Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage (SLEAC) of the West Pokot Integrated Management of Acute Malnutrition (IMAM)

25th Sept – 12th Oct 2019

Table of Contents

LIST OF TABLES

LIST OF FIGURES

Acronyms

ACF	Action Against Hunger
CHU	Community Health Units
CHVs	Community Health Volunteers
CSAS	Centric Systematic Area Sampling
ECDE	Early Childhood Development Centres
GAM	Global Acute Malnutrition
IMAM	Integrated Management of Acute malnutrition
MAM	Moderate Acute Malnutrition
MoH	Ministry of Health
MUAC	Middle Upper Arm Circumference
NGO	Non-governmental Organization
OTP	Outpatient Therapeutic Program
PSU	Primary Sampling Unit
RUTF	Ready to use Therapeutic Food
RUSF	Ready to use Supplementary Food
SAM	Severe Acute Malnutrition
SDUs	Service Delivery Units
SLEAC	Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage
SCNO	Sub-county Nutrition Officer
SQUEAC	Semi Quantitative Evaluation of Access and Coverage
SFP	Supplementary Feeding Program
UNICEF	United for Children's Fund

Executive Summary

Overview of the Coverage Survey

Coverage is a measure of how well an IMAM program is reaching an intended target group, children below 5 years suffering from acute malnutrition. It is essential to measure coverage to see if a program is functioning optimally and reaching the maximum number of malnourished children in need. Coverage is one of the most important indicators of how well a service/programme is meeting the need. High-quality services/programs have both high coverage and high cure rates.

The Ministry of Health with support from UNICEF and partners in West Pokot County has previously implemented coverage assessments to allow; periodic evaluation of the IMAM program, evaluation of the spatial pattern of coverage, identification of areas of high and low coverage based on barriers to service and uptake and estimation of overall IMAM program coverage. The last coverage assessment using Simplified Lot Quality Assurance Sampling Evaluation of Access and Coverage (SLEAC) and Semi Qualitative Evaluation of Access and Coverage (SQUEAC) was implemented in 2013 and 2014 in the entire West Pokot County and Central Pokot Sub-county respectively. Recommendations were given to help in IMAM program reforms. Following over 5 years of implementing IMAM program reforms to address barriers to access and treatment, it was important to conduct a coverage assessment and evaluate the IMAM program coverage.

The SLEAC, implemented in the wider West Pokot County, was to inform on the specific Sub-counties with areas of high and low coverage and thereafter, inform which sub-county to implement a SQUEAC survey for further understanding of the barriers to access and treatment. In addition, it aimed at informing the overall SAM and MAM coverage for West Pokot County using wide area coverage estimator.

The Wide Area Survey Findings

The three-tier classification decision rules were also used to classify coverage in each of the four sub-counties where the *low, moderate* and *high* coverage thresholds were *<20%, ≥20%* to *<50%* and *≥50%* respectively. Effectiveness of timely case finding and recruitment estimator was used to calculate the decision rule. The wide area survey showed that Pokot Central and South Sub-counties had the lowest coverage in both OTP and SFP program coverage among the four sub-counties; classified as low SAM and MAM coverage areas. The overall weighted coverage estimates for OTP and SFP program in West Pokot County were 24.7% (17.2% - 32.4%) and 19.6% (16.1% - 23.1%) respectively. A chi-square statistics test calculated showed that both OTP and SFP Program coverage were homogenous across the sub-counties in West Pokot County.

Lack of awareness that the child is malnourished, unawareness of the IMAM program, long distance to the IMAM sites, stigma from the community members on the children in IMAM program and lack of follow up of defaulters are some of the barriers identified during the current SLEAC survey. All these can be attributed to the weak community mobilisation

component of the IMAM program in West Pokot. Further investigation was recommended in the sub-counties that were found to be classified as low coverage areas to inform program reforms.

Table 1: A Summary of the Recommendations based on the Barriers Identified

Gaps in coverage based on Reasons for Non-Attendance	**Recommendation**
Lack of awareness of IMAM program by the key community leaders	• Advocacy meetings at all levels with all partners in nutrition and health programmes and community leaders such as chiefs, village elders, and religious leaders.
	• IMAM programme and malnutrition awareness
Weak community-health facility linkages	• Strengthen CHVs activities
Untimely case-finding and recruitment into IMAM Program	• Increase opportunities for timely case-finding
	• Upscale mother led MUAC
	• Ensure integration of screening for malnutrition in the existing services to ensure that there are no missed opportunities
High defaulter rates	• Establish defaulter-tracing mechanisms
	• Active follow up of defaulters for readmission
	• Consistent supply of IMAM Commodities to avoid
Long distance to the health facilities	• Scale up IMAM Services and the number of health facilities offering IMAM services
Feeling of rejection by the health facility when referred by CHVs	• Proper community education on the eligibility criteria for admission into IMAM program

1.0 Introduction

1.1 Background Information

West Pokot County is located in the North-Western part of the country. It borders Baringo County to the East, the Republic of Uganda to the west, Trans Nzoia and Elgeyo Marakwet Counties to the south and Turkana County to the north. The county has an area of 9,169.4 sq. km with a population of 718,837 persons (projected population, DHIS 2019). West Pokot has three main livelihood zones namely; Pastoral (All species), mixed farming and agro pastoral comprising of 33%, 30% and 37% of the population respectively. The county is further divided into four administrative sub-counties namely; Pokot North, Pokot South, Pokot Central and Pokot West.

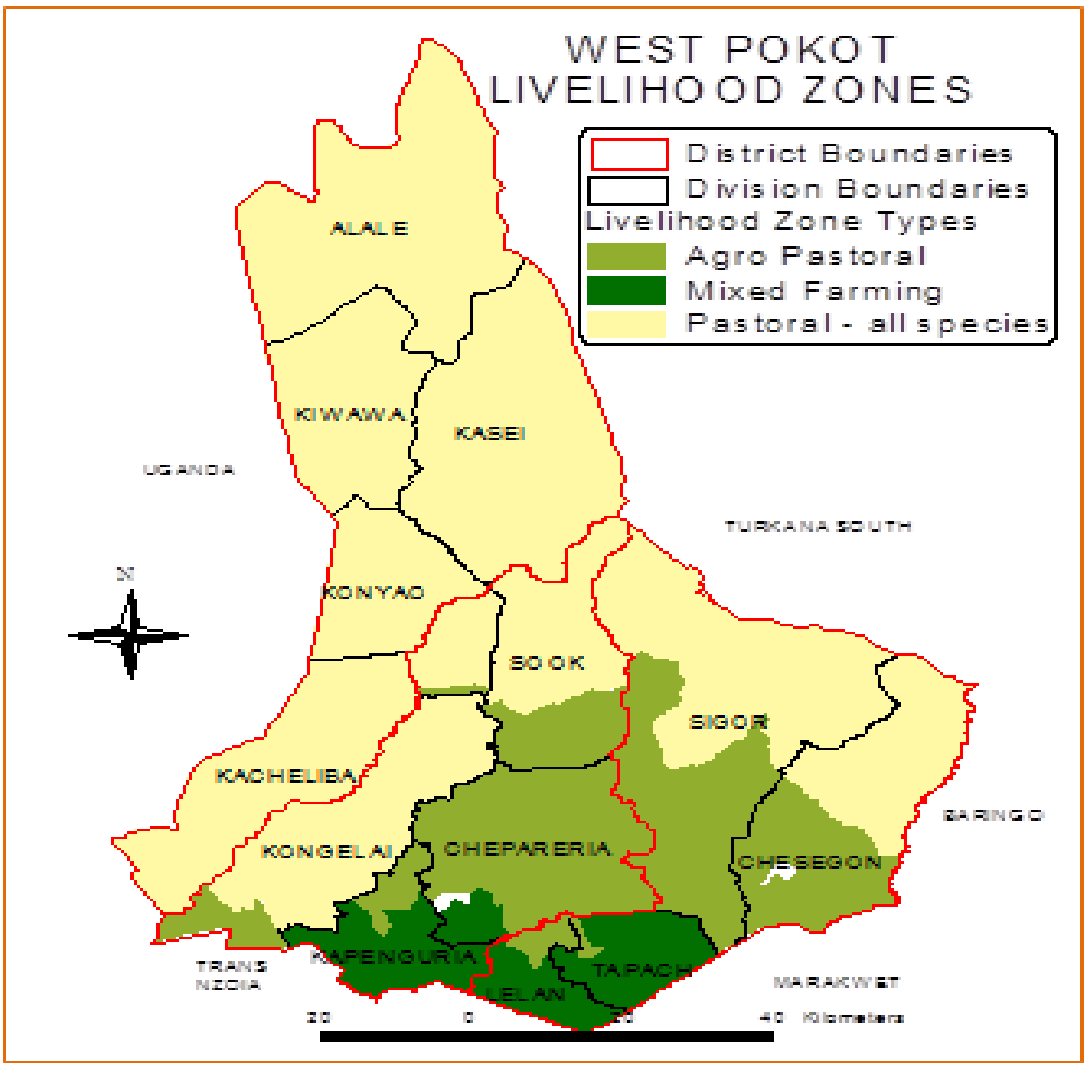

Figure 1: A map of West Pokot County Livelihood Zones

1.2 Rationale for the Coverage Survey

Previously, SLEAC assessment was conducted in 2013 to map and identify IMAM coverage in West Pokot County. The assessment identified overall programs point coverage as follows; OTP 21.7 %(12.7%-30.7%) and SFP point coverage 10.0 %(C.I 6.7%-13.3%). Central Pokot

