NAME OF PROGRAMME: Humanitarian Support to Vulnerable Populations in Pakistan

LOCATION: Kohat District, Pakistan

DATE OF INVESTIGATION: June 2014

AUTHOR(S): Trenton Dailey-Chwalibóg, Lenka Blanárová

TYPE OF INVESTIGATION: SQUEAC, program coverage assessment

TYPE OF PROGRAMME: OTP for SAM

IMPLEMENTING ORGANISATION: ACF-International

Humanitarian Aid
and Civil Protection

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ABBREVIATIONS

CMAM	Community Management of Acute Malnutrition
DoH	Department of Health
GAM	Global Acute Malnutrition
FATA	Federally Administered Tribal Areas
FSL	Food Security and Livelihoods
TDP	Temporary Dislocated person
IVAP	Internal Vulnerability Assessment and Profiling
KPK	Khyber Pakhtunkhwa Province
LHW	Lady Health Worker
LQAS	Lot Quality Assurance Sampling
OTP	Outpatient Therapeutic Feeding Program
PLW	Pregnant and Lactating Women
SAM	Severe Acute Malnutrition
SFP	Supplementary Feeding PRogram
UC	Union Circle

EXECUTIVE SUMMARY

ACF-International supports the ministry of health (MoH) in Community Management of Acute Malnutrition in 5 UCs in Kohat District.

The ECHO funds support an integrated program with Nutrition (CMAM), food security and livelihoods (FSL) and water sanitation and hygiene (WASH). The nutrition component has infant and young child feeding (IYFC) and nutritional education is integrated into CMAM programming.

The CMAM program has Outpatient Therapeutic Program (OTP) sites in each of 5 UCs, with supplementary feeding programs (SFP) running in tandem targeting pregnant & lactating women and children 6-59 months. The Stabilization Center (SC) in the Liaqat Memorial hospital was supported by the Department of Health (DoH) and ACF provides additional technical support. Severely acutely malnourished (SAM) children without medical complications are treated in OTP. SAM cases medical complicates are referred to the SC for stabilization and nutritional therapy and are after which transferred to the OTP site nearest their community. Children discharged as cured from OTP are enrolled in the SFP program for the treatment of moderate acute malnutrition (MAM) to prevent SAM relapse.

The Semi-quantitative Evaluation of Access and Coverage (SQUEAC) was undertaken in the 6 UCs in which CMAM programming is provided in Kohat District.

The SQUEAC investigation purposed to establish various barriers and boosters to access and program uptake, measurement of program performance, as a means to improve CMAM programming for the future.

Three major barriers were: (1) No knowledge about the program; (2) Misperception of NGO services; and (3) Distance and cost of travel. Three major boosters were: (1) Program awareness; (2) Program acceptability; and (3) Active Community Nutrition Volunteers (CNVs).

The results of this SQUEAC assessment reveal a final coverage estimate of:

- SAM coverage: 54.8% (95% CI ≅ 42.8% - 66.5%); Z-test: = –0.04, p = 0.9675

The final coverage estimate for Kohat District is slightly greater than the 50% international SPHERE standard for CMAM programming in rural contexts.

CONTEXT

OVERVIEW OF THE AREA

Kohat district is located in Khyber Pakhtunkhwa (KP) province, 180km from Islamabad and 65km from Peshawar (the provincial capital). It is sub-divided into 33 Union Councils (UCs). It is bordered by Peshawar district in the north, Hangu and Kurak in the south, Nowshera in the east, and Oarkzai Agency in the west. Military operation in Bajur district and insurgency activity throughout 2011 caused a significant number of displaced persons to Kohat District. The majority of temporary displaced person (TDP) stay with host communities, stretching the capacity of households who employ distress mechanisms to overcome the additional strain. During 2012, Kohat has received part of the newly displaced population from Khyber Agency, thus the pressure on traditional livelihoods in combination with structural vulnerabilities has had the effect of reducing the overall quality of life and resilience for the region.

DESCRIPTION OF THE POPULATION

KPK province has an estimate population of about 21 million. The largest ethnic group is the Pashtun, who have historically been living in the area for centuries. Around 1.5 million are Afghan refugees, the majority of whom are Pashtun followed by Tajiks, Hazaras and other smaller groups. Most of the inhabitants of KPK adhere to Islman, with a Sunni majority and significant minorities of Shias, Ismailis and Ahmadis.(1)

Since July 2008, Pakistan's northwestern areas of KPK and the federally administrated tribal areas (FATA) have experienced significant population movements as a result of security operations between government armed forces and non-state armed groups as well as sectarian violence.(2) Additionally, military operations in the zone and insurgency activity in 2011 caused a significant number of internally displaced people (IDP) in Kohat District. Based on the internal vulnerability assessment and profiling (IVAP) report of July 2011, Kohat District hosts the third largest population of IDPs in KPK with almost 18,111 families, as well as the second largest population of unregistered IDPs.(3) In May 2013 the size of the region's temporarily displaces population reached 1.2 million; of these displaced families, 10% live in one of three camps (Jalozai, Togh Sarai and New Durrani) while the remain 90% live in various host communities host communities with extended family members or in rented accommodation.(4)

The IDP population and host community face limitations in access to food due to loss of personal assets and lack of alternative opportunities. Additionally, weak water and sanitation infrastructure further impact community resilience to future shocks. This coupled with poor hygiene and care practices and reduced humanitarian intervention in areas where access is difficulty increases this vulnerable population's risk to become undernourished.(2)

With a total population of 1,042,850 inhabitants and an under five population of 117,455 (17%), Kohat District is the 14th most highly populated district of KP.(3)

NUTRITIONAL SITUATION

According to the national nutrition survey conducted in 2011, a staggering 43% of children under 5 (10 million) suffer from chronic malnutrition; more than 15% (3.5 – 3.7) of these children suffer from acute malnutrition.(4) The most recent SMART survey conducted Kohat District, KPK in 2013 reports rates global acute malnutrition (GAM) and severe acute malnutrition (SAM) at 8 % and 1.3% respectively.

DETAILS OF HEALTH AND NUTRITION SERVICES:

ACF International supports the Department of Health (DoH) in Community based Management of Acute Malnutrition (CMAM) with funds from the Humanitarian Aid and Civil Protection department of the European Commission (ECHO). The project design is an integrated, multi-component strategy that includes the following three components: (1) Food Security and Livelihoods (FSL); Water Sanitation and Hygiene (WASH); and (3) nutrition.

CMAM programming began in KPK in September 2008 as an emergency response project targeting the vulnerable IDP population following monsoon rains and widespread flooding. Since 2008, CMAM services have been progressively expanded to include operational sites in DI Khan, Hango, Kohat and Nowshera.

CMAM protocols and SAM management in Pakistan consist of the following four components:

1. **COMMUNITY OUTREACH** measures aim to mobilize the community and promote early presentation and compliance. Children under 5 and PLW are screened in the community at health facilities by community mobilizers, lady health workers (LHWs) and community volunteers. Cases are then referred to OTP and SFP sites respectively for treatment;
2. **SUPPLEMENTARY FEEDING PROGRAMS (SFP)** for those with moderate acute malnutrition and no serious medical complications;
3. **OUTPATIENT THERAPEUTIC PROGRAMS (OTP)**provide home-based treatment and rehabilitation using ready to use therapeutic foods (RUTF) for children with SAM and no serious medical complications;
4. **STABILIZATION CENTER (SC) INPATIENT CARE** provide intensive in-patient medical and nutrition care to acutely malnourished children with complications such as anorexia, severe medical issues or edema; SC link with OTP to allow early discharge and continued treatment in the community.

When possible, OTP sites are established at government health facilities. These are complemented with satellite sites within the community in an effort to decentralize service.

INVESTIGATION PROCESS

STAGE 1

QUANTITATIVE DATA

From the start of the program in June of 2013, 641 SAM children in Kohat District were admitted to the OTP for CMAM services at an average rate of 53 children per month. There were 14 recorded defaulters, 2 recorded deaths and 1 child recorded having not responded to treatment.

GLOBAL ADMISSIONS: TRENDS AND NEED MET

The most important element of routine program data is the number of admissions over time. The capacity of treatment services to respond to SAM needs is dependent on a constant, systematic and significant improvement of coverage.[5]

Figure 1 illustrates the evolution of admissions and defaulting in Kohat over a period of 7 months (September 2013 – April 2014). Admissions data is presented in the raw form alongside smoothed time-series data. This figure is compared to a seasonal event calendar that was elaborated by the investigation team presented in Table 1. Together these two figures helped determine to what degree the program was able to respond to seasonal need.

Note that Figure 1 has two separate scaled Y-axes; admissions data is plotted on the left axis while defaulting data is reported on the right axis.

FIGURE 1. Plot of OTP admissions and defaulting over time (with and without smoothing) (September 2013 – April 2014); Kohat District, KPK, Pakistan 2014.

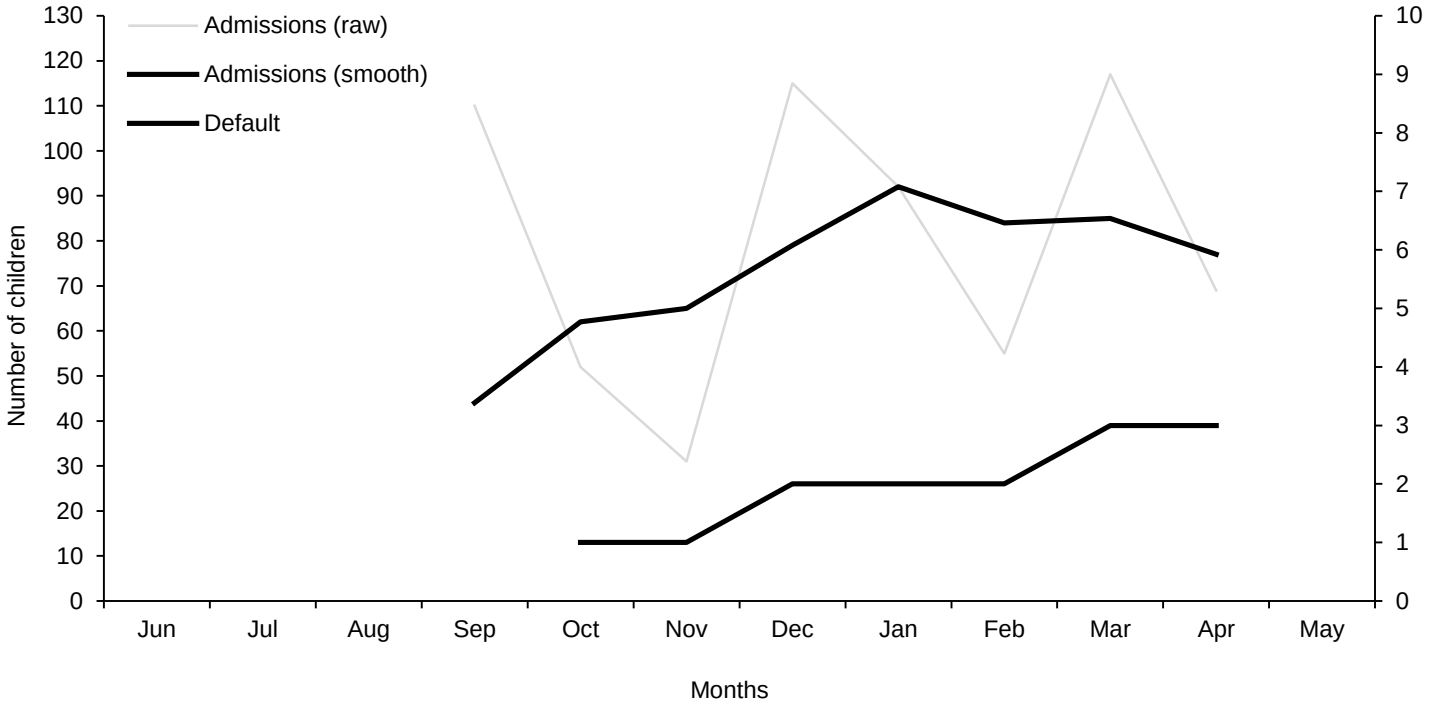
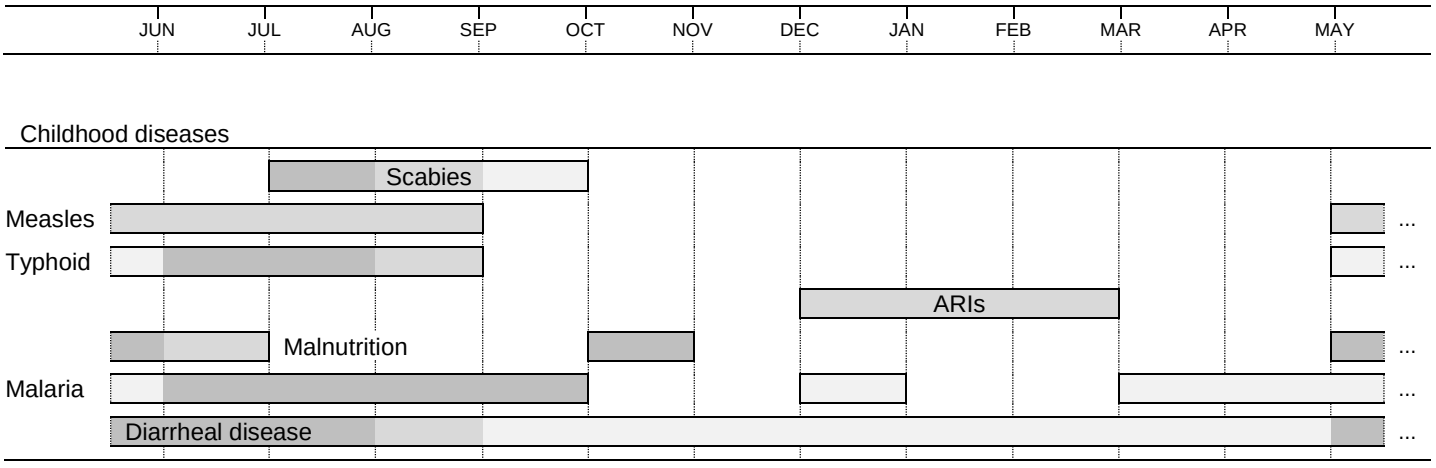
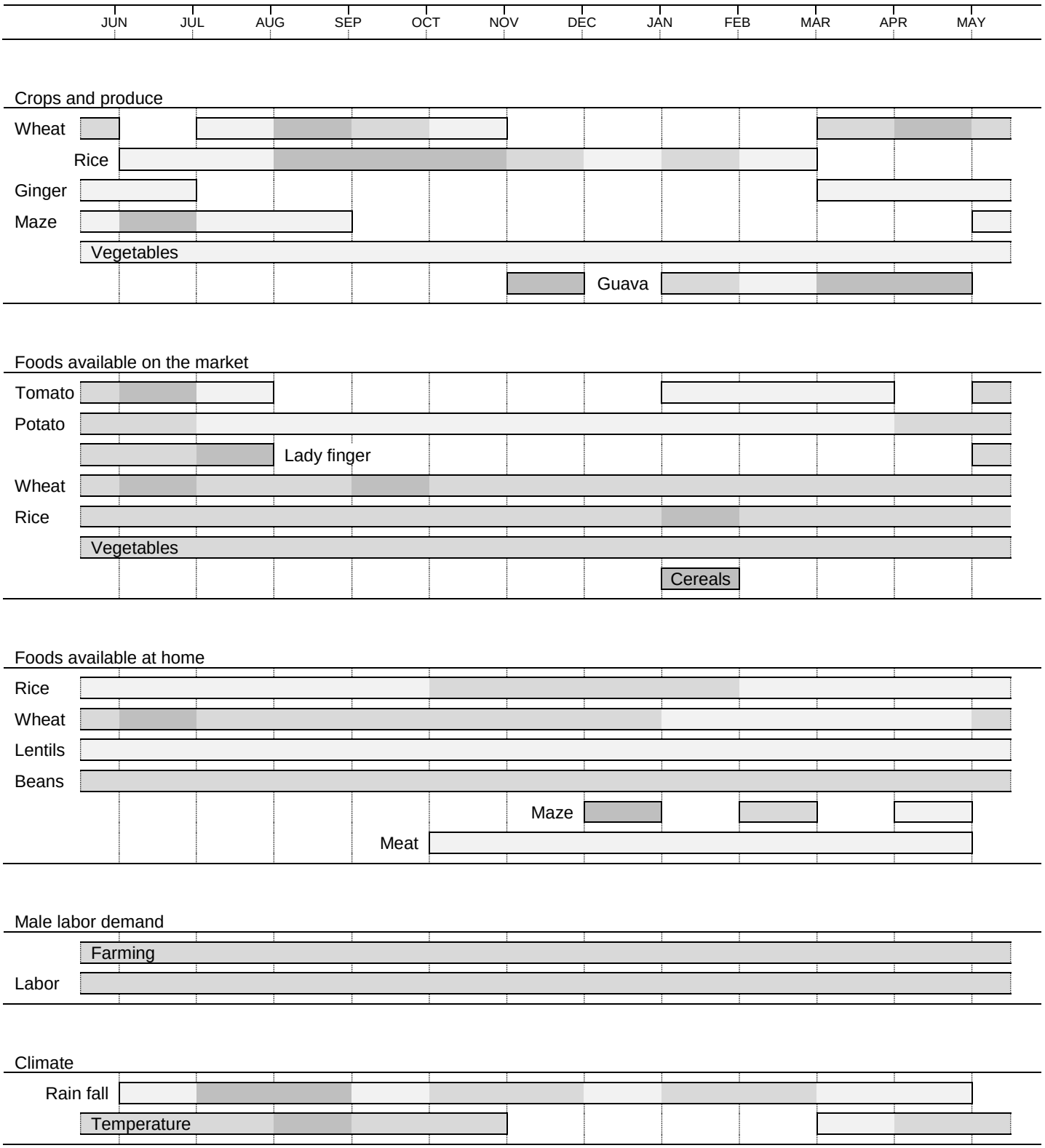


