	**No support**
48	Qorqa 1		52	1st	FHK	**No support**
49	Qorqa 2		65	1st	FHK	**No support**
50	Elbeso		30	1st	FHK	**No support**
51	Goricha/El Isako malla		15	1st	FHK	**No support**
52	Burra/Boji		7	1st	FHK	**No support**
53	Konon Goss		45	1st	FHK	**No support**
54	Uran Ura		72	1st	FHK	**No support**
55	Sigirso		50	2nd	**No support**	**No support**
56	Nyaber		65	2nd	**No support**	**No support**
57	Wara Goss		55	2nd	**No support**	**No support**
58	**Elmasich**	Illeret	49	1st	Sign of Hope	**Concern worldwide**
59	**Aibete**		35	1st	Sign of Hope	**Concern worldwide**
60	**Guoro**		6	1st	Sign of Hope	**Concern worldwide**
61	**ElBokoch**		6	1st	Sign of Hope	**Concern worldwide**
62	**Ilgele/Sabarei**		10	1st	Sign of Hope	**Concern worldwide**
63	**Watalii**		8	1st	Sign of Hope	**Concern worldwide**
64	**Namuguse**		24	1st	Sign of Hope	**Concern worldwide**
	Telesgaye	**Telesgei dispensary**	0		**Facility was opened**	
	Ilolo & Lomadang		6		**Facility was opened**	
	sieslucho		0		**Facility was opened**	
65	Shankera	Hurri hills	20		Concern	Concern
66	Old Yaa Garra		35		Concern	Concern
67	**Baqaqa**		6		Concern	Concern
68	Bori/Kubi Koti		15		Concern	Concern
69	Idido/Gandile	Forolle	40		**THS**	**THS**
70	Yaa Garra		35		**THS**	**THS**
71	Wario Yara/Koso bora		20		**THS**	**THS**