Sub-county had the lowest coverage for both OTP and SFP programs. The SLEAC findings recommended an in-depth SQUEAC assessment that was conducted in 2014 in Central Pokot Sub County and identified the barriers and boosters for the low coverage. The two coverage assessments (SLEAC and SQUEAC) gave recommendations that if implemented at scale would increase access to OTP and SFP in the county. After implementing recommendations for SLEAC and SQUEAC assessments for approximately 6 years and 5 years respectively, it was important to conduct a coverage assessment and evaluate the IMAM program coverage.

The SLEAC was to inform on the specific Sub-counties with areas of high and low coverage and give a bearing on which sub county to conduct a SQUEAC. The IMAM coverage assessment was also to give recommendations that will be used to reform the low coverage program and improve access/ coverage.

1.3 Objectives of the SLEAC Survey

The main objective of SLEAC survey was to classify IMAM programs in West Pokot County.

Specific objectives was:

1. To inform overall SAM and MAM coverage for West Pokot County using wide area coverage estimator
2. To help identify areas of high and low SAM and MAM coverage by classifying the sub-counties
3. To capacity build MOH, ACF and key partners on how to conduct wide area survey (SLEAC)
4. To share lessons learnt and develop recommendations based on findings

2.0 Methodology Approach

2.1 Overview

SLEAC is a rapid low-resource survey method that classifies (e.g. low, moderate or high) coverage at the service delivery unit (SDU) level, which in the case of West Pokot is the sub-county. The sub-counties were selected as units of classification because service delivery is managed at sub-county level. SLEAC requires small sample sizes (e.g. n ≤ 40) to make reliable classifications per SDU. SLEAC can also estimate coverage over several service delivery units hence ideal for assessing the overall coverage across the different sub-counties of West Pokot County.

2.2 SLEAC primary sampling units (PSUs)

SLEAC primary sampling Units (PSUs) are the most basic administrative units within a sub county from which the target population was sampled. Villages were used as the PSUs in this assessment. The county has a total of 1503 villages that were sampled. The figure below shows detailed information on the number of villages in each sub county.

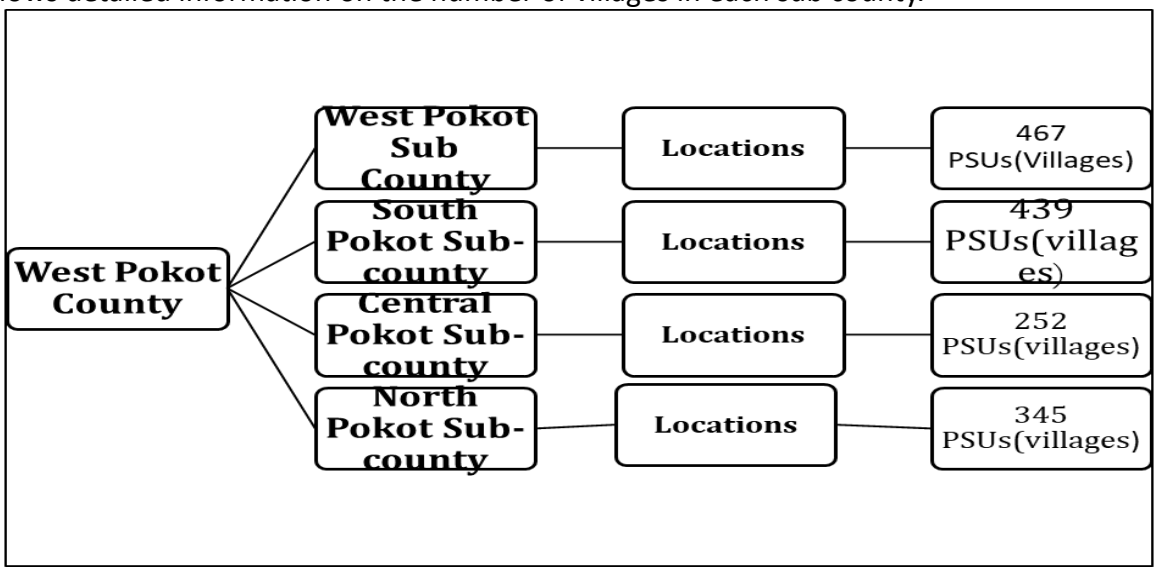

Figure 2: West Pokot County Primary Sampling Units (PSUs)

2.3 SLEAC survey sample design

A two stage sampling was used in this assessment.

First Stage Sampling Method: The first stage sample was the PSUs (villages) to be surveyed in each of the sub-counties of West Pokot County. This method involved a *systematic spatial sampling* of villages from a complete list of villages per sub-county stratified by administrative units such as locations or sub-locations and a population size was obtained. This included grouping villages in each sub-county according to their sub-location. Selection of villages to sample was done by systematically selecting villages from this stratified list beginning with the village found on a randomly determined starting position on the list. Subsequent villages were then selected based on a constant sampling interval until the required number of villages to sample was reached.

The average population per village was obtained using the following formulae and findings tabulated as shown in the table below.

Average population per village=Total population (all ages) in a sub-county
Number of villages (PSUs) in the sub County

Table 2: Average population per village

Sub county	Population	No. of villages	Average Population/village
West Pokot	201,891	467	432
South Pokot	188,218	439	429
Central Pokot	114,770	252	455
North Pokot	142,245	345	412

Sample size: The target sample size for SLEAC in each sub-county was determined using an LQAS sampling calculator found in http://www.brixtonhealth.com/hyperLQAS.html. Based on this minimum sample size requirement, appropriate number of villages to sample was estimated using the following formula:

$$n_{villages} = \frac{Target\ sample\ size}{Averege\ village\ population_{All\ ages} \times \%\ under\ 5 \times SAM\ prevalence}$$

Using this formula above the number of villages to be sampled by sub-county were as follows:

Table 3 : Sample Sizes and Number of Villages to Sample

No	**Sub-County**	Total population (All ages) {growth rate-3.2%}	Average population per village	6-59 months population {19.0% (DHIS, 2019) * 90% of U5s)	SAM prevalence by MUAC **1.45%** (June SMART, 2019)	N – Expected **SAM** cases by prevalence of **1.45% (Round down)**	Target sample size (LQAS sampling plan calculator)	**n** villages (sampled villages)
1	Pokot West	**201,891**	432	34524	1.45%	500	37	35
2	South Pokot	**188,218**	429	32,186	1.45%	466	37	35
3	Central pokot	**114,770**	455	19,626	1.45%	284	37	33
4	North Pokot	**142,245**	412	24,324	1.45%	352	37	37
TOTAL		**647,124**						**140**

Sampling interval: The sampling interval for the systematic sampling of villages was determined by dividing the total number of villages in each sub-county by the number of villages that needed to be sampled as per calculations above. The sampling intervals used for the systematic sampling in each of the sub-counties are show in *Table 4*.
Systematic random sampling was used to select the villages from a list of all villages per Sub County.
The "**n"th** interval value

$$\frac{Number\ of\ villages\ of\ subcounty}{Number\ of\ villages\ to\ be\ sampled\ in\ the\ Sub-county}$$

First village in the list were randomly selected between 1 and the nth of sub county list. Then every nth.

Table 4 : Sampling Interval per Sub-County

Sub-county	No. of villages	n villages (sampled villages)	nth Village (sampling interval	nth village
West Pokot	467	35	13.3	Every 13th
South Pokot	439	35	12.5	12th
Central Pokot	252	33	7.6	7th
North Pokot	345	37	345/37	9th

Second Stage Sampling Method: This method is usually either an active and adaptive case finding method or a house-to-house screening. It involves active and adaptive case finding in which malnourished children are searched for or measured using MUAC tape, weighing scale, height board and examination of bilateral pitting oedema.
For this survey, house-to-house method within the community was applied and used exclusively to ensure the sample size for SAM was reached. A questionnaire was filled for all identified malnourished cases (SAM/MAM) that were not in program.

