

DECEMBER 2018



Figure 1: MUAC Tape Quiz

SEMI-QUANTITATIVE EVALUATION OF ACCESS AND COVERAGE

**GUMBO, KHOR ROMULA AND RAJAF EAST
SITES, JUBA COUNTY, JUBEK STATE - SOUTH
SUDAN**

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1.0 INTRODUCTION

In Jubek State, Concern is running five OTP and five TSFP sites (two are in Juba POC and three in MOH PHCU/PHCC in Gumbo, Rajaf East and Khor Romula). The total population of the three sites estimated at 15,604 individuals. Concern provides nutrition services (Outpatient Therapeutic programme and supplementary feeding programme) integrated in the health facilities in the three sites.

Concern usually conducts annual SMART survey in Juba POC to estimate the prevalence of malnutrition among the target communities, however, no SQUEAC surveys have been done before in the programme areas. However, a barrier analysis was done early 2017 in order to identify behaviour determinants. This SQUEAC aims to build on these findings and to see whether a programme is functioning optimally and reaching the maximum number of malnourished children in need.

In total in Juba County host community, there are three Concern worldwide supported OTP sites, these are located in the Ministry of Health led PHCUs/PHCCs. There have been no previous coverage assessments in the three sites, and therefore this is the first of its type.

2.0 STAGE 1: QUANTITATIVE ANALYSIS

Quantitative data analysis of electronic data from Concern, was performed and disaggregated for SAM and MAM. The period analysed was from August 2017 until July 2018, to allow the majority of cases analysed to have been discharged from the programme.

Additional data (such as length of stay, MUAC on admission, referral source) was collected additionally from registers and treatment cards. This was also used to verify electronic data. The number of treatment cards analysed is recorded in table 1.

Table 1: Quantitative Data Analysis

Programme	Site	Amount of total sample	Dates	Number of admissions analysed
OTP	Rajaf East	All	August 2017 – July 2018	53
OTP	Khor Romula	All	August 2017 – July 2018	113
OTP	Gumbo	All	August 2017 – July 2018	195
TSFP	Rajaf East	All	August 2017- July 2018	167
TSFP	Khor Romula	All	August 2017 – July 2018	572

TSFP	Gumbo	All	August 2017 – July 2018	497
TOTAL ADMISSIONS ANALYSED				1597

2.1 SEASONAL CALENDAR

A seasonal calendar was developed using the knowledge of community members and programme staff.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Climatic conditions												
Rainy season				I	II	III	II	I				
Dry season	II	III	I									
Economic activities												
Planting				II	III	I						
Harvest							II	III	II	I		
Non-agricultural labour	II	I										
Diseases												
Increase in GAM	II	III	II									
Malaria						II	III	II	I			
Diarrhoea				II	III	II						
Coughs	III	II	I							I	II	
Key events (religious holidays, etc.)												
Christmas												II