Figure 1 does not follow the typical pattern of admissions over time for an emergency-response CMAM program; this pattern is characterized by an initial peak in admissions at the start of programming (representing prevalent and incident cases admitted) followed by a gradual stabilization and finally a drop in admissions as the emergency abates.[6] Instead Figure 1 reports a steady and gradual increase in program admissions over time; however, this could suggest that community outreach activities were inadequate at the start of the program, as there is no initial peak in admissions (i.e. prevalent and incident cases).

TABLE 1 . Seasonal Calendar.Kohat District, KPK, Pakistan 2014.

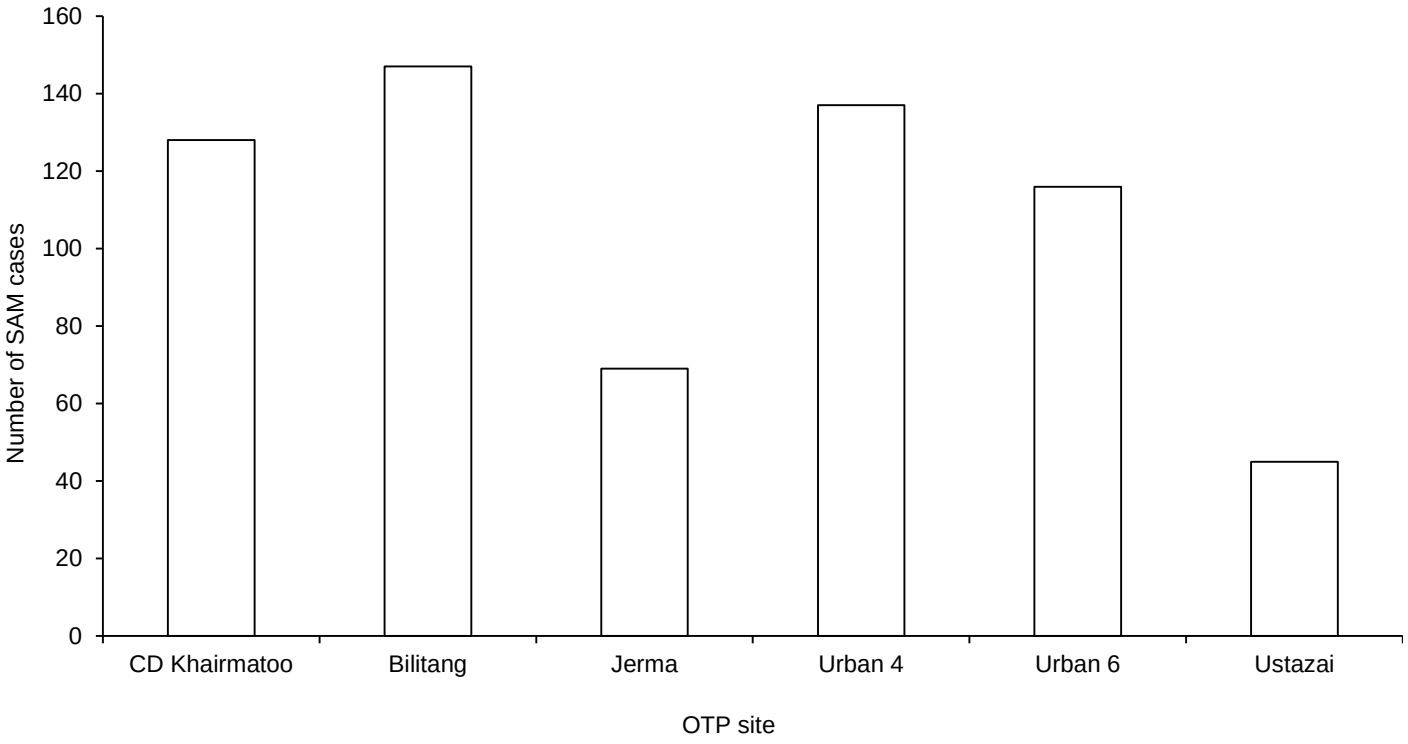



JUN
JUL
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
Crops and produce
Wheat
Rice
Ginger
Maze
Vegetables
Guava
Foods available on the market
Tomato
Potato
Lady finger
Wheat
Rice
Vegetables
Cereals
Foods available at home
Rice
Wheat
Lentils
Beans
Maze
Meat
Male labor demand
Farming
Labor
Climate
Rain fall
Temperature

OTP ADMISSIONS

Figure 2 reports total number of admissions per OTP for all the UC supported by the program.SAM admissions in OTP was compared with the total population of children between 6 and 59 months per health zone.

FIGURE 2. Total admissions per OTP site (September 2013 – April 2014); Kohat District, KPK, Pakistan 2014.

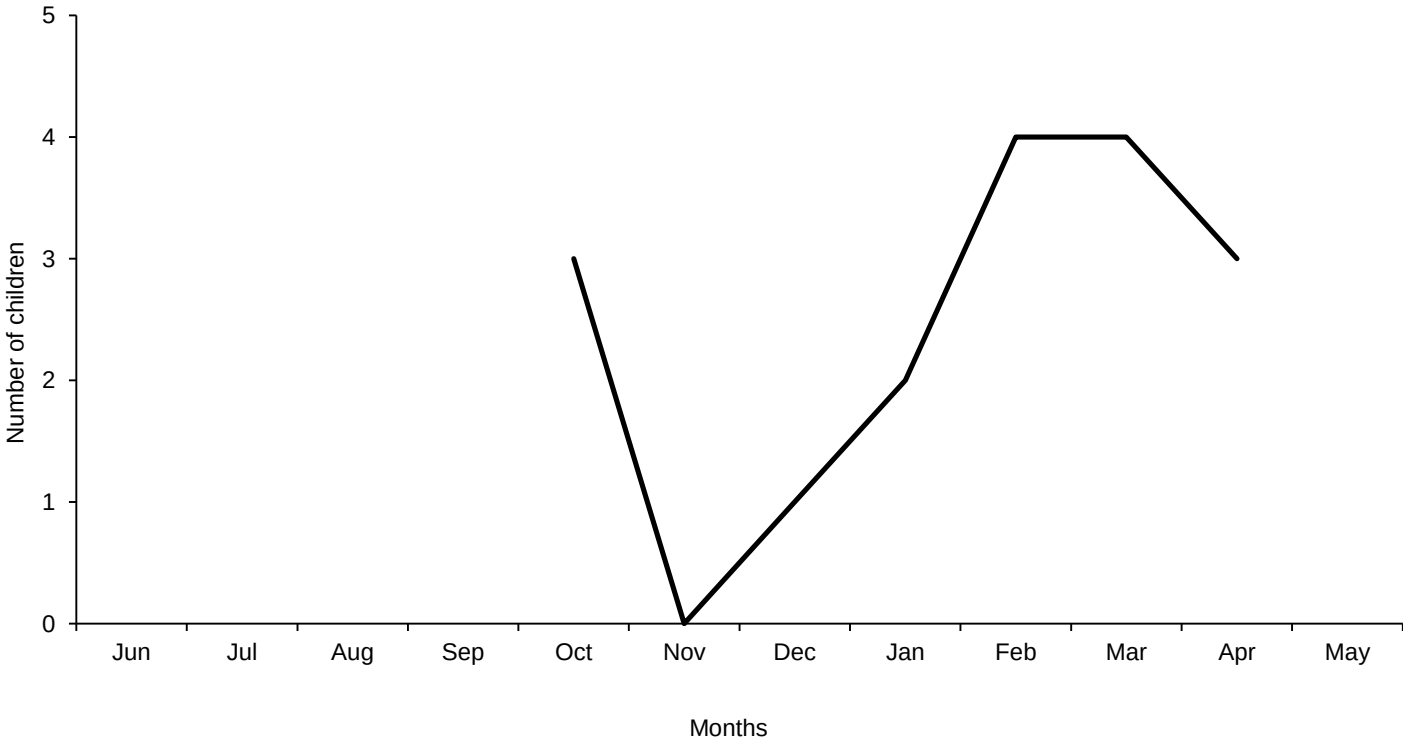


In Kohat District, total SAM admissions were relatively equal across UCs, with the exception of Jerma and Usterzai. This is because in February 2013, following the disintegration of the security situation in the union council, CMAM programming was abandoned in Jerma and activities were shifted to a new location in the UC Usertzai.[(2)]

SC ADMISSIONS

Figure 3 presents the plot of SC admissions over time in Kohat District.

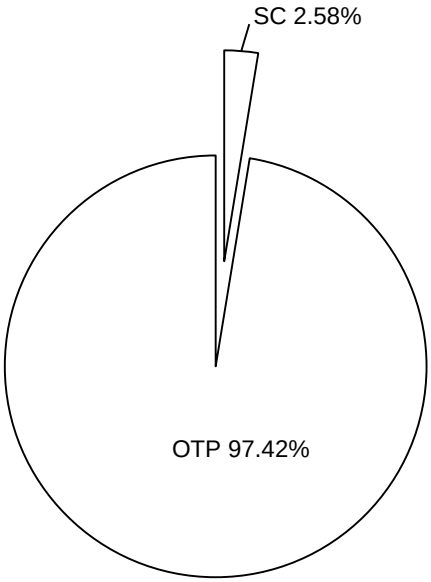
FIGURE 3.SC admissions (Sept 2013 – April 2014); Kohat District, KPK, Pakistan 2014.