Survey Team Composition and Training

A two-day training on SLEAC methodology done with technical support from NITWG. This meant to equip the teams with the skills necessary to collect data in the village during the wide area survey using the relevant SLEAC data collection tools

The team was divided into 14 teams comprising one core team member who was the team leader and an enumerator. Once the team arrived in the villages a village elder was identified to work with the team as a village guide. Upon completion of the wide area survey the team met centrally to collate the information. In addition there were four (4) supervisors whose responsibilities was to oversee the whole process of the survey.

In total 45 participants (11 male and 34 female) were trained and equipped with knowledge and skills on SLEAC methodology and data collection. Among the those trained were; 9 nutrition officers, 2 nurses, 1 Clinical Officer, 8 partner staff (ACF and UNICEF) and 25 nutrition Volunteers/Interns.

2.4 Coverage Standards and Decision Rules

In order to classify coverage, MOH and ACF set standards which were in line with the SPHERE standards for measuring rural therapeutic feeding programmes. The following coverage standards using 3tier classification, which identifies very high and very low SDUs, were decided as most appropriate:

- <20% Low coverage
- ≥20%-<50%Moderat coverage
- ≥50% High coverage

These standards were used to create decision rules using the following rule-of-the thumb formulae below:

$$d1 = n \times \frac{p1}{100}$$

$$d2 = n \times \frac{p2}{100}$$

The decision rules were also used to classify coverage in each of the four sub-counties where *n* is the sample size achieved by the survey, p_1 the lower threshold (20%) and p_2 is the upper threshold (50%).

A threshold value (d) was established to determine the number of cases that needed to be covered in order for coverage to be satisfactory.

- If the number of covered cases exceeds the threshold value (d) then coverage is classified as being satisfactory.
- If the number of covered cases found does not exceed the threshold value then the coverage is classified as being unsatisfactory.

2.5 Coverage Estimator

The West Pokot IMAM currently faces issues of weak community mobilisation. There is no active case finding and recruitment in all the four sub-counties due to very few CHVs trained and almost none incentivized per IMAM program. This translates to CHVs working mostly at the health facility rather than in the communities finding cases. Therefore, it was agreed that *effectiveness of timely case finding and recruitment estimator* previously *point coverage estimator* is the most appropriate estimator to use for reporting coverage as it provided a snapshot of programme performance at the time of the survey calculated using the following formula:

$$\textbf{\textit{Effectiveness of Timely case finding and Recruitment Coverage}} = \frac{\textbf{\textit{Number of Cases Covered (c)}}}{\textbf{\textit{Number of total Cases found (n)}}}$$

Single coverage estimator was also calculated for comparability using the following formula:

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

3.0 Results of the SLEAC Survey

3.1 Overview of the Wide Area Survey findings

During the wide area survey, 140 villages were visited for case finding across the four sub-counties in West Pokot County. In total 4,922 children (2,431 male and 2,491 female) were screened for malnutrition during the house-to-house case finding. Non-covered questionnaire would be administered to each caregiver of an identified non-covered SAM or MAM case; specifying why they were not seeking treatment. A total of 134 SAM cases (35 in OTP program and 99 not in program) and 10 cases recovering in program were identified. On the other hand, MAM cases identified were 640; 121 in program and 519 not in program. In addition, 13 cases were recovering in SFP program.

Table 5: A Summary of the Wide Area Survey Findings

Sub-county	Male	Female	Total screened	SAM In	SAM Not covered	MAM In	MAM Not covered
P. North	408	347	**755**	15	29	40	190
P. Central	887	755	**1642**	7	27	33	145
P. South	830	707	**1537**	4	20	22	89
P. West	391	334	**725**	9	23	26	95
TOTAL	**3,897**	**3,319**	**7,216**	**35**	**99**	**121**	**519**

3.2 Coverage Classification

Threshold (d) calculation to classify coverage in the sub-counties was done based on the set coverage standards. The three-tier classification method, was considered to be appropriate for identifying very high coverage service delivery units and very low coverage service delivery units for inclusion in subsequent SQUEAC investigations was applied *(see section 2.3 on the formula for decision rule and thresholds).* Both Single coverage estimator and Effectiveness of timely case-finding and recruitment estimator were both used to calculate the decision rule. Effectiveness of timely case-finding and recruitment estimator was prioritized because contextual data showed inadequate case finding and recruitment and some long lengths of stay due to late admission. Pokot Central and South had the lowest coverage in OTP and SFP coverage among the four sub-counties; classified as low SAM and MAM coverage areas. *Tables 6* and *8* show effectiveness and single coverage classification for OTP in each sub-country, while *Tables 7* and *9* show effectiveness and single coverage classification for SFP in each sub-country.

Table 6: Classifying Coverage OTP Using Effectiveness of Timely Case-finding & Recruitment

Sub-county	Cin+Cout (n)	Cin (c)	Cout	Rin	Rout	Cin+Rin	Cin+Cout+ Rin+Rout	P1	d1	Is c>d1	p2	d2	Is c>d2	Coverage
P. North	46	17	29	6	4	23	56	0.2	9.2	Yes	0.5	23	No	Moderate
P. Central	32	5	27	2	2	7	36	0.2	6.4	No	0.5	16	No	Low
P. South	24	4	20	0	0	4	24	0.2	4.8	No	0.5	12	No	Low
P. West	32	9	23	2	1	11	35	0.2	6.4	Yes	0.5	16	No	Moderate
Total	**134**	**35**	**99**	**10**	**9**	**45**	**153**	**0.2**	**26.8**	**Yes**	**0.5**	**67**	**No**	**Moderate**

Table 7: Classifying Coverage OTP Using Single Coverage Estimator

Sub county	Cin+Cout	Cin	Cout	Rin	Rout	Cin+Rin (c)	Cin+Cout+ Rin+Rout (n)	P1	d1	Is c>d1	p2	d2	Is c>d2	Coverage
P. North	46	17	29	6	4	23	56	0.2	11.2	Yes	0.5	28	No	Moderate
P. Central	32	5	27	2	2	7	36	0.2	7.2	No	0.5	18	No	Low
P. South	24	4	20	0	0	4	24	0.2	4.8	No	0.5	12	No	Low
P. West	32	9	23	2	1	11	35	0.2	7.0	Yes	0.5	17.5	No	Moderate
Total	**134**	**35**	**99**	**10**	**9**	**45**	**153**	**0.2**	**30.6**	**Yes**	**0.5**	**76.5**	**No**	**Moderate**

Table 8: Classifying Coverage SFP Using Effectiveness of Timely Case-finding & Recruitment

Sub county	Cin+Cout (n)	Cin (c)	Cout	Rin	Rout	Cin+Rin	Cin+Cout+ Rin+Rout	P1	d1	Is c>d1	p2	d2	Is c>d2	Coverage
P. North	230	40	190	3	4	43	237	0.2	46	No	0.5	115	No	Low
P. Central	178	33	145	2	2	35	182	0.2	35.6	No	0.5	89	No	Low
P. South	111	22	89	1	1	23	113	0.2	22.2	No	0.5	55.5	No	Low
P. West	121	26	95	7	8	33	136	0.2	24.2	yes	0.5	60.5	No	Moderate
Total	**640**	**121**	**519**	**13**	**18**	**134**	**671**	**0.2**	**128**	**No**	**0.5**	**320**	**No**	**Low**

Table 9: Classifying Coverage SFP Using Single Coverage Estimator

Sub county	Cin+Cout	Cin	Cout	Rin	Rout	Cin+Rin (c)	Cin+Cout+ Rin+Rout (n)	P1	d1	Is c>d1	p2	d2	Is c>d2	Coverage
P. North	230	40	190	3	4	43	237	0.2	47.4	No	0.5	118.5	No	Low
P. Central	178	33	145	2	2	35	182	0.2	36.4	No	0.5	91	No	Low
P. South	111	22	89	1	1	23	113	0.2	22.6	yes	0.5	56.5	No	Moderate
P. West	121	26	95	7	8	33	136	0.2	27.2	yes	0.5	68	No	Moderate
Total	**640**	**121**	**519**	**13**	**18**	**134**	**671**	**0.2**	**134.2**	**No**	**0.5**	**335.5**	**No**	**Low**