Figure 2: Seasonal Calendar

2.4 SEVERE ACUTE MALNUTRITION TREATMENT: GUMBO, KHOR ROMULA AND RAJAF EAST

2.4.1 Admissions over time

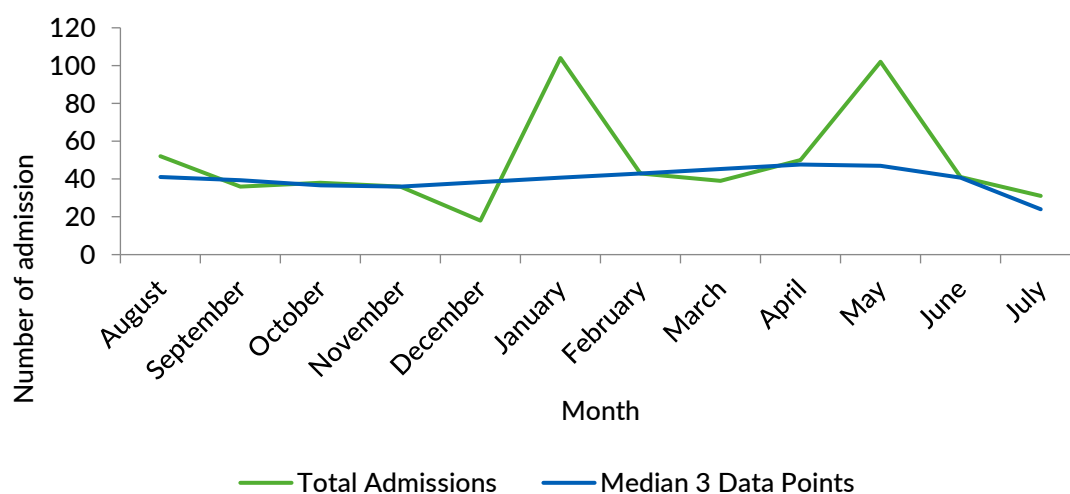


Figure 3: Admissions over Time - Gumbo, Khor Romula and Rajaf East OTPs

Admissions over time fluctuate considerably throughout the year. Admissions reduce slightly in September, as the harvest begins, food security increases and the price of food reduces. The number of admissions then stabilises until December, where there is a reduction as programmatic activities slow over the festive period, and there is a migration of the population out of Juba. There is a sharp increase in January, as programme activities are reinitiated, admissions then stabilise until April, when the rains start and the incidence of disease increases. There was a peak in May due to the mass MUAC screening conducted in the three sites.

2.4.2 MUAC and Weight-for-height admissions

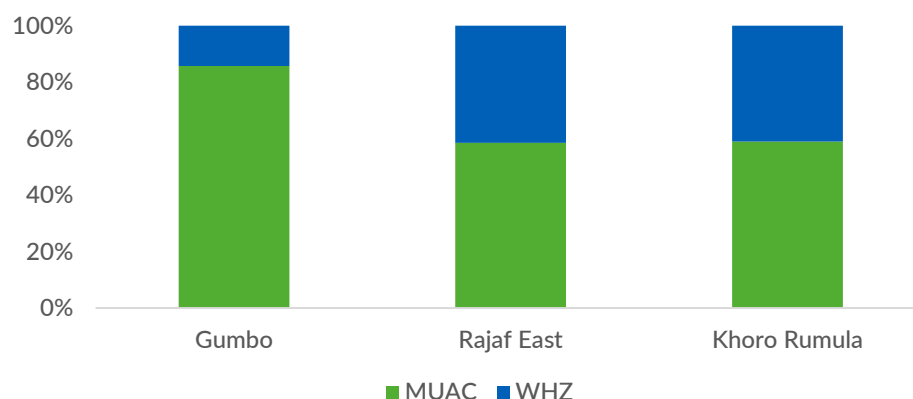


Figure 4: MUAC and WHZ admissions - Gumbo, Khor Romula and Rajaf East OTPs

MUAC vs WHZ admission of three OTP sites demonstrates that the highest proportion of admissions are based on MUAC. Rajaf East and Khoro Rumula have a higher proportion of WHZ admissions than Gumbo (41% and 42% opposed to 14%), this is likely to be due to the high case load of Gumbo OTP, whereby it is more straightforward to admit using MUAC.