Since the start of program activities only 17 SAM children were referred to the SC for inpatient care. This is a relatively small portion of the entire SAM population admitted in OTP.

Figure 4 presents the total percentage of OTP/SC admissions.

FIGURE 4. Total percentage of total admissions in OTP/SC (Sept 2013 – April 2014); Kohat District, KPK, Pakistan 2014.



Since the beginning of program activities, 97.48% of total admissions the OTP and 2.58% of total admissions were admitted in the SC.

Together, figures 3 and 4 present a very low percentage of SC admissions in Kohat District. This percentage is an indicator of the timeliness of admissions; it is directly related to the percentage of SAM cases that arrive late and often with medical complications. Late admissions are associated the need for inpatient care, longer treatment, poor outcomes and a negative opinion of the program in the community. However, these two figures suggest timely case-finding and enrollment, both of which contribute to high coverage.

OTP PERFORMANCE INDICATORS

The main OTP performance indicators assessed are the following:

1. Cure rate
2. Death rate
3. Default rate
4. Non-response rate

Table 2 reports the main OTP performance indicators for Kohat District from September 2013 – April 2014.

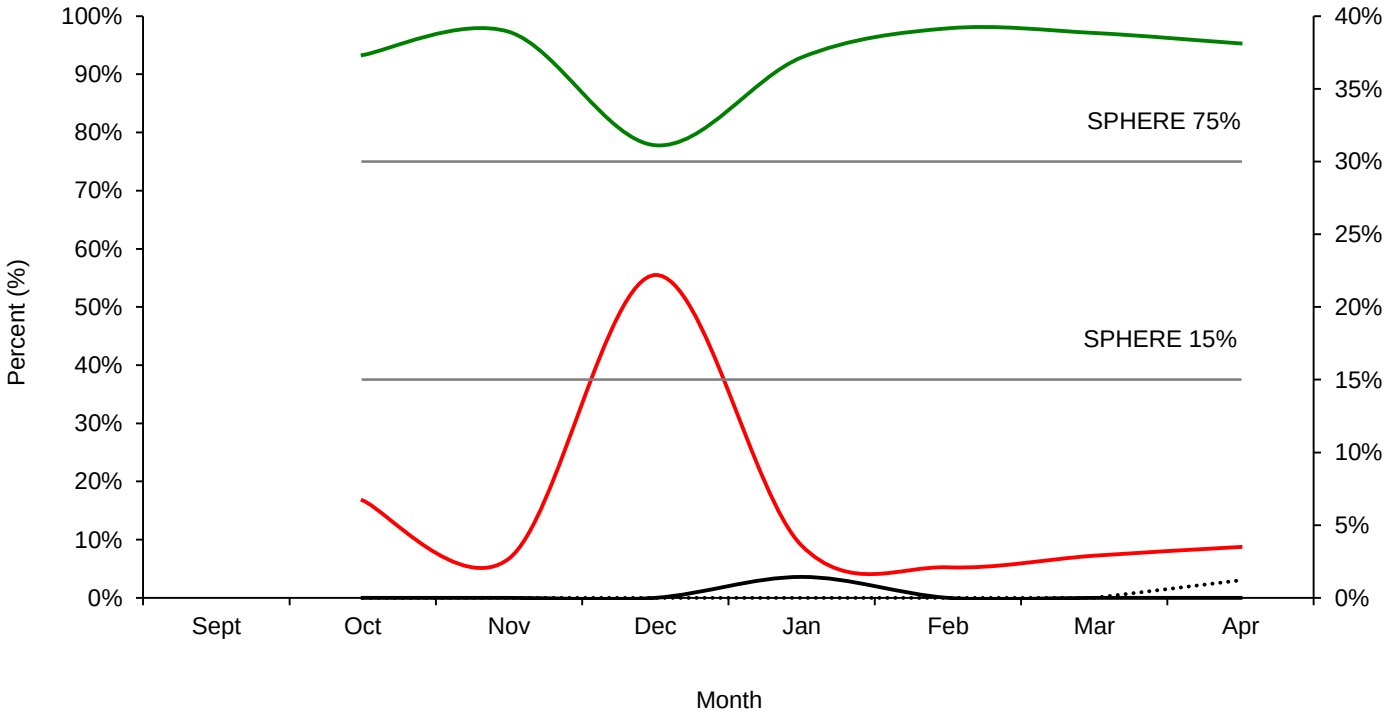
TABLE 2.OTP performance indicators (September2013 – April 2014); Kohat District, KPK, Pakistan 2014.

Indicators	Rates
Cure rate	95.8 %
Default rate	3.5 %
Death rate	0.5 %
Non-response rate	0.2 %

Based on the available data, these OTP indicators report overall satisfactory values for a recently launched CMAM program according to SPEHERE references.

Figure 5 reports the evolution of OTP performance indicators (September 2013 – April 2014). Note that these rates are reported on two axes. Cure rate is reported on axis 1 (range 1% – 100%); default, death and non-response rates are reported on axis 2 (range 1% – 15%). Additionally, two SPHERE quality-control guides are reported at 75% on axis 1 and 15% on axis 2.

FIGURE 5. Evolution of performance indicators over time (September 2013 – April 2014); Kohat District, KPK, Pakistan 2014.



----- Cure Rate
----- Default Rate;
----- Death Rate;
- - - Non-response rate

Figure 5 shows an overall constant improvement in cure rate from the beginning of programming.

From September 2013 to April2014a total of 628 children were newly admitted to OTPs for CMAM at an average 53 children per month.

COMPLEMENTARY QUANTITATIVE DATA

ADMISSION MUAC ANALYSIS

Admission MUAC is an indicator that reports on the timeliness of case detection, presentation and admission; a low median admission MUAC can indicate late presentation, an example of direct coverage failure as SAM cases have spent a considerable amount of time non-covered before admission. Late presentation also affects coverage directly because it is often associated with the need for inpatient care, extended lengths of stay in the OTP, defaulting and overall poor treatment outcomes.[6]

MUAC at admission was analyzed from the period of September 2013 to June 2014. This timeframe corresponds with the time from which nutritional activity began. Individual beneficiary treatment cards were examined and verified with program registers. All OTP sites supported by ACF were included in the analysis. Data is presented in Figure 5.

FIGURE 6. MUAC at admission (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

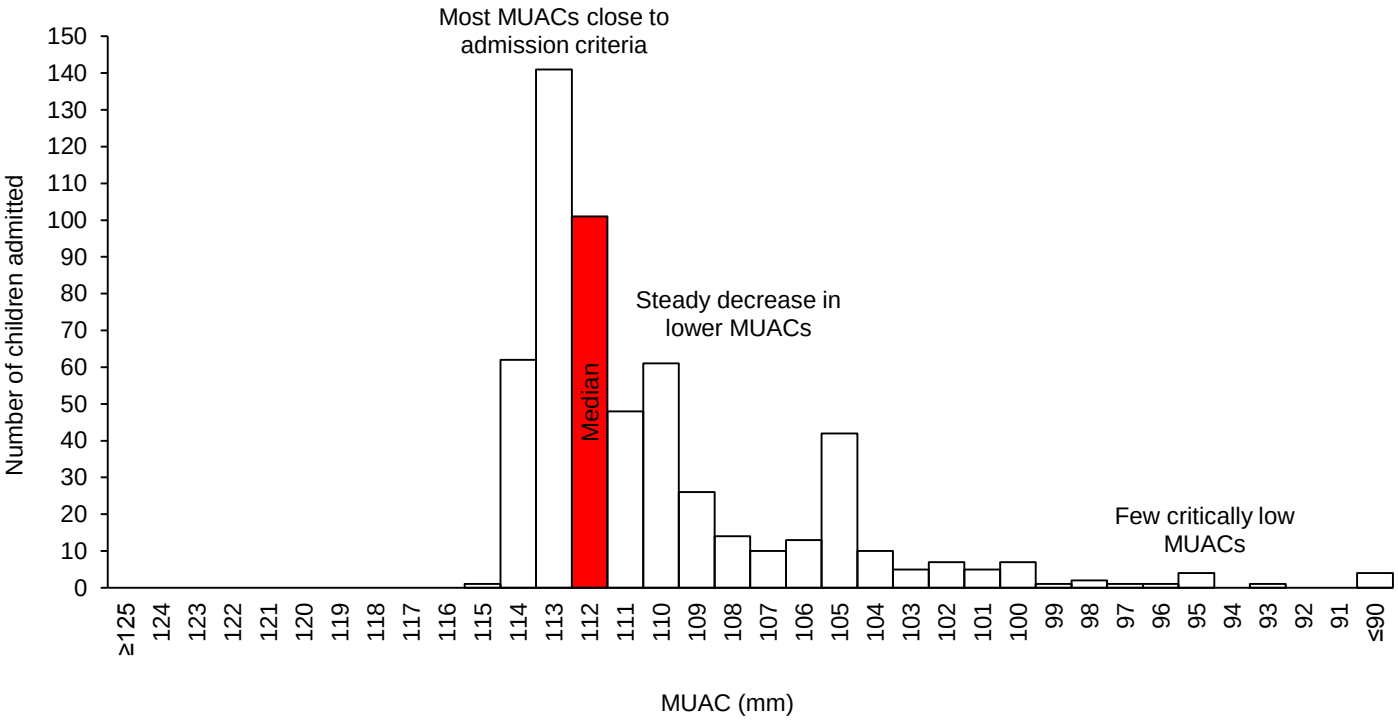


Figure 6 shows that most MUAC measurements at admission are close to admission criteria, followed by a steady decrease in lower MUACs and finally few critically low MUACs; together these elements suggest high coverage and strong case-finding and recruitment. The median MUAC at OTP admission was 112 mm for children admitted by MUAC (presented in solid red). Additionally, 64.0% of these children were admitted to the OTP with a MUAC less than or equal to 112 mm, in other words in a state of moderate wasting. Lastly, Figure 6 reports a slight

overestimation of rounded numbers (i.e. multiples of 5 like 110, 105, 100, 95 and 90) suggesting error in anthropometric measurement.

DEFAULT MUAC ANALYSIS

Figure 7 presents a plot of default MUAC.

FIGURE 7. Default MUAC (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

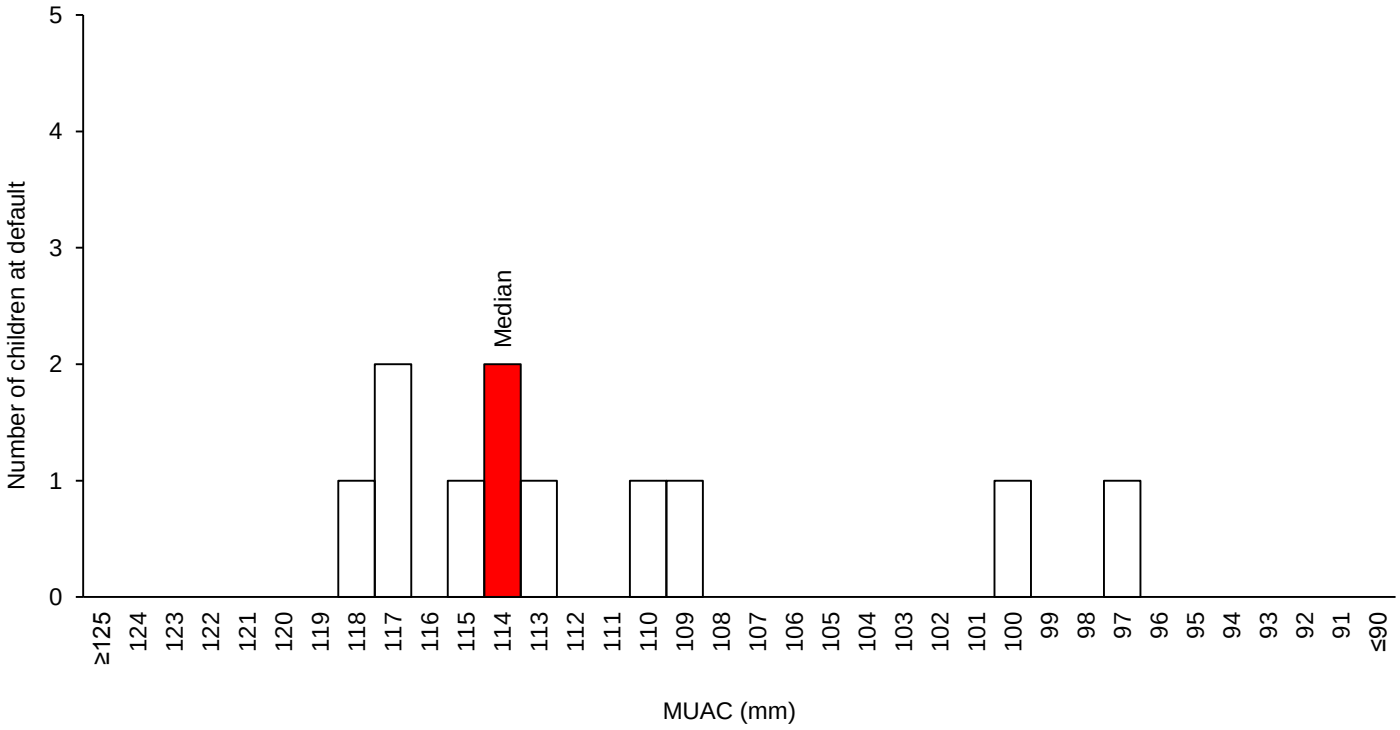


Figure 7 reports a small overall total of defaulters since the start of CMAM programming. Among these, 36% were recovering cases and only a very small proportion were had critically low MUACs. The median MUAC for at default was 114 mm which is very close to admission criteria.