3.3 Coverage Mapping

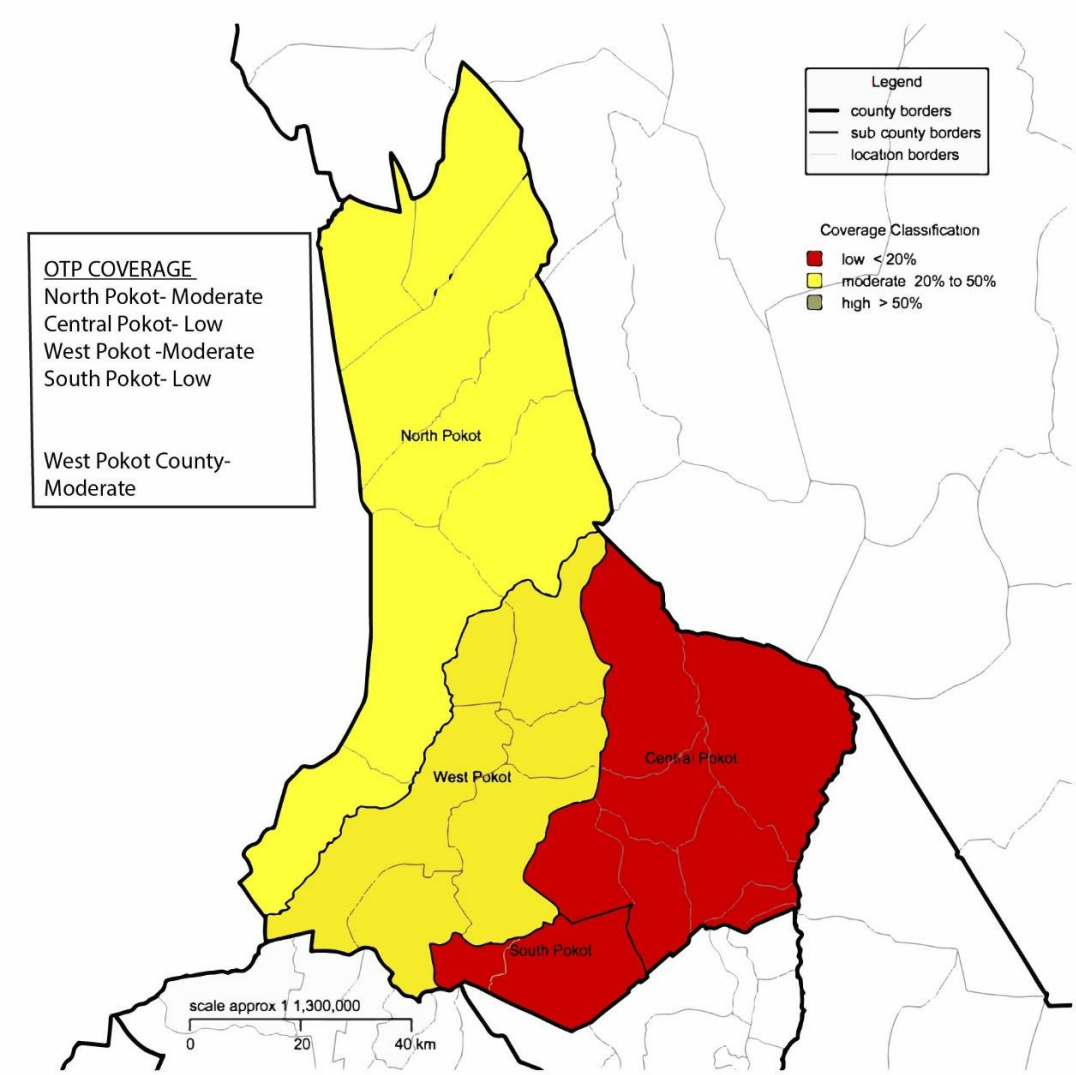

Figure 3 : Map of OTP coverage classification by sub-county

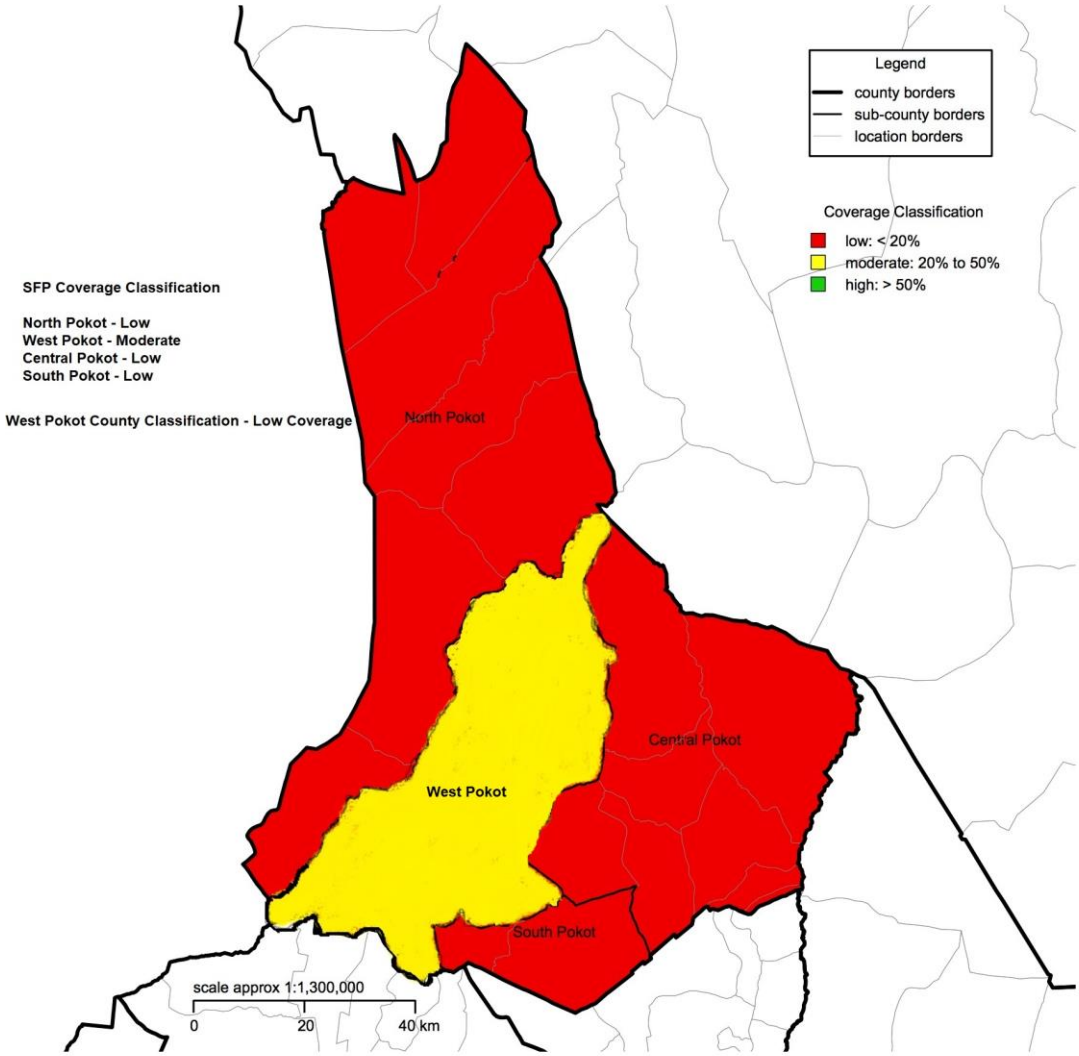

Figure 4 : Map of SFP coverage classification by sub-county

In general, none of the four sub-counties achieved high coverage classification. The point coverage for SAM was moderate in North Pokot and West Pokot whilst low in South Pokot and Central Pokot. The overall county point coverage classification was moderate. MAM point coverage classification was found to be low across all the four sub-counties and the county coverage classification was also low.

Single coverage classification was also done during the analysis with the core team and has been included in this report *(see Tables 10, 12* and *14)* not for reporting purposes, but for future reference for the training participants.

3.4 Coverage Estimation

3.4.1 Overall County Coverage Estimates

County-level coverage estimation done using a posterior weighting approach:

$$\frac{\text{Number of cases estimated in each surveyed sub-county}}{\text{Total number of cases across all sub-counties}}$$ [1]

Both Single coverage estimator and Effectiveness of timely case-finding and recruitment estimator were both used to give the overall coverage estimate for West Pokot County. Effectiveness estimator was prioritized because contextual data showed inadequate case finding and recruitment, defaulting and some late admissions into IMAM program. Weighted analysis for OTP and SFP coverage for the entire West Pokot County was as shown in *tables 10, 11, 12, 13* and *14*.