2.4.3 MUAC at admission

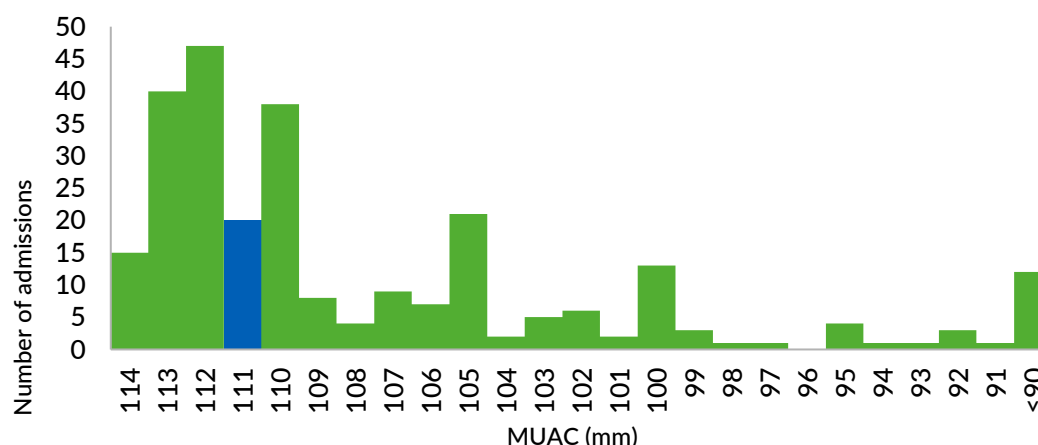


Figure 5: MUAC at admission - Gumbo, Khor Romula and Rajaf East OTPs

The median MUAC on admission is 111mm, indicating that most cases are found in the relatively early stages of SAM. However considering there is a SFP programme; it indicates that these children could have been identified whilst they were MAM. There are a significant number of admissions at 110, 105 and 100mm, indicating a digit preference and probable incorrect readings at these measurements.

2.4.4 Discharge Outcomes

Discharge outcomes are an important indicator of performance that allows us to see what proportion of cases recover after treatment.