DISCHARGE MUAC FOR CURED SAM CASES

Figure 8 presents the MUAC at discharge for cured children.

FIGURE 8. Discharge MUAC for cured children (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

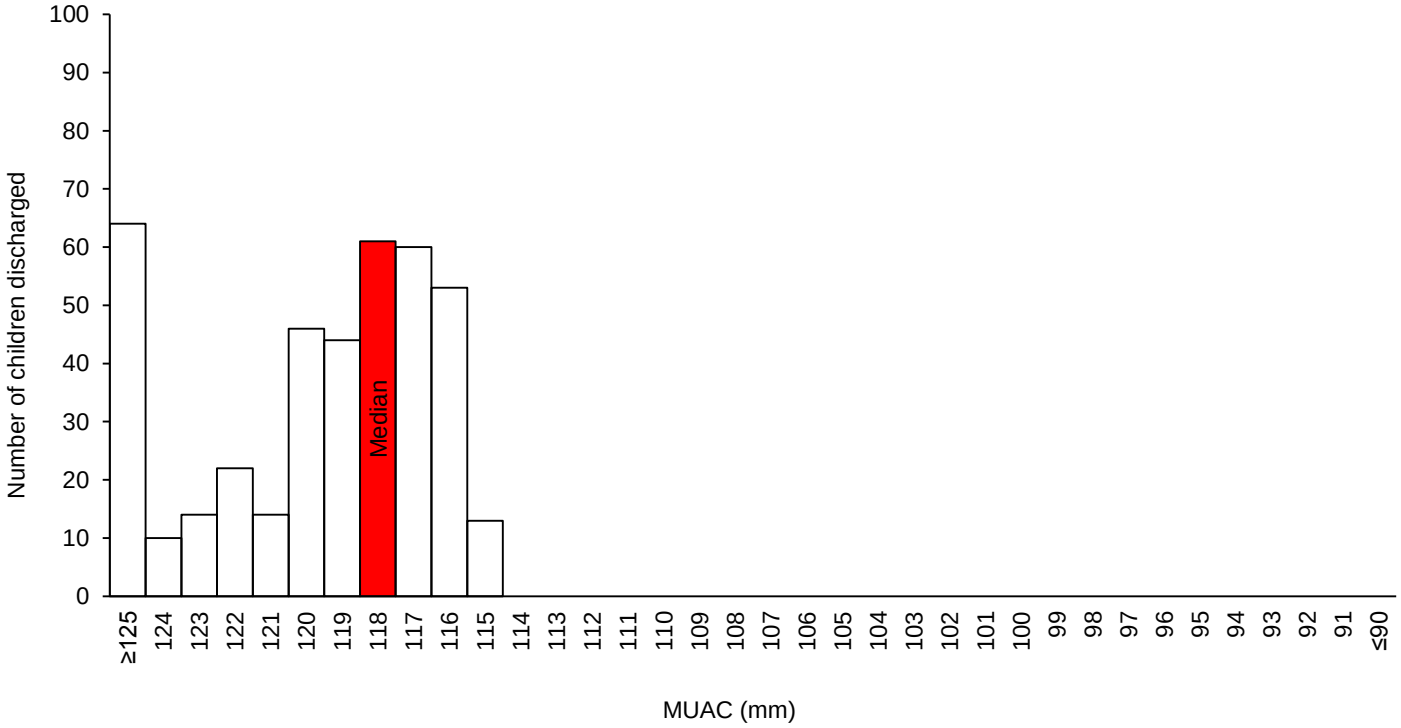


Figure 8 shows 100% of children discharged between from the OTP from September 2013 - June 2014 had a MUAC≥ 115 mm. In other words, no cases were discharged prematurely.

LENGTH OF STAY BEFORE DISCHARGE AS CURED

The length of stay in the OTP before discharge for cured SAM cases is an indicator that reports on the duration of the treatment episode (i.e. the time between admission and discharge). Long treatment episodes are associated with advanced SAM at admission and late presentation, both of which are linked to poor treatment outcomes.

Figure 9 presents the length of stay before discharge from the OTP for cured SAM (September 2013 – June 2014)

FIGURE 9. Length of stay before discharge as cured (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

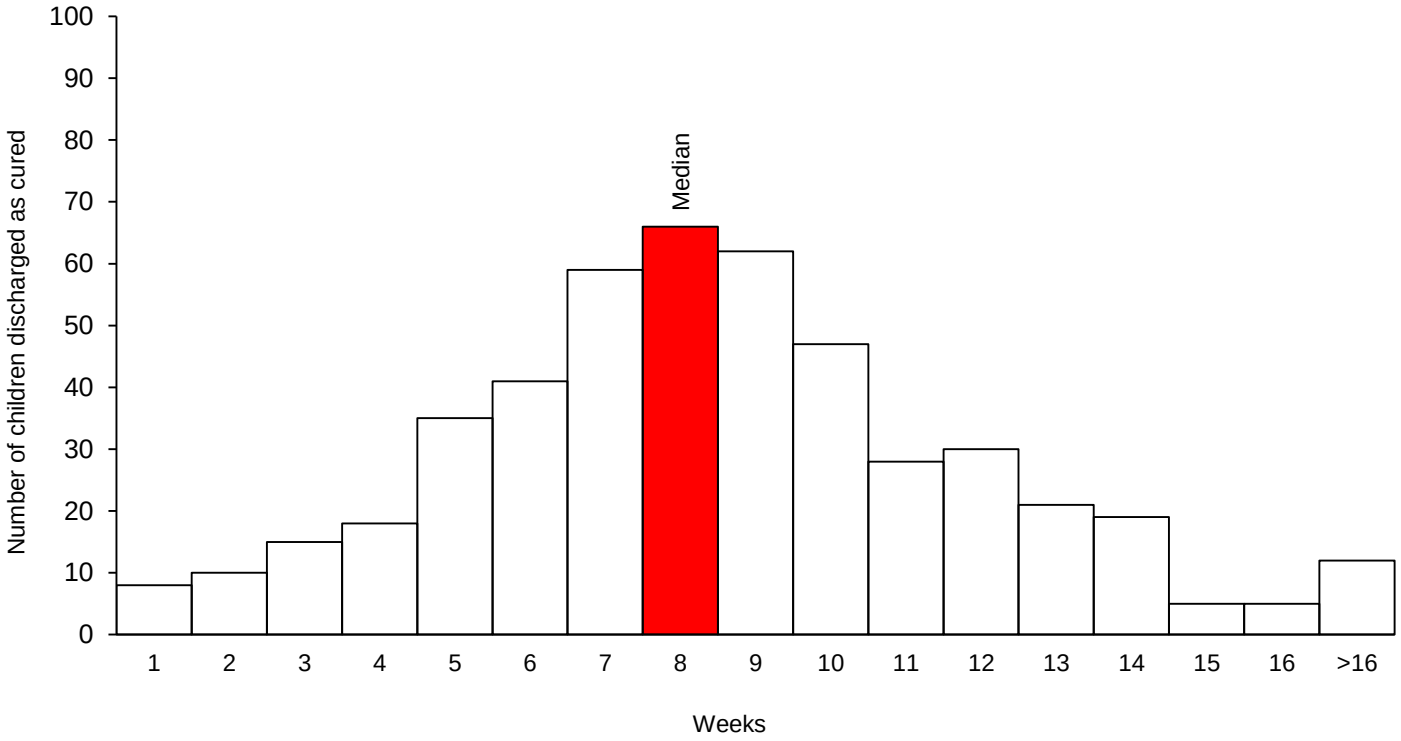


Figure 9 reports that 52.3% of SAM cases in Kohat district were cured within the first 8 weeks of treatment, constituting a relatively acceptable performance in the OTP.

LENGTH OF STAY BEFORE DEFAULT

Time-to-default is a measure of how long a defaulter stays in the program before defaulting. This measure distinguishes an early defaulter (i.e. defaults within 4 weeks from admission) from a late defaulter (i.e. defaults after 4 weeks from admission). It is important to distinguish these two classes of defaulters particularly early defaulters because they are most likely current cases who are not covered by the program.[7]

Figure 10 presents the length of stay before default (September 2013 – June 2014)

FIGURE 10. Length of stay before default (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

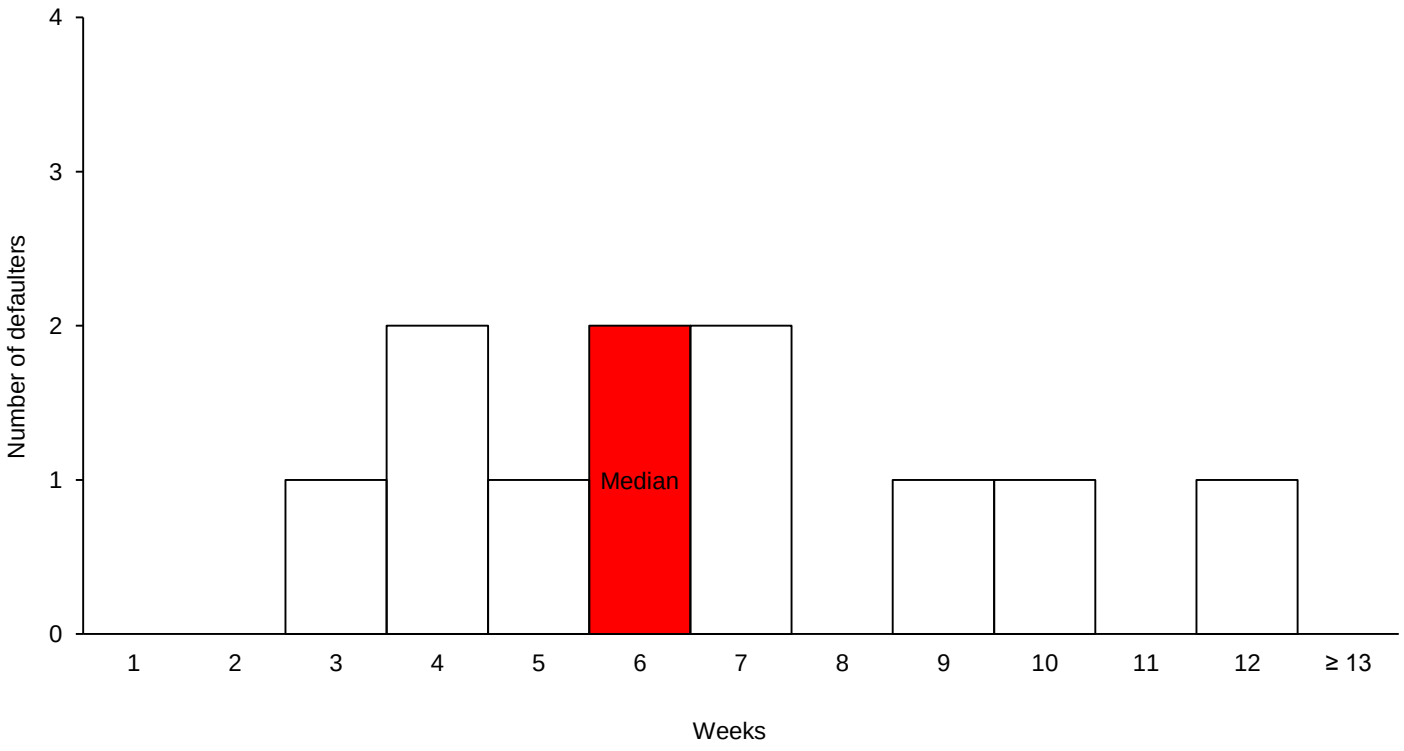


Figure 10 reports that 73% of cases were considered late defaulters, having abandoned the after 4 weeks.

DISTANCE-TO-TRAVEL: ADMISSIONS & DEFAULTING

Distance-to-travel is one tool for assessing the impact on coverage distance of distance beneficiaries and program sites. Note that a limitation of distance-to-travel analyses is that is does not consider factors relevant to travelling such as means of transportation, quality of roads, geographical barriers, etc.

Figure 11 presents the distance-to-travel for SAM admissions (September 2013 - June 2014).