Table 10: Overall Weighted Coverage Estimation

Program	Single Coverage Estimate	Effectiveness of Timely case-finding and Recruitment Indicator:
OTP	27.4% (19.9% - 34.9%)	24.7% (17.2% - 32.4%)
SFP	20.9% (17.4% - 24.4%)	19.6% (16.1% - 23.1%)

Overall Coverage for OTP and SFP program in West Pokot County was below the SPHERE indicator for coverage in rural setting (50%).

3.4.2 OTP Coverage Estimation

Table 11: OTP Coverage Estimation using effectiveness of Timely Case-finding and Recruitment Estimator

Sub-county	Total Expected SAM	Weighting factor	Identified cases				Sample (n)	Covered (c)	Coverage Proportion	Weighted Coverage
	N	**w**	**Cin**	**Cout**	**Rin**	**Rout**	**Cin + Cout**	**Cin**	**c / n**	**w*c / n**
P. North	352	0.22	15	29	6	4	44	15	0.341	0.0749
P. Central	284	0.18	7	27	2	2	34	7	0.206	0.0365
P. South	466	0.29	4	20	0	0	24	4	0.167	0.0485
P. West	500	0.31	9	23	2	1	32	9	0.281	0.0878
TOTAL	1602	1.00	35	99	10	7	134	35		**0.2477**

Overall coverage estimate using the effectiveness of Timely **Case-finding and recruitment estimator 24.7% (17.2% - 32.4%)**

[1] *Myatt et al, 2012*

Table 12: OTP Coverage Estimation using Single Coverage Estimator

Sub-county	Total Expected SAM	Weighting factor	Identified cases				Sample (n)	Covered (c)	Coverage Proportion	Weighted Coverage
	N	**w**	**Cin**	**Cout**	**Rin**	**Rout**	**Cin+Cout+ Rin+Rout**	**Cin+Rin**	**c / n**	**w*c / n**
P. North	352	0.22	15	29	6	4	54	21	0.389	0.0854
P. Central	284	0.18	7	27	2	2	38	9	0.237	0.0420
P. South	466	0.29	4	20	0	0	24	4	0.167	0.0485
P. West	500	0.31	9	23	2	1	35	11	0.314	0.0981
TOTAL	1602	1.00	35	99	10	7	151	45		**0.2740**

OTP Coverage Single Coverage Estimator **27.4% (19.9% - 34.9%)**

3.4.3 SFP Coverage Estimates

Table 13: SFP Coverage Estimation using effectiveness of Timely Case-finding and recruitment estimator

Sub-county	Total Expected SAM	Weighting factor	Identified cases				Sample (n)	Covered (c)	Coverage Proportion	Weighted Coverage
	N	**w**	**Cin**	**Cout**	**Rin**	**Rout**	**Cin + Cout**	**c**	**c / n**	**w*c / n**
P. North	352	0.22	15	29	6	4	230	40	**0.174**	**0.0382**
P. Central	284	0.18	7	27	2	2	178	33	**0.185**	**0.0329**
P. South	466	0.29	4	20	0	0	111	22	**0.198**	**0.0576**
P. West	500	0.31	9	23	2	1	121	26	**0.215**	**0.0670**
TOTAL	**1,602**	**1.00**	**35**	**99**	**10**	**7**	**640**	**121**		**0.1958**

Overall coverage estimate using the effectiveness of Timely **Case-finding and recruitment estimator 19.6% (16.1% - 23.1%)**

Table 14: SFP Coverage Estimation using Single Coverage Estimator

Sub-county	Total Expected SAM	Weighting factor	Identified cases				Sample (n)	Covered (c)	Coverage Proportion	Weighted Coverage
	N	**w**	**Cin**	**Cout**	**Rin**	**Rout**	**Cin+Cout +Rin+Rout**	**Cin+Rin**	**c / n**	**w*c / n**
P. North	352	0.22	15	29	6	4	237	43	**0.181**	**0.0399**
P. Central	284	0.18	7	27	2	2	182	35	**0.192**	**0.0341**
P. South	466	0.29	4	20	0	0	113	23	**0.204**	**0.0592**
P. West	500	0.31	9	23	2	1	136	33	**0.243**	**0.0757**
TOTAL	**1,602**	**1.00**	**35**	**99**	**10**	**7**	**668**	**134**		**0.2089**

SFP Coverage Single Coverage Estimator **20.9% (17.4% - 24.4%)**

3.5 Chi Square Test

Chi-square test statistics was done to **test homogeneity or heterogeneity** of both **OTP and SFP coverage in West Pokot County** using this formula:

$$\frac{[(O - E) \wedge 2]}{E}$$

Where, **O** is **observed** value (covered cases) and **E** is the **Expected** Value.

Both OTP and SFP Program coverage were found to be homogenous across the sub-counties in West Pokot County *(see table 9)*.

Table 15: Chi-square test statistics for OTP and SFP Homogeneity

Program	Chi Square Value	P value	Homogeneity
OTP	3.20	0.3667	OTP and SFP Program Coverage is homogenous across all the sub-counties in West Pokot County
SFP	0.9	0.8143	

3.6 Barriers to IMAM Service Uptake and Access

The survey data compiled from questionnaires *(Annex 3)* administered to both SAM and MAM cases not covered by the programme identified different barriers for the current West Pokot IMAM programme. The barriers varied from sub-county to sub-county as shown in *Figures 5* to *12.* In North Pokot, the major barrier identified was lack of awareness for caregivers on programs that they can take their children for treatment for SAM and lack of awareness whether their children were malnourished for MAM. In South Pokot, the main barriers were lack of awareness whether their children were malnourished for both SAM and MAM. In Central Pokot, it was lack of programme awareness by carers on where to take their sick children and whether their children were malnourished for both SAM and MAM cases respectively. In West Pokot, it was lack of programme awareness by carers on where to take their sick children and whether their children were malnourished for both SAM and MAM cases respectively were reported as the main reason why they did not attend the programmes.