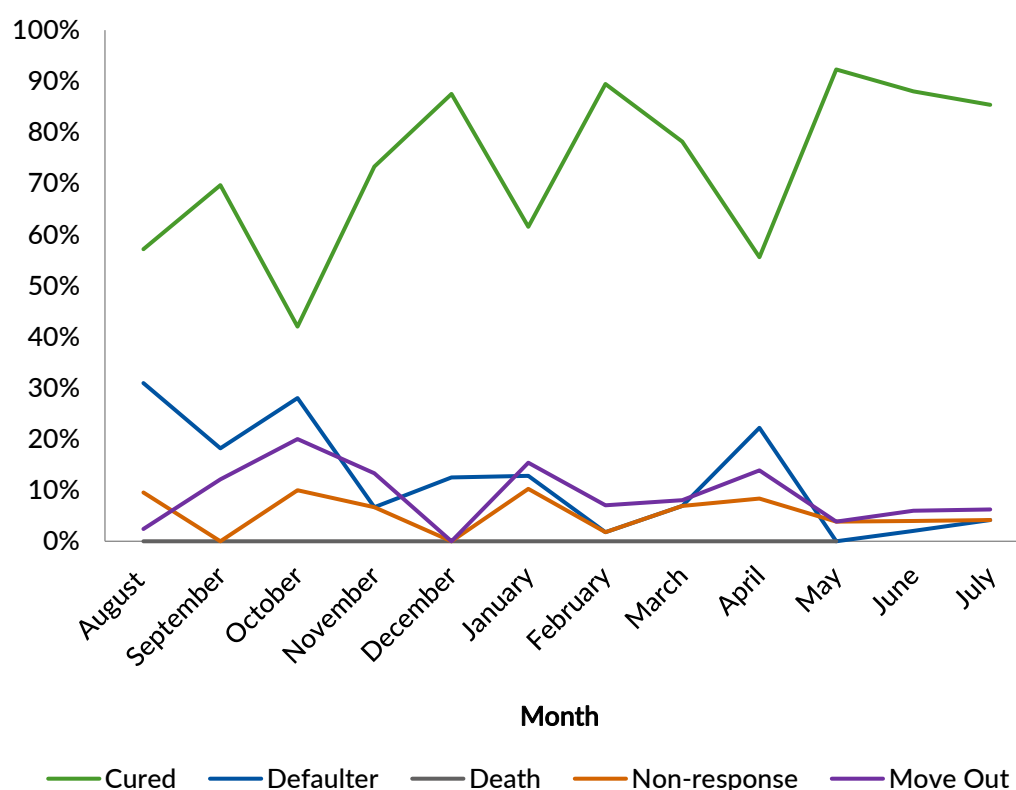


Figure 6: Discharge outcomes over time - Gumbo, Khor Romula and Rajaf East OTPs

The mean cure is 74%, which is just slightly below the Sphere standard of 75%¹. Defaulting is 11%, which is acceptable (below the Sphere standard of maximum limit 15%). However, the move-out value is 9.19%, taking defaulting above 15%. However, further investigation highlights that referrals to other programmes are also counted as 'move outs', and so we cannot class these as defaulters. At 0%, the death rate is well below the standard maximum limit of 10% and non-response is reasonably low at 5.8%. When included, medical transfers are 5% of the total discharges, which is considerable given these are cases in which have likely come to the programme too late for outpatient treatment, and thus require inpatient treatment.

¹ Sphere Association. The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, fourth edition, Geneva, Switzerland, 2018. www.spherestandards.org/handbook

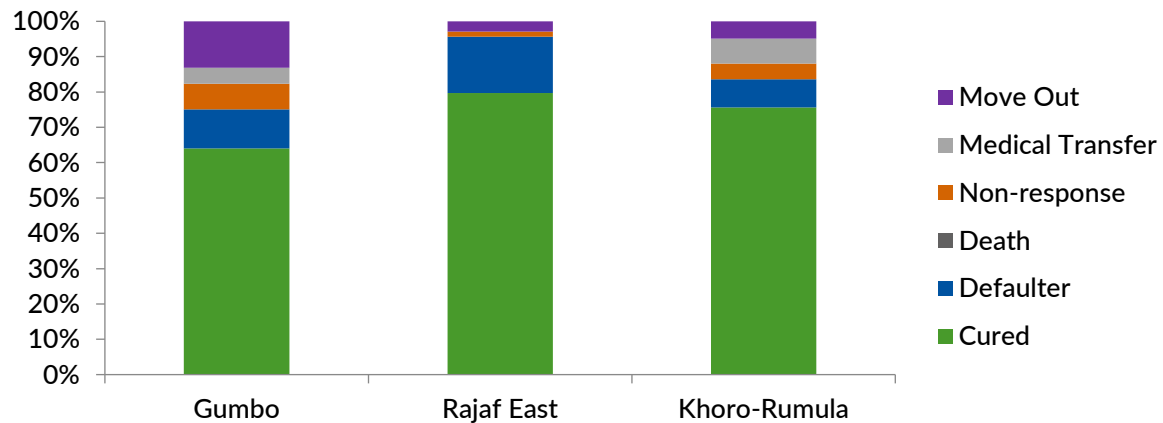


Figure 7: Discharge Outcomes per OTP Site - Gumbo, Khor Romula and Rajaf East OTPs

The discharge outcomes of individual OTPs vary slightly, with both Rajaf East and Khoro-Rumula displaying higher cure rates (above the Sphere Standard) than Gumbo (64%). Defaulting is highest in Rajaf East (16%); however defaulting and move-outs are higher in Gumbo (11% and 13%). Of all the centres, Gumbo is the busiest and has the highest number of admissions, it is also more of an urban centre and so an increased amount of movement population and migration is expected in that area. Interestingly, Rajaf East has very few admissions as well as very few medical transfers compared to Gumbo and Khoro-Rumula, this is due to the remote location of this OTP, and the better nutritional status as the majority of households are producing fruit and vegetables.