FIGURE 11. Distance to travel for admissions (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

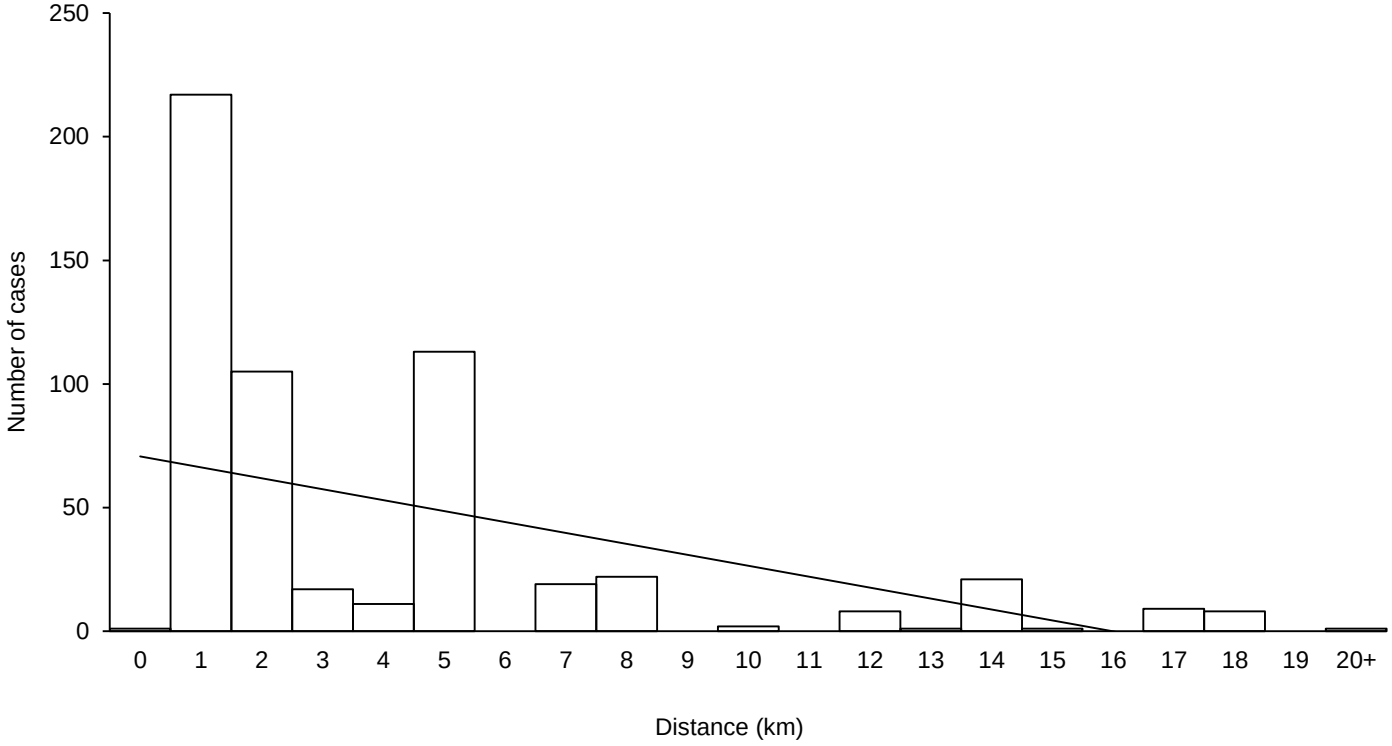


Figure 10 reports and inverse relationship between admissions and distance; the majority of admitted SAM cases reside nearby OTP sites which promotes accessibility and reduces opportunity cost.

Figure 12 presents the distance-to-default for SAM admissions (September 2013 – June 2014).

FIGURE 12. Distance to travel for defaulters (September 2013 – June 2014); Kohat District, KPK, Pakistan 2014.

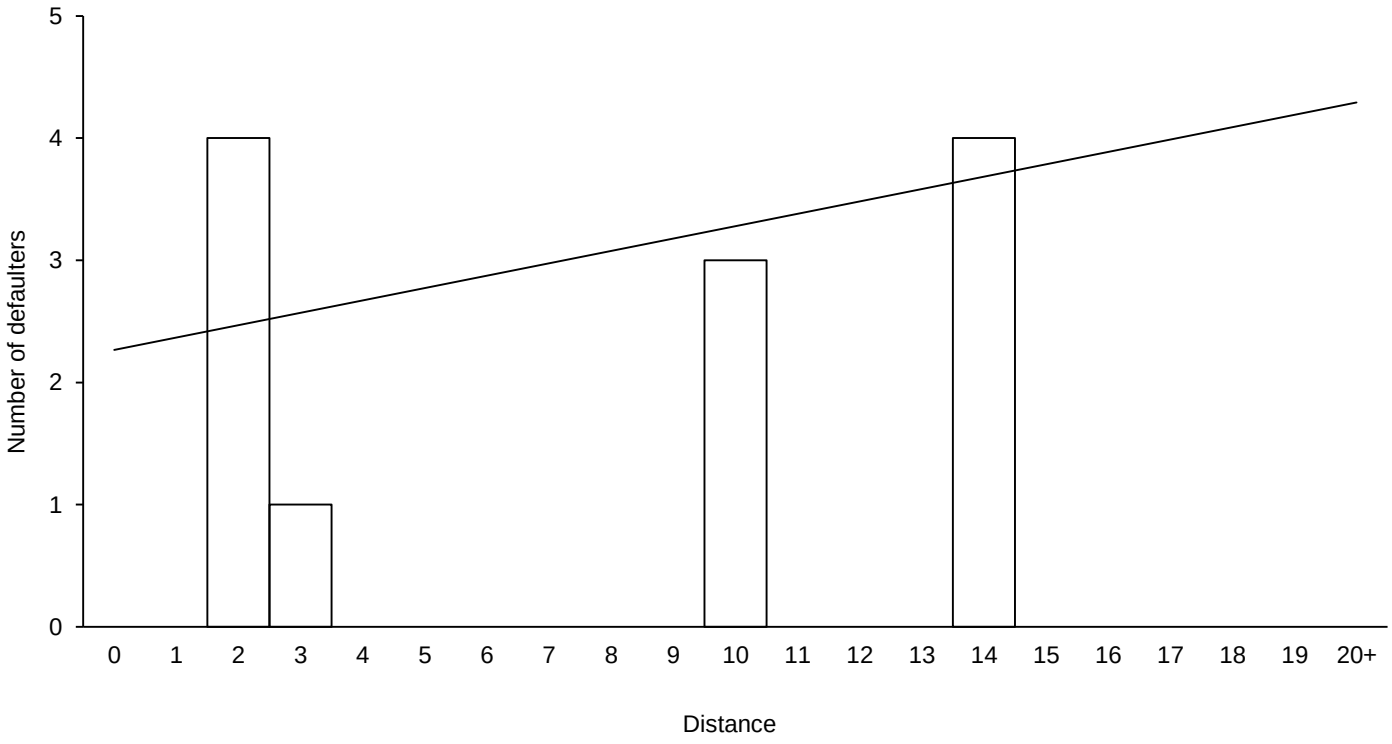


Figure 12 reports and direct relationship between defaulting and distance; this graph suggests that defaulters tend to live further away from the program site, suggesting that distance-to-travel is a possible cause of defaulting.

QUALITATIVE DATA

Qualitative data was collected and triangulated by various sources and methods. Qualitative methods used included in-depth group discussions, semi-structured interviews, simple structured interviews, case studies and observations. These various methods helped uncover various boosters and barriers (positive and negative elements) that influence coverage and access. Interviews and discussions took place at various community and OTP sites across the intervention zone that were strategically selected to assure equal representation. Interview guides were adapted and oriented to facilitate the collection of data that was pertinent to program coverage and barriers to access. Finally, the investigation team also elaborated a list of local terminology employed when referring to malnutrition and ready-to-use therapeutic foods (RUTF);

All results were regularly categorized and organized in one of three categories in using the BBQ tool. Table 3 presents a legend of the different sources and methods used during the investigation.

TABLE 3. BBQ tool legend; Kohat District, KPK, Pakistan 2014.

Sources	Methods
– Beneficiaries – OTP staff – Community volunteers – Village elders – Religious leaders – Female groups – Male groups – Screening & active case finding – Critical incidents	Semi-structured interviews Simple structured interviews (questionnaires) In-depth discussions Case studies Observations

Table 4 details the principal positive and negative factors influencing coverage defined in stage 1; these are the main barriers and boosters.

TABLE 4. Main barriers and boosters; KohatDistrict, KPK, Pakistan 2014.

Barriers	Boosters
1. Anti-NGO agitation & insecurity (during measles and polio campaigns) 2. Distance 3. Unavailability of health facilities 4. Misperception of NGO services 5. RUTF sharing in siblings 6. Migration of IDPs 7. No knowledge of CMAM program 8. RUTF considered as chocolate 9. Stigma 10. Seasonal variability in admissions and defaulting 11. SFP supply pipeline break 12. Opportunity cost	1. Treatment free of cost 2. OTP service integration at government health facilities 3. Program acceptability 4. Strong communication between staff and CNV 5. Program awareness 6. Peer referrals 7. Active and efficient CNV network 8. Strong referral mechanism 9. Strong mobilization 10. Strong outreach 11. Availability of satellite services in Urban-6 UC

These lists regroup the barriers and boosters identified during the investigation. A detailed list is presented in the BBQ tool in the following section for reference.

DATA TRIANGULATION

BBQ TOOL

	BOOSTER	SOURCE	SCORE
1	Program Awareness	6,6,6,6,6,6,6,6,6,6	5
2	Program Acceptability	1,1,2,4,4,6,6,6,6,6,6	5
3	Active CNVs	1,1,4,4,4,6,6,7	4
4	Strong Communication b/w Staff &CNV	4,4,4,4,6	4
5	OTP setup within Government Health Facility	5,5,5,6	2
6	Strong Out Reach	6,6,6,7	2
7	Availability of MUAC tapes & Ref: Slips in Community	4,6,5,6,	2
8	StrongMobilization	5,6,6,	3
9	Peer Referls	1,6,6,	1
10	StrongReferalMechanism	1,4,4,	2
11	Availability of Satlelite Site	6,6,	2
12	Free of CostTreatment	6	1

	BARRIERS	SOURCE	SCORE
1	Miss-perception of NGO services	4,4,6,6,6,4,7	5
2	Distance / Cost of Travel	1,1,4,6,2,4,2,2,	5
3	RUTF considered as a Chocolate	4,4,6,2,	5
4	No Knowledge about program	7,7,7,7,7,7,7,7,7,7	5
5	Migration	1,6,7,7	2
6	RUTF sharing in Siblings	7,7,7,7	2
7	Stigma	2,6,6,	1
8	SFP supply pipeline breakage	4,4,	1
9	Season Variation leads to Defaulters	1,1,	1
10	Polio Campaigns	1,1,	2
11	Measles Vaccination Campaign	5,5,	2
12	Unavailability of HealthFaicility	1	1

Legend	
Staff Interview (SSI)	1
Benificiaries Interview (SSI)	2
Prgram Data	3
Volunteer Interview	4
Self Observation	5
IGD	6
Screening / Active Case Finding	7

STAGE 2

All routine program data, quantitative data and well as qualitative data collected during stage 1, once combined, helped to identify specific zones in Kohat District where coverage was believed to be either satisfactory or not. These data revealed information concerning potential barriers to service access. This information was used to formulate hypothesis that were then tested.

SMALL AREA SURVEY

The small-area survey is used to test hypotheses regarding the spatial distribution of coverage.[6] A small-area survey was conducted in 3 or 4 villages strategically sampled from 4 out of all 5 UCs in the intervention zone; due to security concerns, only 1 village could be selected from UC-Usterzai for the small-area survey..

Data analysis during stage 1 revealed that the distance between beneficiaries' home villages and OTP sites played a key role in coverage.

These observations led to the following hypothesis:

Coverage is heterogeneous in Kohat District; certain zones benefit from good coverage while in others coverage is unsatisfactory. This heterogeneity is influenced by the distance between beneficiaries' home villages and OTP sites.

The sampling methodology applied was the following: villages were categorized as either near or far using both distance (in kilometers) and time-to-travel; villages located 1km - 2 km from OTP sites (20 - 30 minutes of travel-time) were considered near while villages located between 3 km - 5 km from OTP sites (40 - 50 minutes) were considered far.

A total of 15 villages were selected to test the hypothesis. These villages are listed in Table 5.

TABLE 5. Small-area survey village selection criteria; KohatDistrict, KPK, Pakistan 2014.

Hypothesis	Village	Distance
High coverage zone	Camp 1 (Urban-4) - 2 km Camps 2 & 3 (Urban-4) - 1 km Mirozai (Urban-6) - 2 km Hasan Khel (Urban-5) - 2 km Talab Banda (Urban-6) - 2 km NariKak, DhokaJaat (Bilitang) - 2 km	–
Low coverage zone	Gulshan Far (Urban-4) - 4 km UsterzaiBala Far (Usterzai) - 3 km Dal BinzadiMoeen Abad (Urban-6) - 5 km Ghulam Banda (Bilitang) - 5 km DhakiMuhalla (Bilitang) - 3 km KohatiDhok (Bilitang) - 4 km Kot Deri Banda (Khairmatoo) - 26 km BharaGarhi (Khairmatoo) - 5 km DhokRamzan (Khairmatoo) - 5 km	+

Following are the 3 various case definitions applied during the small-area survey:

1. SAM case in-program: a child aged 6 - 59 months with a MUAC< 115 mm and currently enrolled in a CMAM program.
2. SAM case not in-program: a child aged 6 - 59 months with a MUAC< 115 mm however but not currently enrolled in a CMAM program.
3. Recovering case: a child aged 6 - 59 months with a MUAC≥ 115 mm and currently enrolled in a CMAM program.

Table 6 presents the results and analysis of the small-area survey.

TABLE 6. Small-area survey results; KohatDistrict, KPK, Pakistan 2014.