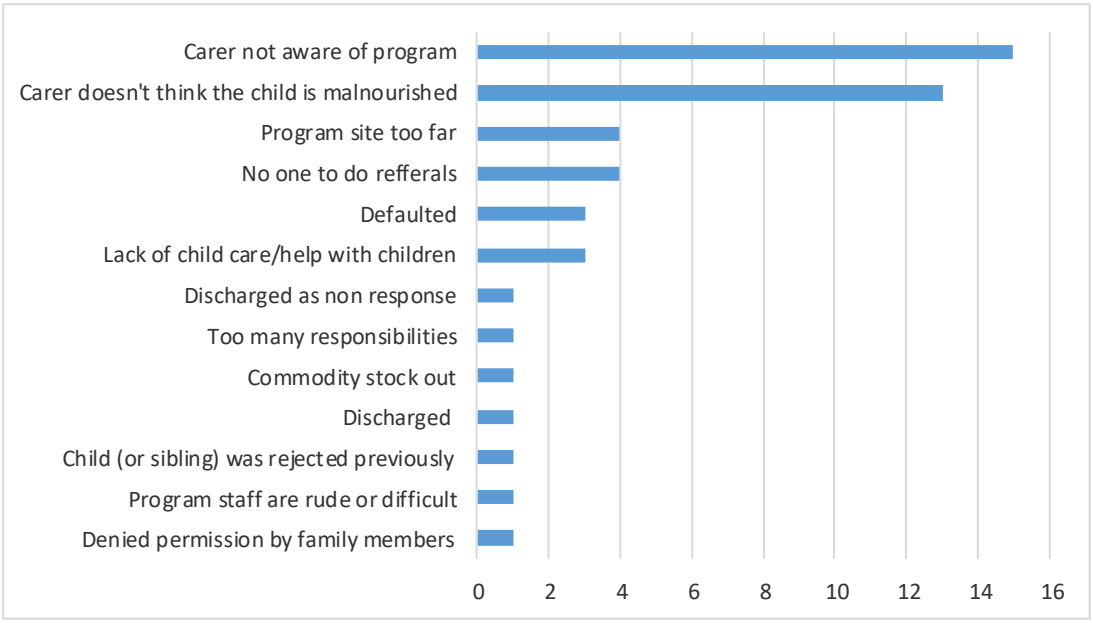

Figure 5: Barriers for OTP coverage in North Pokot

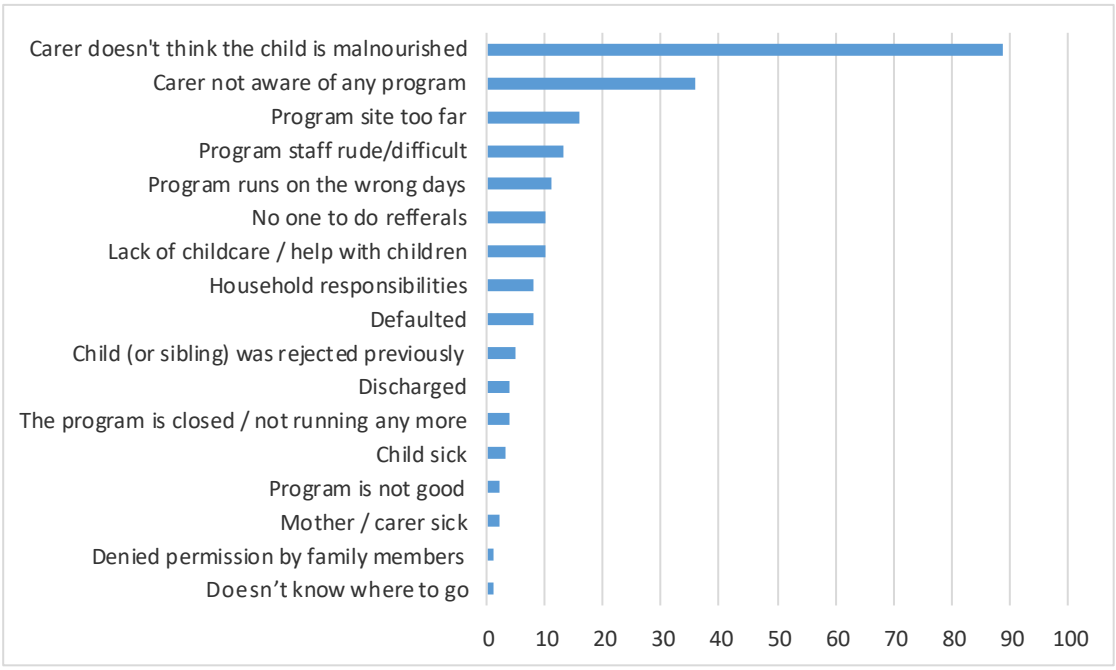

Figure 6: Barriers for SFP coverage in North Pokot

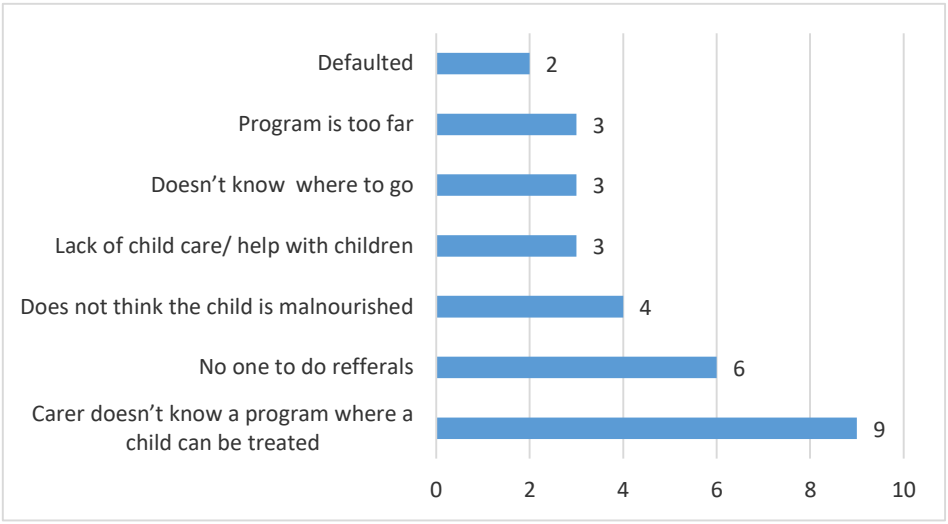

Figure 7: Barriers for OTP coverage in Central Pokot

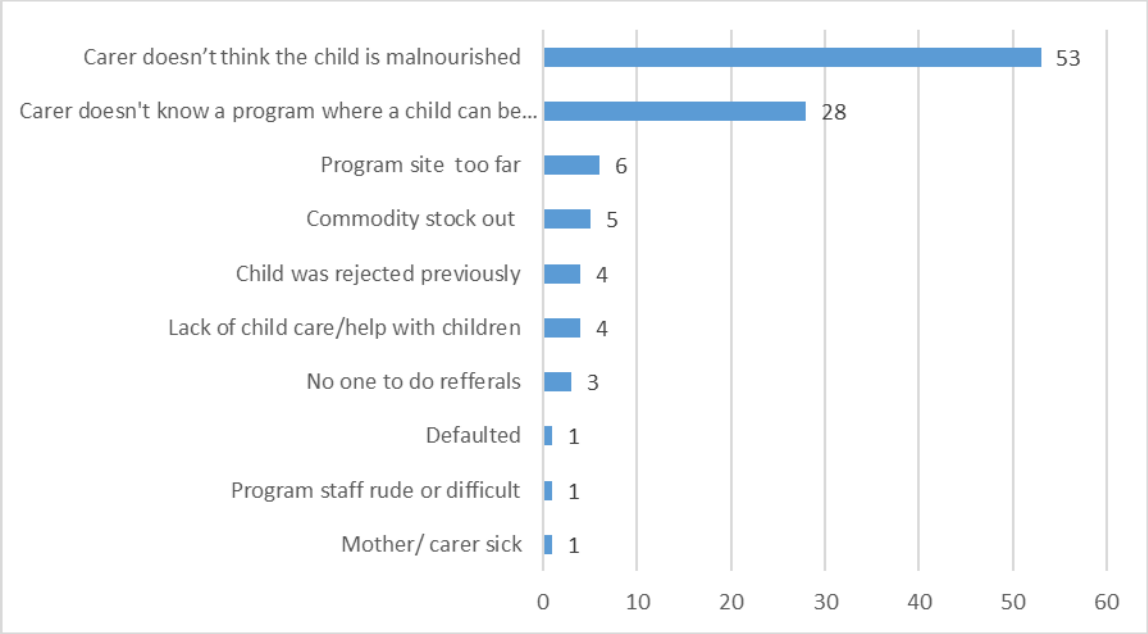

Figure 8: Barriers for SFP coverage in Central Pokot

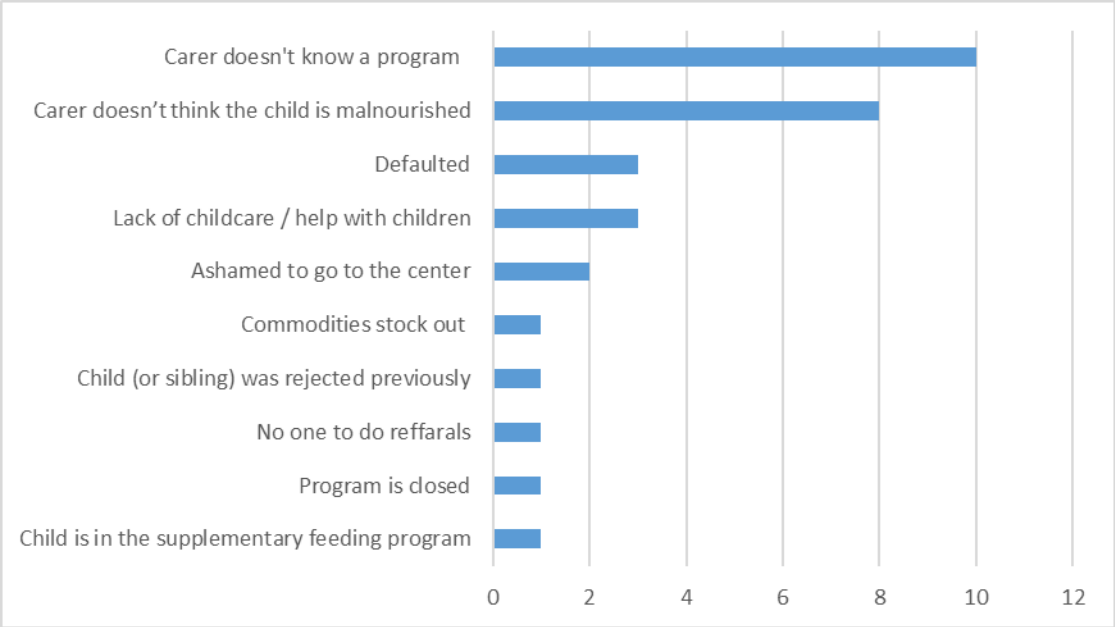

Figure 9: Barriers for OTP coverage in West Pokot

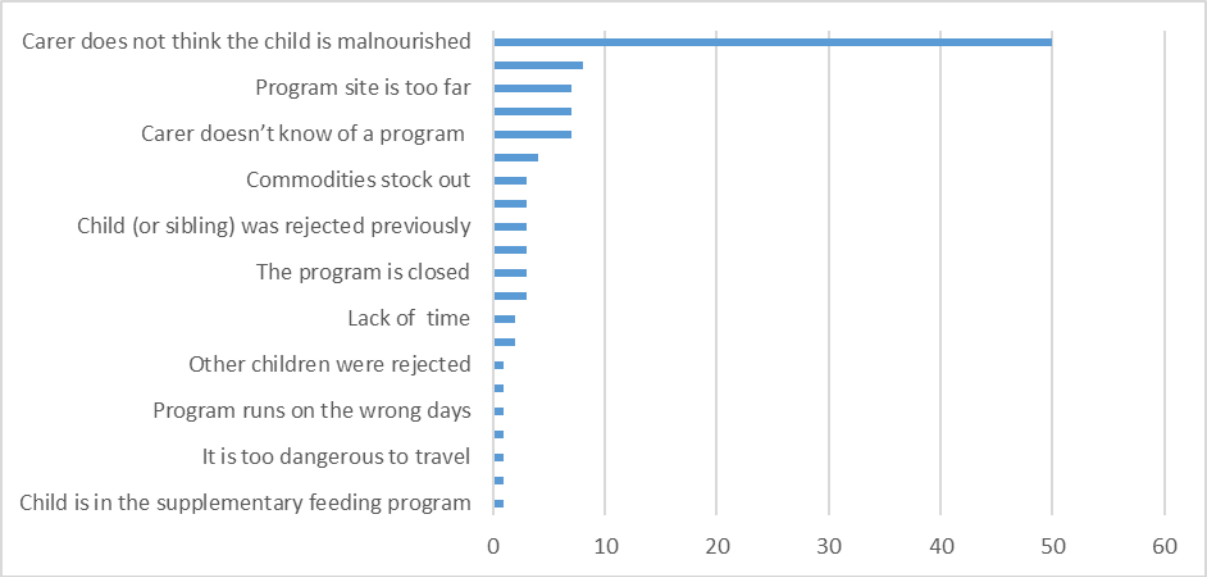

Figure 10: Barriers for SFP coverage in West Pokot

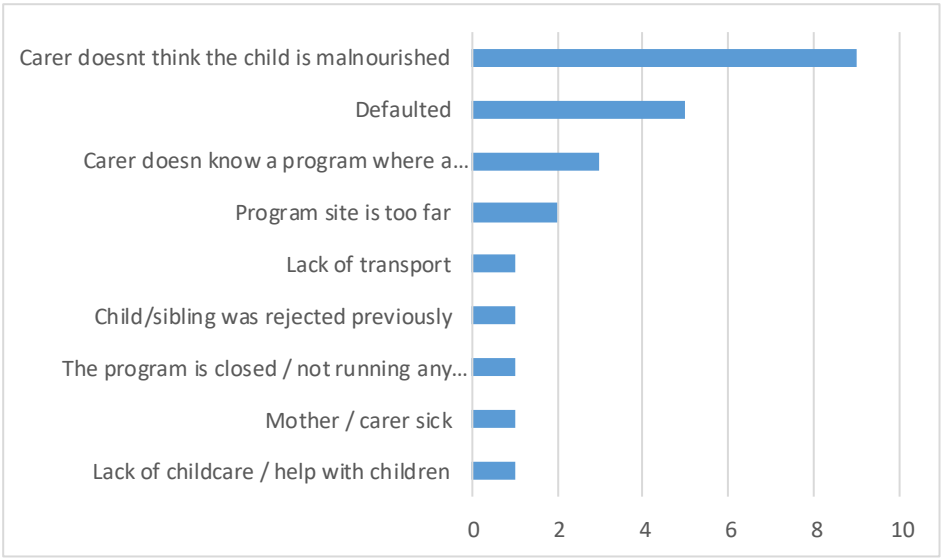

Figure 11: Barriers for OTP coverage in South Pokot

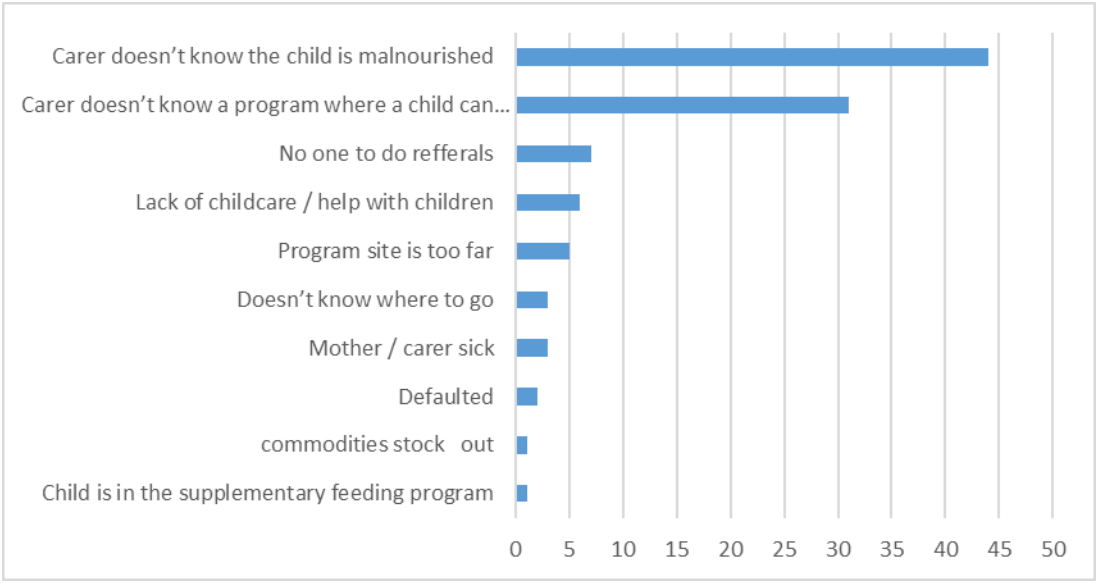

Figure 12: Barriers for SFP coverage in South Pokot

4.0 Discussion and Recommendations

4.1 Discussion

Overall, *effectiveness of timely case finding and recruitment* coverage for both SAM and MAM in all the four sub-counties did not reach a high coverage classification. The coverage for SAM was moderate in North Pokot and West Pokot whilst low in South Pokot and Central Pokot sub-counties. The overall county coverage classification for SAM was moderate. MAM coverage classification on the other hand was found to be low across all the sub-counties except West Pokot translating into a low coverage classification for MAM for the whole county. The overall weighted coverage estimates for OTP and SFP program in West Pokot County were 24.7% (17.2% - 32.4%) and 19.6% (16.1% - 23.1%) respectively. A chi-square statistics test calculated showed that both OTP and SFP Program coverage were homogenous across the sub-counties in West Pokot County.

It is important to note that the health systems nearly immobilized in 2019 following termination of employment for over 80 percent of the health workforce in West Pokot County. At the time of the assessment, health services had not fully normalized including IMAM services at the health facility and community level. In addition, majority of the newly recruited staff had not trained on IMAM services and community linkage hence low coverage.

The majority of barriers identified during the current SLEAC survey can be attributed to the weak community mobilisation component of the IMAM program in West Pokot. The weak community-health facilities linkage prior to the emergency response due to low coverage of functional Community Health Units and community activities in the county contribute to low IMAM coverage. Furthermore, little or no motivation of the CHVs to conduct early screening for case finding, beneficiaries' follow up and defaulter tracing has been associated with low IMAM program coverage in the County. This therefore means that the programme should invest adequate resources (time, financial and human) into community-based activities to promote programme understanding and adherence to treatment regimens.

In summary, it would also be ideal to conduct SQUEAC investigations in sub-counties classified with low SAM and MAM coverage, in this case Central Pokot Sub-county, to understand more of the identified barriers which could be used to reform the programme.