2.4.5 Length of Stay Cured

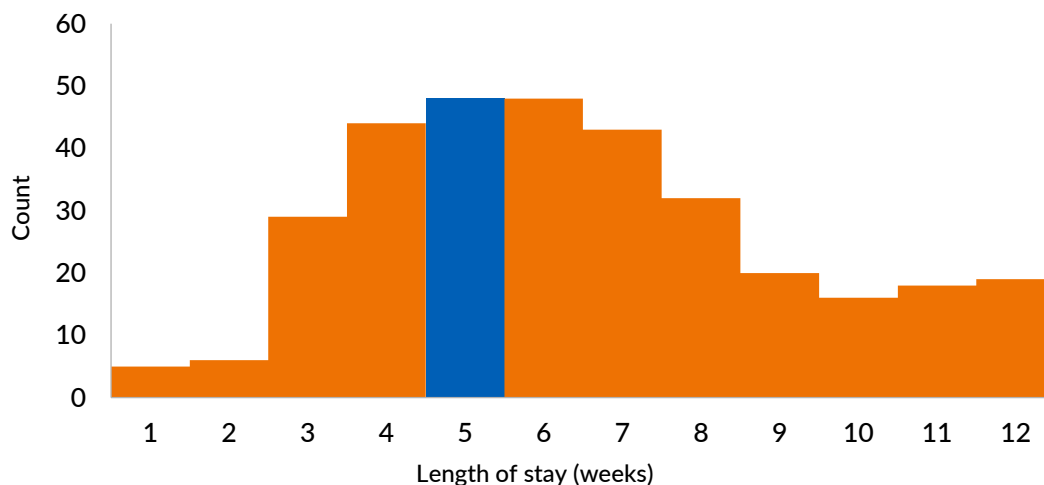


Figure 8: Length of stay before cure - Gumbo, Khor Romula and Rajaf East OTPs

Median LOS for cured cases is 5 weeks, which is coinciding with the MUAC on admission in SAM cases. It also indicates that there is good compliance to treatment protocol, as cases are not overstaying in the programme.

2.4.6 Defaulting over time

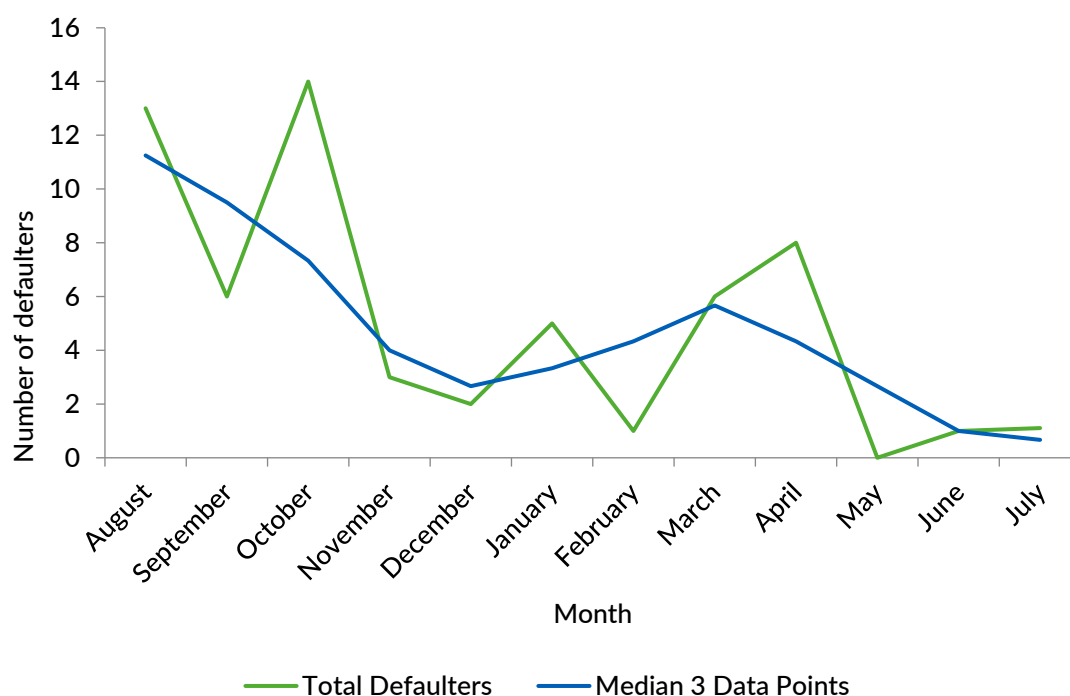


Figure 9: Defaulting Over Time - Gumbo, Khor Romula and Rajaf East OTPs

There is a spike in defaulting in October 2017, which coincides with the time of the harvest and food security. This also coincides with registration for the cash transfer programme, which resulted in a spike in defaulting. During December, programmatic activities slow and so defaulters are not recorded at this point, leading to the small spike in January. As the rains come in March and April, defaulting increases. This is attributable to the cash transfer programme implemented by World Vision, where once registration was completed; beneficiaries were expected to attend training, thus causing a spike in defaulting.