Results	Near	Far
Total number of SAM cases found	11	18
In-program	7	9
Not in-program	3	9
Recovering cases	3	6

Questionnaires were conducted with the caregivers for all current SAM cases—those cases both in-program and not in-program:

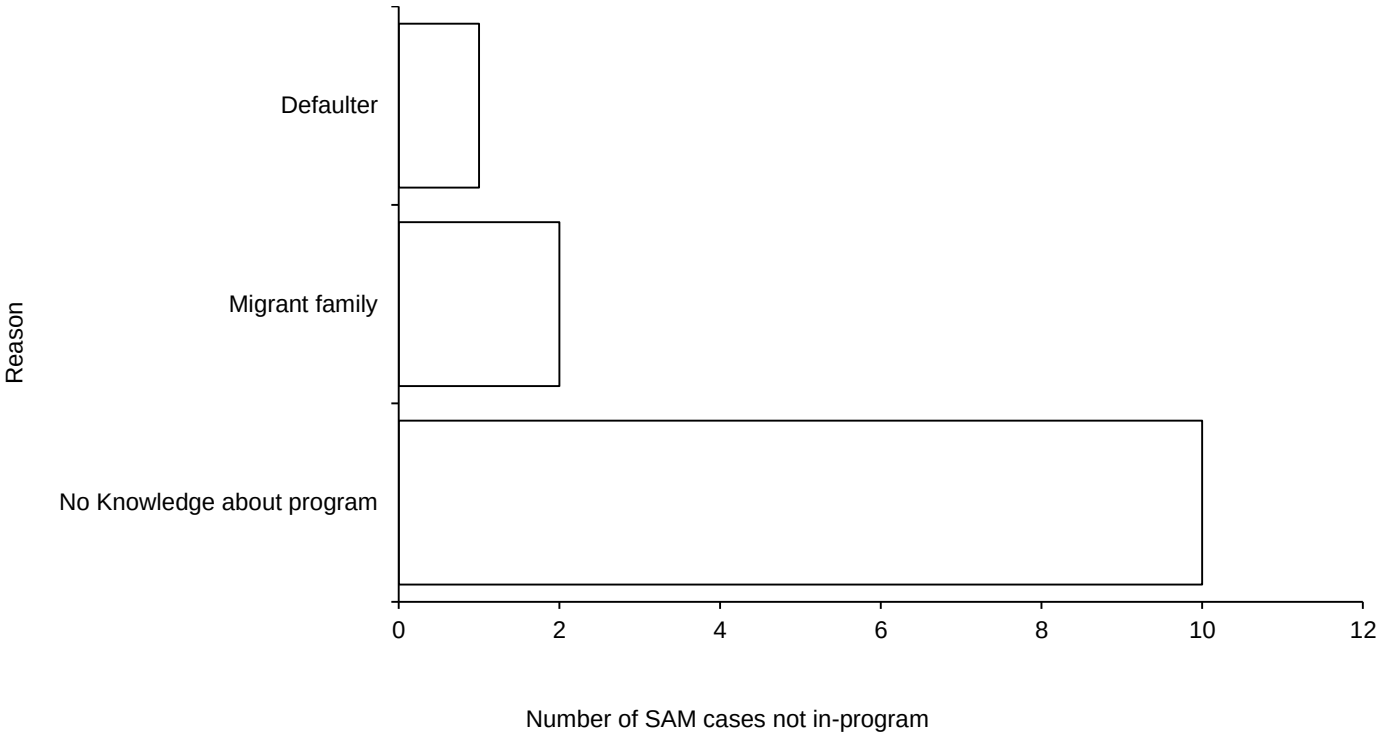
1. Questionnaires conducted for covered SAM cases sought to identify the mode of referral by which the child came to the OTP.
2. Questionnaires conducted for non-covered SAM cases sought to uncover the reason for which the child was not in the OTP.

These questionnaires can be found in annex 2 for reference.

Among the 13 caregivers of current SAM cases not in-program questioned, 100% of them were aware that their children were malnourished. However, 76% (10 caregivers) had no knowledge of the program while only 23% (3 caregivers) had knowledge of a CMAM program in their area. Among these 3 caregivers, 15% (2 caregivers) were from migrant families and 7% (1 caregiver) had defaulted.

Figure 13 graphically reports the barriers to access for SAM cases not in-program.

FIGURE 13. Small-area survey barriers to access; Kohat District, KPK, Pakistan 2014.



Small-area survey results were analyzed using a simplified lot quality assurance sampling (LQAS) technique based on a coverage threshold value of 50%. The decision rule was calculated using the following formula:

$$d = \left\lfloor n \times \frac{p}{100} \right\rfloor$$

d: decision rule
n: number of SAM cases found in-program
p: coverage standrd

Table 7 presents the LQAS classification results.

TABLE 7. Small-area survey results; KohatDistrict, KPK, Pakistan 2014.

	Near	**Far**
Coverage standard (p)	50%	50%
Number of SAM cases found (n)	11	18
Number of SAM cases found in-program	7	9
Decision rule (d)	$= \left\lfloor 11 \times \frac{50}{100} \right\rfloor$ $= \lfloor 5.5 \rfloor$ $= 5$	$= \left\lfloor 18 \times \frac{50}{100} \right\rfloor$ $= \lfloor 9 \rfloor$ $= 9$

Deductions	Number of SAM cases in-program (7) ≥ decision rule (5) Coverage ≥ 50 % Hypothesis validated	Number of SAM cases in-program (9) =decision rule (9) Coverage = 50 % Hypothesis not validated

Note that the alternative hypothesis that villages categorized as “far” from the OTP site was not validated, but only just. It was hypothesized that in these villages, coverage would be < the 50% coverage threshold; however, the results show that coverage is in fact exactly equal to 50%. This finding is linked to the very small sample size and requires further investigation.

In conclusion, the small-area survey confirms the hypotheses that coverage heterogeneity exists across the intervention zone in Kohat District. Certain zones benefit from high coverage while others are confronted with poor coverage; furthermore, heterogeneity is influenced by the distance between beneficiaries’ home villages and OTP sites.

FORMING THE PRIOR

The priori probability distribution, henceforth referred to as “the prior” was estimated by combining the results of stages 1 and 2 (i.e. routine program data analysis, quantitative and qualitative data analysis as well as the results of the small-area survey). Together these elements generate a probability density—the prior probability distribution or prior.

The prior was calculated from the average of the three coverage estimates from the following three SQUEAC tools.

1. **The simple BBQ tool:** the simple BBQ tool is the most basic approach to calculate the prior. A uniform weight of 1 point was attributed to each element (either barrier or booster). The corresponding booster point-sum was added to the minimum possible coverage (0%) while the barrier point-sum was subtracted from the maximum possible coverage (100%). The average between these two values was then calculated to obtain a prior mode.
2. **The weighted BBQ tool:**forthe weighted BBQ approach, scores or weights are attributed to each element that reflect the relative the likely effect on coverage. Scores range on a scale from 1 to 5 and denote the importance of each finding. The same method point-sum average method used for the simple BBQ tool was employed to obtain a prior mode.
3. **The histogram:** during a participatory working group, the investigation team produced a realist and consensual histogram that represented the hypothetical prior probability. The mode, minimum and maximum were chosen credibly.Uncertainty about the prior mode was fixed at ± 25 percentage points for a first SQUEAC investigation and was deemed consistent with prior information.

Table 8 details the prior mode calculations for Kohat District.

TABLE 8. Prior probability calculation; Kohat District, KPK, Pakistan 2014.

Tool	Barrier	Booster	Calculation	Result
Simple BBQ	12	11	$\text{mode}_{\text{prior}} = \frac{(11 \times 1\%) + [100\% - (12 \times 1\%)]}{2}$	49.5%
Weighted BBQ	28	38	$\text{mode}_{\text{prior}} = \frac{38\,\% + (100\,\% - 28\,\%)}{2}$	55.0%
Histogram	—	—		60.0%
Prior mode				**54.8%**

Thereafter, using the equations listed in Table9, the shape parameters α_{prior} andβ_{prior}were calculated from the prior mode of 54.83% with a degree of uncertainty oscillating between $\pm$ 25 percentage points.

TABLE 9. Shape parameter calculation; KohatDistrict, KPK, Pakistan 2014.

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

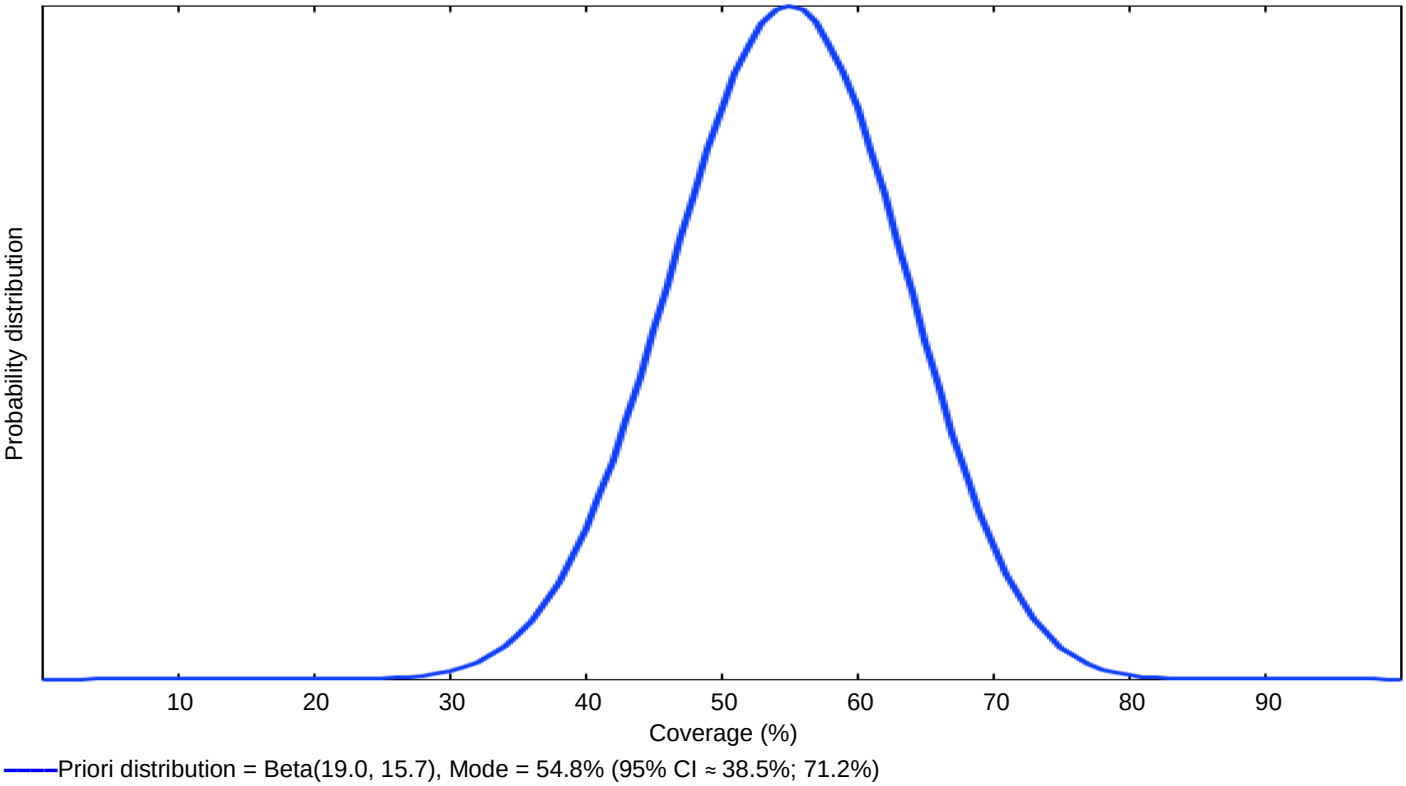
$$\sigma = \frac{\text{maximum} - \text{minimum}}{6}$$

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

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

The prior distribution density had a “credible interval” of 95% (i.e. the baysien equivalent of a confidence interval) between 38.5% and 72.1%. This distribution was then reproduced graphically in the following figure 14:

FIGURE 14. Priori probability density, Distribution = Beta(19.0, 15.7), Mode = 54.8% (95% CI ≈38.5%; 71.2%); Kohat District, KPK, Pakistan 2014.



STAGE 3

WIDE AREA SURVEY

A wide-area survey was conducted using a two-stage sampling procedure:

1. **First stage sampling method:** a systematic, stratified sampling framework was applied to randomly select villages from a complete list of villages sorted by clinic catchment area.
2. **Within-community sampling method:** due to insecurity and anti-NGO agitation in the zone, active and adaptive case-finding was impossible. Instead, the investigation team used multiple communitykey informants (LHWs, teachers, community elders) to identify, find and bring potential SAM cases to a congregation area to be screened. In an effort to protect privacy and facilitate simple-structured interviews with caregivers, multiple intimate screening areas were established in each sampled village.

The sample size was calculated using formula the following formula:

$$n = \left\lceil \frac{\text{mode} \times (1 - \text{mode})}{(\text{precision} \div 1.96)^2} - (\alpha_{\text{prior}} + \beta_{\text{prior}} - 2) \right\rceil$$

in which mode is the prior mode, α_{prior} and $\beta_{\text{prior}}$are shape parameters andprecision is the ideal for the posterior coverage estimate. In SQUEAC, the wide-area sample size is typically calculated to attain a precision of ± 10% around the posterior coverage estimate.(6) For this assessment, a broader precision of ± 12% was specified. The investigation sample size was 33 SAM cases for Kohat District.

Sample size was then used to estimate the number of villages needed to visit using the formula:

$$n_{\text{villages}} = \left\lceil \frac{n}{\text{Average village pop.} \times \frac{\%\text{ of the population}_{6-59\text{ months}}}{100} \times \frac{\text{SAM prevalence}}{100}} \right\rceil$$

In Kohat Distract the SAM prevalence was estimated at 2.3%, the population percentage between 6 and 59 months was 14.0% and the average village population was estimated at 2,485 inhabitants.(8) Together these three elements were used to calculate minimum number of villages to be sampled, 8 villages. These villages were sampled using a random stratified sampling framework.