4.2 Recommendations

Based on the identified barriers the following recommendations were suggested;

Gaps in coverage based on Reasons for Non-Attendance	Recommendation	Intervention (Activities)	Responsible
Lack of awareness of IMAM program by the key community leaders	• Advocacy meetings at all levels with all partners in nutrition and health programmes and community leaders such as chiefs, village elders, and religious leaders.	• Sensitization sessions during barazas • Intensified sensitization at the household levels by the CHVs	MOH/Partners
	• IMAM programme and malnutrition awareness	• Use of mass media local radio stations and community dialogues to raise programme awareness and improve community's understanding/recognition of malnutrition.	MOH/Partners
Weak community-health facility linkages	• Strengthen CHVs activities	• Advocate for counties to invest in CHUs to support CHVs activities at the community level	MOH/Partners
Untimely case-finding and recruitment into IMAM Program	• Increase opportunities for timely case-finding	• Orientation of community mother-to-mother support groups and father-to-father support groups in active case finding.	CHVs/Health workers/Caregivers
	• Upscale mother led MUAC	• Encourage care givers to do self-referrals to health facilities • Encourage the caregiver to take the child to the volunteer in their settlement for MUAC or oedema check or take the child to OTP/SFP every time they suspect that s/he is becoming malnourished	Caregivers/community

	• Ensure integration of screening for malnutrition in the existing services to ensure that there are no missed opportunities	• Intensify Growth monitoring and screening in ECDE Centres, and during Immunization and child welfare clinics etc.	MOH/Partners
High defaulter rates	• Establish defaulter-tracing mechanisms	• Encourage self-referrals by caregivers • Conduct follow up of absentee program beneficiaries before they become defaulters	CHVs/Health Workers
	• Active follow up of defaulters for readmission	• More CHVs to be identified and trained to assist with active case finding and defaulter tracing	CHVs/Health Workers
	• Consistent supply of IMAM Commodities to avoid	• Timely forecasting and submission of commodity requests	MOH/Partners
Long distance to the health facilities	• Scale up IMAM Services and the number of health facilities offering IMAM services	• Increase consistent mobile outreach coverage	MOH/Partners
Feeling of rejection by the health facility when referred by CHVs	• Proper community education on the eligibility criteria for admission into IMAM program	• Ensure that rejected cases are handled carefully and are made to understand reasons for non-admission. • Sensitize CHVs on the admission criteria • Counselling and follow up of cases at risk of malnutrition	CHVs/Health Workers

5.0 APPENDICES

Annex 1: West Pokot SLEAC Training participant list

No.	Name	M/F	Agency	Position
1	Kevina Krop	F	MOH	SCNO
2	Betty Cheyech	F	ACF	Nutrition Officer
3	Ivy Chepkosgei	F	MOH	Nurse
4	Caren Kawertui	F	MOH	Nutrition intern
5	Cherotich Anita	F	MOH	Nutrition intern
6	Mariamu Hazel	F	MOH	Nutrition Volunteer
7	James Kiriri	M	MOH	Nutrition Volunteer
8	Sharleen Njuki	F	MOH	Nutrition intern
9	Bitok Jepkosgei	M	MOH	Nutrition Volunteer
10	Kipkoech Kurgat	M	MOH	Nutrition intern
11	Isaac K. Lopeli	M	MOH	SCNO
12	Jacob Cherr	M	MOH	SCNO
13	Grace Cherotich Lomil	F	MOH	Nutrition Volunteer
14	Nancy Chebet	F	MOH	Nutrition Volunteer
15	Betty C. Kosgei	F	MOH	Part time lecturer
16	Mary Okello	F	ACF	M&E Officer
17	Jacqueline Macharia	F	MOH	NITWG
18	Cheruto Adepa	F	MOH	C O
19	Lokerisa Hellen	F	MOH	Nutrition Volunteer
20	Roselyne Chemariach	F	MOH	Nutrition Volunteer
21	Clare Chepkorir	F	MOH	Nutrition Volunteer
22	Doreen Chebet	F	MOH	Nutrition Volunteer
23	Daniel Kemei Sang	M	MOH	Nutrition Volunteer
24	Yvonne Chematai	F	MOH	Nutrition Volunteer
25	Issa Krop	M	MOH	Nutrition Volunteer
26	Victor Kemtai	M	MOH	Nutrition Volunteer
27	Lorema Salome	F	MOH	Nutrition Volunteer
28	Hildah Kalum	F	MOH	Nutrition Volunteer
29	Claudina Namerio	F	MOH	Nutrition Volunteer
30	Emily Ling'ang'ole	F	MOH	Nutrition Volunteer
31	Leah Chelobei	F	MOH	SCNO
32	Jane Limang'ura	F	MOH	CNC
33	Scholasticah Mwongela	F	ACF	Nutrition Officer
34	Lonah Katul	F	ACF	Nutrition Officer
35	Nick Korir	M	ACF	Logistics officer
36	Caroline Shander	F	ACF	WASH officer
37	Emmy Chepkwony	F	ACF	Seth Officer
38	Salome Tsindori	F	ACF	Nutrition PM
39	Temko Mokung' Faith	F	MOH	Sign languageg interpreter
40	Sharon Jepngetich	F	MOH	Nutrition Volunteer
41	Benard K. Kiplimo	M	MOH	Nurse
42	Jane Molo	F	MOH	Nutrition Volunteer
43	Elsen Cheruto	F	ACF	Nutrition Officer
44	Benedict Pkatey	M	ACF	WASH officer
45	Mercy Lomuk	F	ACF	FSL officer
46	Elizabeth Cherop	F	UNICEF	Nutrition Support officer

Annex 2: West Pokot SLEAC Schedule of events

Date	Activity	Location	Responsible
5th -10th September , 2019	Development of SLEAC methodology & compilation of Recommendations from the previous coverage assessments	West Pokot	ACF/ MOH/ UNICEF
18th September , 2019	Validation of the methodology by CNTF	Kapenguria	ACF/ MOH/ UNICEF
TBD	Validation of methodology by NIWG	Nairobi	ACF/ MOH/ UNICEF
16th -19th September 2019	Collection of the secondary data & identification of survey team (HRIOs, nurses, Nutrition, PHOs and CHEWS)	West Pokot	ACF/ MOH/ UNICEF
23rd -24th September 2019	Briefing of survey team on field procedures	Kapenguria	ACF/ MOH/ UNICEF
25th September - 12th October 2019	Data collection and Analysis (analysis to be done on the final day of data collection)	Entire county	ACF/ MOH/ UNICEF
4th November 2019	Presentation of results and findings at County level	Kapenguria	ACF/ MOH/ UNICEF
7th November 2019	National level/Report writing and submission	Nairobi	ACF/ MOH/ UNICEF

Annex 3: Questionnaire for carers of SAM and MAM cases not in the program

Sub-county:_____Village_____

Team No._____Date_____

1. Do you think that this child is malnourished? 1. YES 2. NO

2. Do you know of a program that can treat malnourished children?

1. YES 2. NO

IF YES...

3. What is the name of this program?

_____

4. Where is this program?

_____

5. Has this child ever been to the program site or examined by program staff? 1. Yes 2. NO

□

If YES...

6. Why is this child not in the program now?

□ Previously rejected

□Defaulted

□ Discharged as cured

□ Discharged as not cured

□ *Other reasons*_____

7. If YES in Qn 2 and NO in Qn 5 then why is this child not attending this program?

*Do **not** prompt. Probe 'Any other reason?' (I. YES 2. NO)*

□ Program site is too far away

□ No time/too busy to attend the program

□ Carer cannot travel with more than one child

□ Carer is ashamed to attend the program

□ Difficulty with childcare

□ The child has been rejected by the program

□ *Other reasons*_____

Annex 4: Village MUAC screening summary

Date……Sub County……..……..

Household Number	Child ID	Sex of Child (M/F)	Age in Months	MUAC Measurement	In Program YES or NO

Village……

Name of Data Collector……..Name of Team Leader…….

Annex 5: Wide Area Survey Tally sheet

Sub-county: _______________Village: ________________________ Team: ________Date:______________

# OF SAM CASES FOUND (MUAC ≤11.4/oedema)	SAM CASES **IN** OTP (MUAC ≤11.4/oedema)	IN OTP PROGRAM **BUT RECOVERED** (MUAC ≥11.5 or no oedema)	# OF MAM CASES FOUND (MUAC ≥11.5-≤12.4)	MAM CASES IN SFP (MUAC ≤12.4)	IN SFP PROGRAM BUT RECOVERED (MUAC ≥12.5)
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Total children 6-59 months screened					
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000

Annex 6:Wide area survey summary sheet

SLEAC SUMMARY SHEET

Date:……...Sub-County……..Name of team……..

Leader…….. Team no…….....

Name of the village	Total number of SAM cases found (MUAC <11.5/ oedema)	Total number of SAM cases in OTP (MUAC <11.5/ oedema)	Total number in OTP program but recovering (MUAC ≥ . or no oedema)	Total number of MAM cases found (MUAC ≥11.5-<12.5)	Total number of MAM cases in SFP (MUAC <12.5)	Total number of cases in SFP program but recovering (MUAC ≥12.5)	Total children 6-59 months screened