2.4.7 Weeks in programme before default

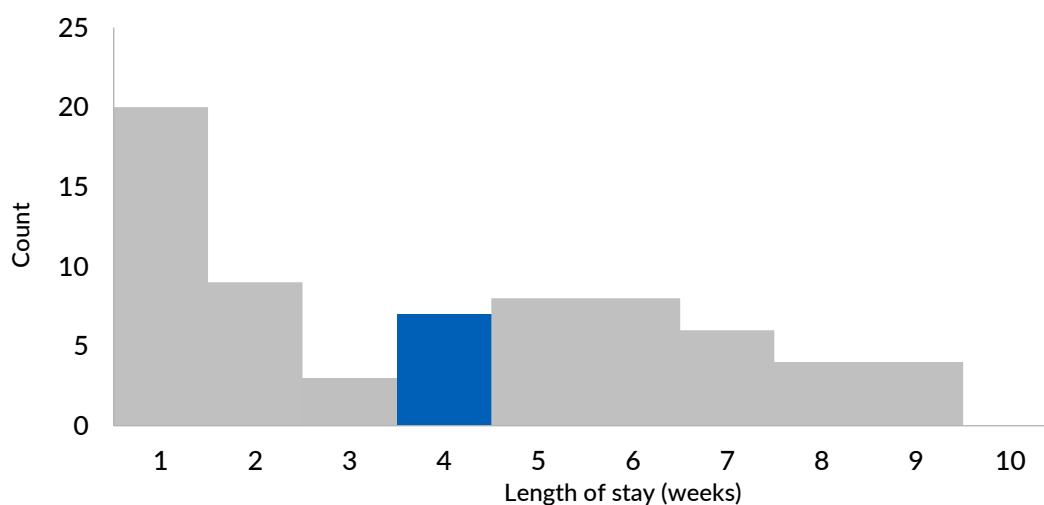


Figure 10: Weeks in programme before default - Gumbo, Khor Romula and Rajaf East OTPs

The median length of stay before default is 4 weeks; however, there are a high proportion of defaulting after the first visit. There are a number of possible explanations for this; there is high mobility in the population due to the urban context. In addition, as many referrals are made from the adjoining health facilities, there are numerous cases where children are not brought back for follow up visits at the OTP. Finally, this could also be indicative of inadequate instructions resulting in the caregiver not understanding the need to return for treatment or a poor user experience at the OTP. Due to the reporting format, we were unable to collect the MUAC at default from the treatment cards, and therefore it is recommended that a small study on this is conducted to ascertain the stage of treatment in which cases are defaulting.

2.5 MODERATE ACUTE MALNUTRITION TREATMENT: GUMBO, KHOR ROMULA AND RAJAF EAST

2.5.1 Admissions over time

The trend for admissions over time in SFP is largely similar to the OTP, which is expected, given the programme is operated out of the same sites.