Note that the most recent SAM prevalence estimate for Kohat District was 1.3% (CI 95% = 0,7% - 2.3%) published in the most recent national nutrition and anthropometry survey, the SMART (SMART Survey Report - Kohat District of Khyber Pakhtunkhwa (KP) Province, Pakistan - ACF-International). This survey was conducted in November 2013 just after the end of the hunger gap, when food availability is expected to be high and SAM prevalence low.

Because SAM prevalence varies throughout the year, it is important to use an estimate that most accurately reflects prevalence at the time of the SQUEAC investigation. This investigation was conducted in June, a time at which food is not scarce but SAM prevalence is expected to be higher. Up-to-date program data estimated prevalence at 3.0%, but seemed too high. In this situation the upper confidence interval (2.3%) from the most recent SMART survey was selected as an appropriate seasonal SAM prevalence for June 2014.

RESULTS

A wide-area survey was conducted in 24 villages; 16 additional villages were added to the original sampling framework of 8 villages midway through the survey. Because of socio-economic heterogeneity in Kohat District, a number of “sectors” were selected in the original sample. Inhabitants of these sectors are often well-off therefore SAM is very rare.

Note that the original precision was ± 10%; this was increased to ± 12% during the survey to account for the fact that the SAM prevalence estimate of 2.3% was found to be an overestimated.

In total, 33 SAM cases were found, of which 18 were in-program and 15 were not in program. An additional 12 recovering cases were found. Table 10 presents these data:

TABLE 10. Wide-area survey results; KohatDistrict, KPK, Pakistan 2014.

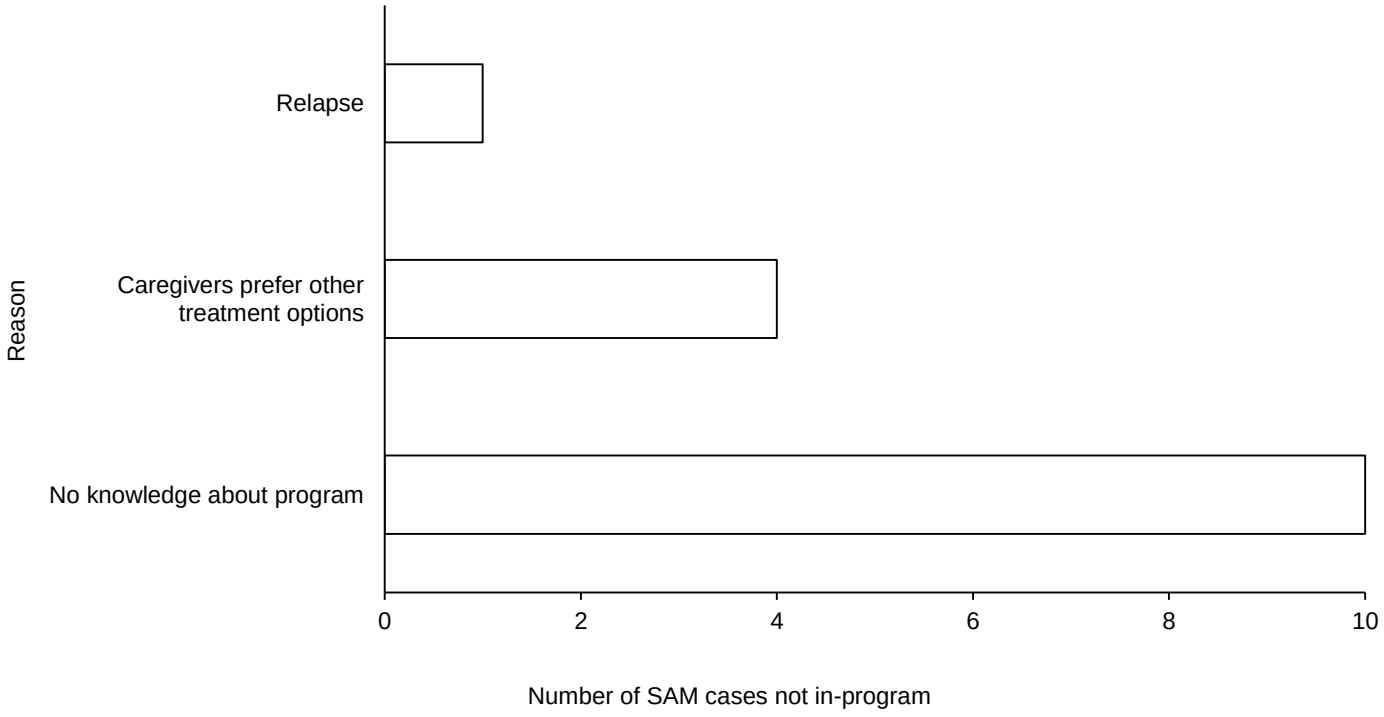
Type	Kohat
Total number of SAM cases found	33
In-program	18
Not in-program	15
Recovering cases	12

Figures 14 and 15 present:

1. The main barriers to service access uncovered during the wide-area survey.
2. The referral mechanism by which current SAM cases were admitted.

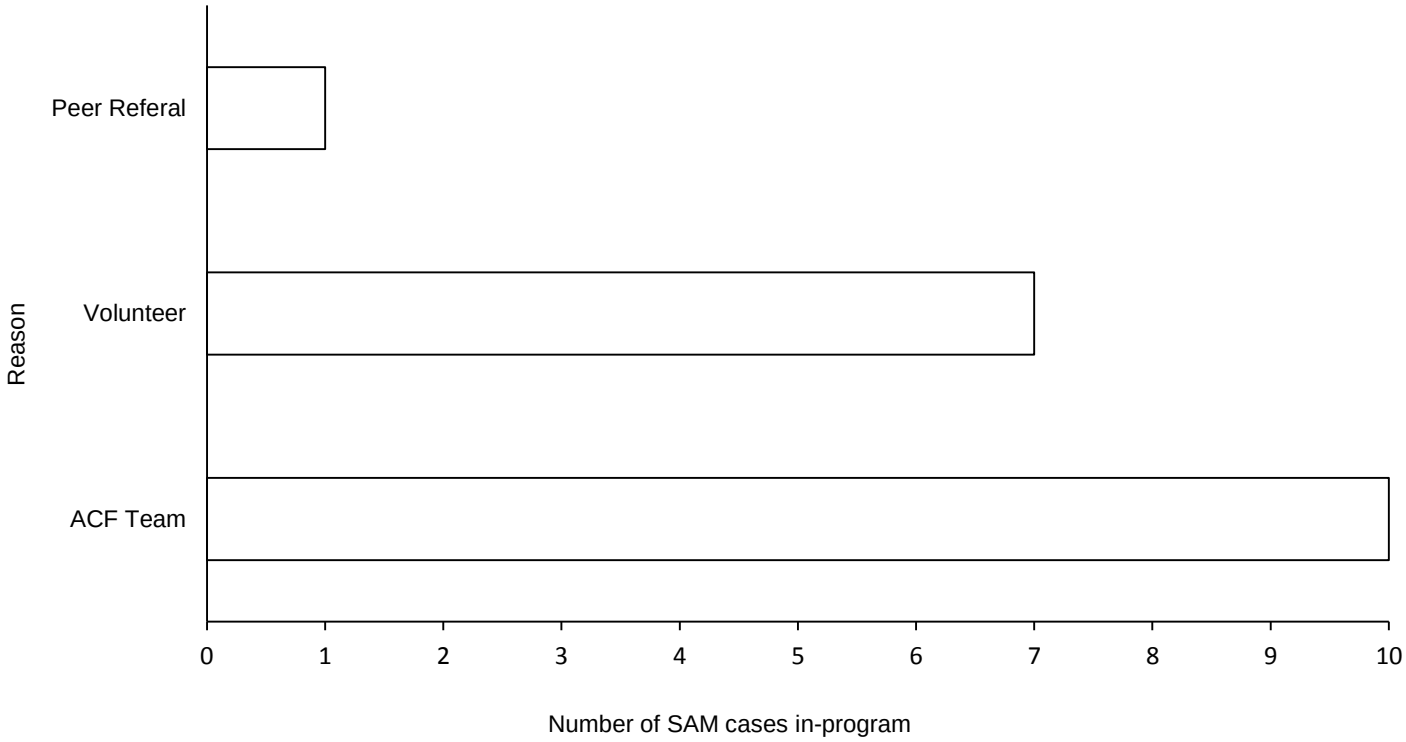
These data come from questionnaires administered with caregivers of SAM cases both in and not in-program.

FIGURE 15. Wide-area survey barriers to access; Kohat District, KPK, Pakistan 2014.



Of the 15 SAM cases not in-program, 66% (10) of caregivers had no knowledge of the CMAM program, 27% (4) of caregivers preferred other treatment options and 7% (1 SAM cases) had relapsed.

FIGURE 156. Wide-area survey referral mechanism; Kohat District, KPK, Pakistan 2014.



Of the 18 SAM cases in-program, 55% (10) of them were referred to the OTP by the ACF team, 38% (7) of them were screened in the community and referred by a volunteer and 7% (1 SAM cases) was referred by a peer.

BAYES COVERAGE ESTIMATE

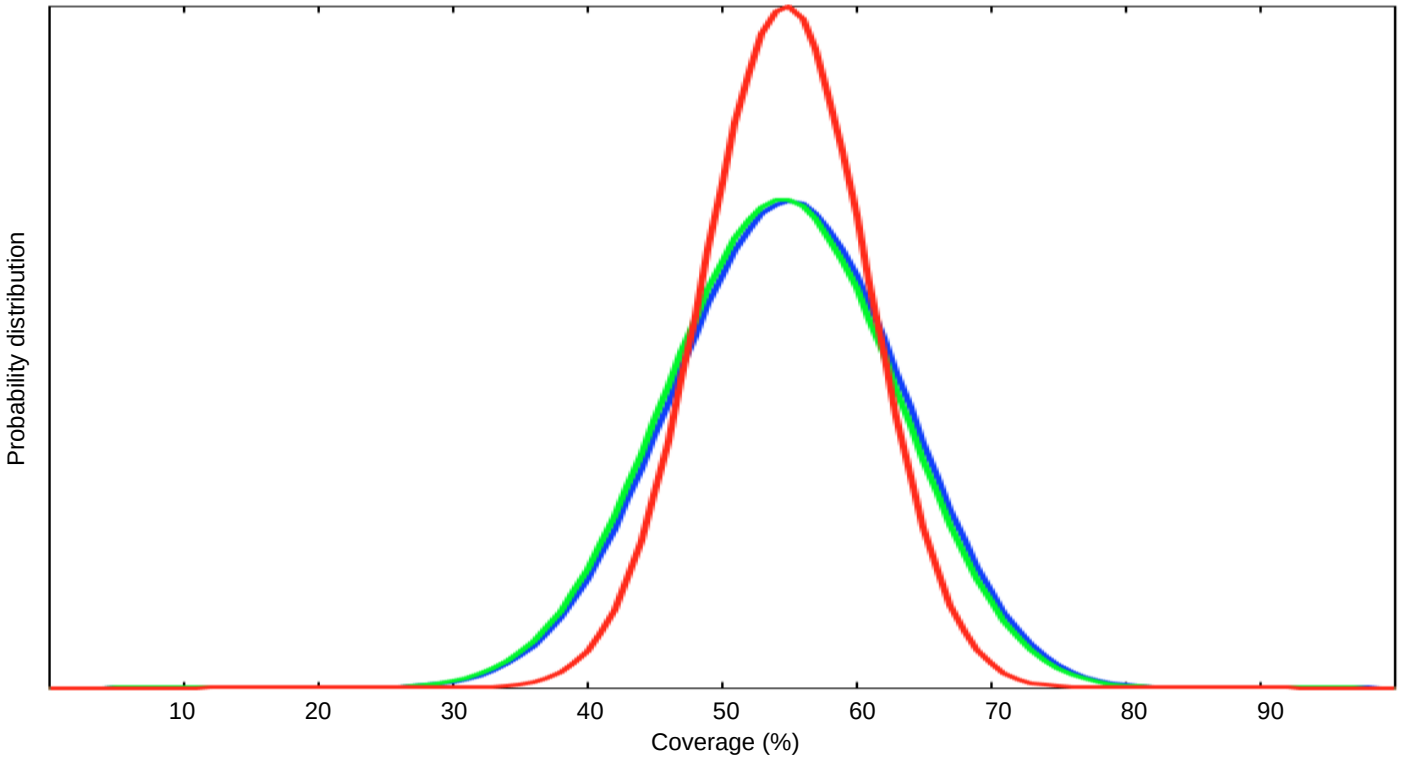
In light of the information revealed about coverage after quantitative and qualitative data analysis, the point coverage indicator was deemed the most appropriate coverage indicator for this assessment. Point coverage best represents the level of coverage at the moment of the assessment and includes only current SAM cases.

Using the Bayesian statistical method of beta-binomial conjugate analysis, the prior probability density was combined with the results of the wide-area survey to calculate a final posterior probability density—the global coverage estimate:

- SAM coverage: 54.8% (95% CI ≅ 42.8% - 66.5%); Z-test: = –0.04, p = 0.9675

Figure 17 is a graphical representation of the three probability densities for the conjugate analysis.

FIGURE 16. Beta-binomial conjugate analysis; Kohat District, KPK, Pakistan 2014.



Prior distribution = Beta(19.0, 15.7), Mode = 54.8% (95% CI ≈ 38.5%; 71.2%)
Likelihood (wide-area survey) = Binomial(33, 18), Mode = 54.5% (95% CI ≈ 34,5%; 64,5%)
Posterior distribution = Mode = 54.8% (95% CI ≈ 42.8%; 66.5%)
Z-test; z = 0.04, p = 0.9675

Figure 15 shows that both prior and posterior probabilities are incredibly accurate and strong; their modes (maximums) coincide exactly with the mode of the wide-area survey (or likelihood). When compared to the prior, posterior distribution is narrower indicating that is the wide-area survey has reduced uncertainty. Lastly, there is considerable overlap between the prior and the likelihood, indicating that the two do not conflict.

In conclusion, as the prior was found to be extremely precise, its strength did not dominate the analysis nor did it bias the resulting coverage estimate, which can sometimes be the case in beta-binomial conjugate analyses.

DISCUSSION AND RECOMMENDATIONS

The results of this SQUEAC assessment reveal a final coverage estimate of:

- SAM coverage: 54.8% (95% CI ≅ 42.8% - 66.5%); Z-test: = –0.04, p = 0.9675

The final coverage estimate for Kohat District is slightly greater than the 50% international SPHERE standard for CMAM programming in rural contexts.

The following action plan focuses on the main barriers (the negative elements that had the greatest impact on coverage) that were uncovered during this investigation; he recommendations formulated for future programming in Kohat District are, for the most part, adapted to these barriers. These recommendations are presented in the following and final section of the report as an adapted logical framework detailing priority actions, methods and monitoring and evaluation tools proposed.

ACTION PLAN

Objective	Justification	Responsible	Performance Indicator	Target	Timeline
Recommendation 1: Develop and implement a result-oriented communication strategy to address misperception of NGO services and potential hostilities in programme areas					
Realise a rapid assessment of beliefs/perceptions by local populations, including NSAG, regarding NGO's mandate and activities.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Rapid assessment of anti-NGO beliefs/perceptions is planned, organised and well documented.	1	09/2014
Develop a comprehensive set of clear messages, which would address these beliefs/perceptions with a special focus on non-alliance with conflicting powers (e.g. anti-spy and collaborator messages, anti-profiteer messages, etc.).	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Key messages designed, pre-tested and validated.	1	10/2014
Ensure that a comprehensive set of messages is incorporated into all written and oral interaction with local communities and systematically reiterated.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Messages are systematically used and can be traced through a variety of written records.	-	10/2014 onwards
Ensure that a comprehensive set of messages is accompanied by a clear definition of NGO's mandate and its int'l charter to set it apart from other actors.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Inclusion of NGO's mandate and Int'l Charter can be traced through a variety of written records.	-	10/2014 onwards
Ensure that NGO activities are disassociated from other actors, which may spur hostilities and/or are viewed negatively by host communities.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Non-existence of joint campaigns with actors with a disputable reputation.	-	10/2014 onwards
Ensure that all field staff, especially field staff is thoroughly briefed on local communities' beliefs/perceptions and respective harmonised ways to address them.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Training plan developed, validated and gradually implemented.	1	10/2014 onwards
Ensure that all field staff are properly trained on communication and negotiations skills.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Training plan developed, validated and gradually implemented.	1	10/2014 onwards

Develop and implement a reporting system, which would allow for a prompt recording of all new information in that respect (formal and informal exchanges with the population, incidents, etc.) and a punctual review and response to it.	▪ Anti-NGO information campaigns ▪ Misperception of NGO services ▪ Lack of knowledge about the program	ACF Pakistan	Reporting system developed, validated and gradually implemented.	1	10/2014 onwards

Recommendation 2: Develop and implement a comprehensive SBCC strategy tailored to the local context, as outlined in results and recommendations of KAP (and RSCA) survey/s					
Realise a Rapid Socio-cultural Assessment, shedding light ontomajor cultural/religious beliefs and perceptions related to malnutrition and its underlying causes (IYCF, WASH, etc.)	▪ Lack of knowledge about the malnutrition ▪ Inadequate child feeding practices ▪ Inadequate hygiene practices	ACF Pakistan	RSCA survey planned, organised and well documented.	1	09/2014
Develop a comprehensive set of key messages, which would address major cultural/religious beliefs and perceptions related to malnutrition and its underlying causes (IYCF, WASH, etc.)	▪ Lack of knowledge about the malnutrition ▪ Inadequate child feeding practices ▪ Inadequate hygiene practices	ACF Pakistan	Key messages designed, pre-tested and validated in line with KAP and RSCA recommendations.	1 set	10/2014
Ensure that a comprehensive set of key messages addresses certain local norms and traditions (such as decisional powers about child care and restricted movement of women), aiming for an enhanced involvement of men in the treatment and prevention of malnutrition.	▪ Gender segregation ▪ Movement restriction for women ▪ Men as key decision-makers ▪ Inadequate involvement of male carers	ACF Pakistan	Key messages designed, pre-tested and validated in line with KAPand RSCArecommendations.	1 set	10/2014
Build on social mapping and relationships identification tool and match diverse community roles with the most appropriate communication channels in order to diversify information sources and reinforce current sensitization/screening networks (of CNVs and LHWs).	▪ Maximising peer or community pressure leverage ▪ Gender organisation and childcare ▪ Advocacy and active involvement of influential community figures	ACF Pakistan	New information sources and communication channels identifiedin line with KAP and RSCA recommendations.	min. 3 (e.g. grandmothers/ mothers-in-law, traditional birth attendants, mother2mother support groups and « pirs »)	10/2014
Develop a gradual inclusion plan for each of the identified information sources, encompassing initial contacts, trainings and follow-up, as necessary.	▪ Maximising peer or community pressure leverage ▪ Gender organisation and childcare ▪ Advocacy and active involvement of influential community figures	ACF Pakistan	Inclusion plan developed, validated and gradually implemented.	1	10/2014 onwards
Develop and systematically distribute illustrated IEC and BCC materials outlining key messages diversified per information source and/or target audience.	▪ Lack of knowledge about the malnutrition ▪ Inadequate child feeding practices ▪ Inadequate hygiene practices	ACF Pakistan	Tailored IEC/BCC materials developed and gradually distributed.	min. 2	09/2014 onwards
Ensure that all IEC/BCC materials include the most precise terminology for malnutrition, avoiding general terms such as	▪ Lack of knowledge about the malnutrition	ACF Pakistan	Correct terminology is systematically used and	-	09/2014

"sick" or "weak" [which do not allow for the correct classification of the illness], and systematically use such terminology in all interactions with target communities.	▪ Maximising peer or community pressure leverage		can be traced through a variety of written records.		
Develop a plan for the diffusion of key messages via public channels (TV, radio, newspapers) and/or internal communication channels (otaqs, local cafés, community events and gatherings) aiming for a homogeneous sensitization of diverse community layers with a potential to influence decisions and/or behavior change.	▪ Lack of knowledge about the malnutrition ▪ Preferred and accessible communication channels	ACF Pakistan	Existence of a written comprehensive communication strategy for at least 6 months with records of its implementation.	1	10/2014 onwards
Stimulate the engagement of "role models" (e.g. mothers or fathers of previously malnourished children) in a variety of sensitization activities in order to share their testimonials and act as potential tipping points of community change.	▪ Maximising peer or community pressure leverage ▪ Creating a momentum for change	ACF Pakistan	Outline and recordsof "role models" engagement.	1	10/2014 onwards

Recommendation 3: Reinforce the capacity building of local stakeholders (OTP staff, CNVs, LHWs, CBOs and others) aiming to improve the quality of provided services and to establish a solid base for long-term sustainability					
Develop the content for refresher/expansion courses for OTP staff, CNVs, LHWs,CBOs, etc.), tailored to their specific needs and areas of improvement, encompassing a new comprehensive set of key messages addressing local beliefs and perceptions.	▪ Need for the reinforcement of local capacities ▪ Inadequate nutrition and hygiene practices ▪ Local beliefs and perceptions unfavourable to health	ACF Pakistan	Training modules for refresher/expansion courses for OTP staff, CNVs, LHWs, CBOs, etc.	min. 3	10/2014
Develop and implement a feasible training plan for each group over the period of six months.	▪ Need for the reinforcement of local capacities	ACF Pakistan	Training plan developed, validated and gradually implemented(documented through training reports).	1	11/2014 onwards
Closely monitor the performance of re/trained personnel and provide ad hoc coaching, whenever feasible.	▪ Need for the reinforcement of local capacities	ACF Pakistan	Outline and records of regular monitoring of performance.	1	12/2014 onwards
Plan for a gradual shift of responsibility (especially for screening) onto local stakeholders, while refraining to a more consultative/supervisory role.	▪ Sustainability	ACF Pakistan	Decrease in % of ACF staff referrals and increase in other stakeholders'referrals.	25%	12/2014 onwards
Stimulate peer or self-referrals via a comprehensive SBCC strategy.	▪ Sustainability	ACF Pakistan	Increase in peer and self-referrals.	15%	12/2014 onwards

Recommendation 4: Improve the accessibility and/or awareness raising of under-served zones					
Create a "risk map" in terms of accessibility to services/defaulting to serve as a base for the establishment of additional satellite/mobile sites.	▪ Distance ▪ Movement restriction for women ▪ Lack of knowledge about the malnutrition	ACF Pakistan	Accessibility and Defaulting risk map created. Decision on the establishment of satellite/mobile sites made.	1	09/2014 - 10/2014
Wherever not applicable, map out potential partners, which could assist the local population with a provision of collective transport to the nearest OTP site.	▪ Distance ▪ Movement restriction for women	ACF Pakistan	Mapping of potential partners completed.	1 per risk-prone zone	09/2014 – 10/2014

			Agreement on the provision of services.		
Increase the frequency and/or thematic orientation of sensitisation campaigns in risk-prone areas in order to reinforce the preventive measures.	▪ Distance ▪ Lack of knowledge about the malnutrition ▪ Inadequate nutrition and hygiene practices ▪ Local beliefs and perceptions unfavourable to health	ACF Pakistan	Number and content of awareness raising session increased.	25%	11/2014 onwards
Establish regular contact with leaders of risk-prone areas via an existing feedback mechanism or otherwise in order to track their development, act promptly and tweak the approach accordingly.	▪ Accountability ▪ Local solutions	ACF Pakistan	Records of regular contact with leaders, including eventual actions by ACF and/or its partners.	Monthly	11/2014 onwards

ANNEX

ANNEX 1: LIST OF PEOPLE TRAINED

Name	Gender
Sana Zubair	Female
Bibi Zainab	Female
Rafia	Female
AniqaYousuf	Female
Rabia	Female
Bilal	Male
SajeelaShahab	Female
Zartasha	Female
FalakZeb	Male
NayabAfzal	Female
Dr.Quaid Ali Yousafzai	Male
ShahrukhYar	Male
M.HarisUmair Qureshi	Male
Mr. Sadam Shah Nawaz	Male
Mss. Sairawaheed	Female
Mss. Sumairabangash	Female
Mss. Roozina bibi	Female
Mr. HusniMubarak	Male
Mss. Shaista	Female
Mss. Dilshadbegum	Female
ShahidAfzal	Male
Farzana	Female
Rehman Shah	Male
Arif Hussain	Male
Muhammad Shehzad	Male
Shamailaazam	Female
Saira	Female
Khalid Khan	Male

ANNEX 2: QUESTIONAIRES

For mothers/carers of children <u>CURRENTLY</u> enrolled in the OTP programme

Name of the district_____ Name of the UC _____
Name of the village _____ Team No _____ Date: _____
Name of Child _____

1. Is this the first time your child has been in the programme? **If yes, skip to Q5** ___

2. **If no:** record the number of times the child was in the programme previously [ ]

3. Try to establish why the child has returned

    a. returned defaulter □
    b. relapsed into severe malnutrition □

4. What was the reason for a or b above?
_____
_____

5. Have any of your other children been enrolled in the programme? **If yes:** record the number_____ [**if no:** put 0]

6. What made you decide to attend? (free listing)
_____
_____

7. Do you share the RUTF with other children (healthy) or do adults eat from it?

For the carers of children (Severe cases) who are NOT in the programme

Name of the district: _____Name of UC _____
Name of the Village _____ Team No. _____ Date:_____
Name of Child _____

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

2. ARE YOU AWARE OF THE EXISTENCE OF A PROGRAMME WHICH CAN HELP MALNOURISHED CHILDREN?
   □ YES □ NO (→ stop!)
   If yes, what is the programme's name? _____

3. WHY IS YOUR CHILD CURRENTLY NOT ENROLLED IN THE PROGRAMME?

   □ Too far (How long does it take to walk? ……..hours)

   □ No time / too busy. What is the parent doing instead?_____

   □ Mother is sick

   □ The mother cannot carry more than one child

   □ The mother feels ashamed or shy about coming

   □ Security problems

   □ There is no one else who can take care of the other siblings

   □ The amount of RUTF was too little to justify the journey

   □ The child has been rejected by the programme already. When? _____ (approx.)

   □ Other parents' children have been rejected

   □ My husband refused

   □ I thought it was necessary to be enrolled at the hospital first

   □ I do not think the programme can help my child (prefer traditional healer, etc.)

   □ Other reasons (specify): _____

4. WAS YOUR CHILD PREVIOUSLY ADMITTED TO THE PROGRAMME?
   □ YES □ NO (→ stop!)
   If yes, why is he/she not enrolled anymore?
   □ Defaulted (when?..... why?.....)
   □ Condition improved and discharged by the programme (when?.....)
   □ Discharged because he/she was not recovering (when?.....)
   □ Other:_____

   (Thank the carer)

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