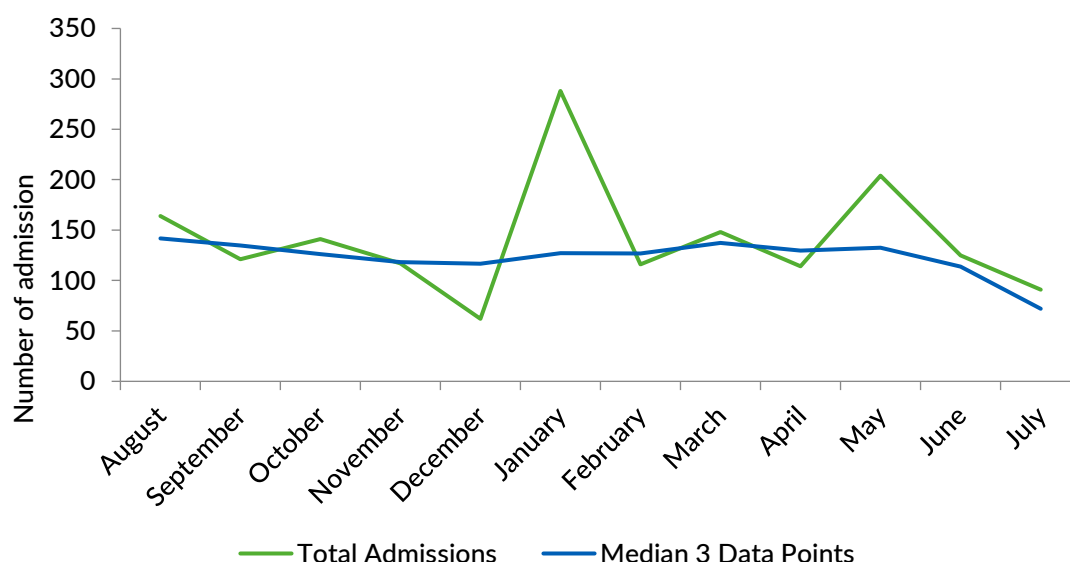


Figure 11: Admissions over Time - Gumbo, Khor Romula and Rajaf East SFP

Admissions are relatively stable from August to November as households are food secure following harvests. The number of admissions then decreases in December, where there is a reduction as programmatic activities slow over the festive period, and there is a migration of the population out of Juba. There is a sharp increase in January, as programme activities are recommenced. In April, the start of rains increase the incidence of disease and so a new spike in admissions is seen. In May, there was a mass screening exercise that resulted in a high number of referrals, and thus admissions to the programme.

2.5.2 MUAC at admission

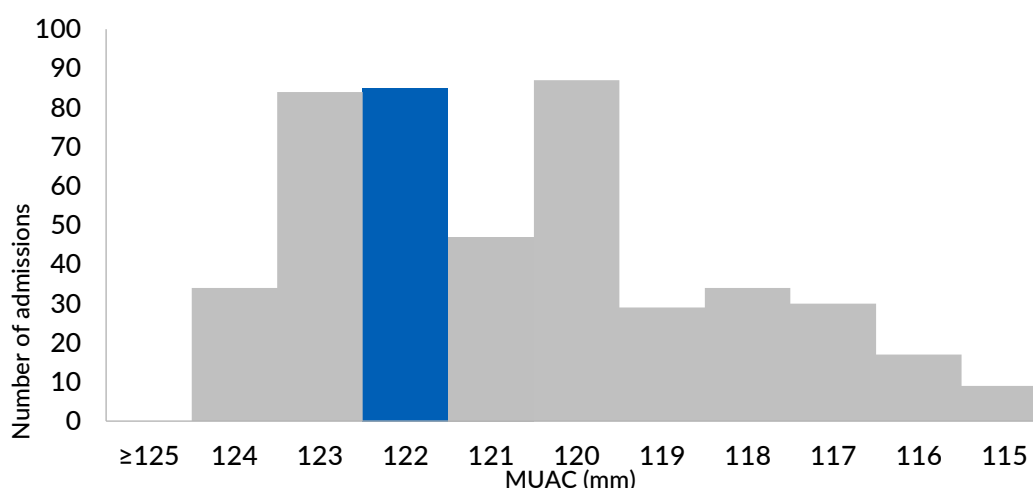


Figure 12: MUAC at admission - Gumbo, Khor Romula and Rajaf East SFP

The median MUAC on admission of cases is 122mm, indicating early admission into the programme. This could be as a result of the proximity of the health facility to the OTP/TSFP, and so children with malnutrition are referred across to the OTP/TSFP. There are digit preferences evident at 120mm, which indicates rounding off measurements.

2.5.3 Discharge Outcomes

Discharge outcomes are an important indicator of performance that allows us to see what proportion of cases recover after treatment.

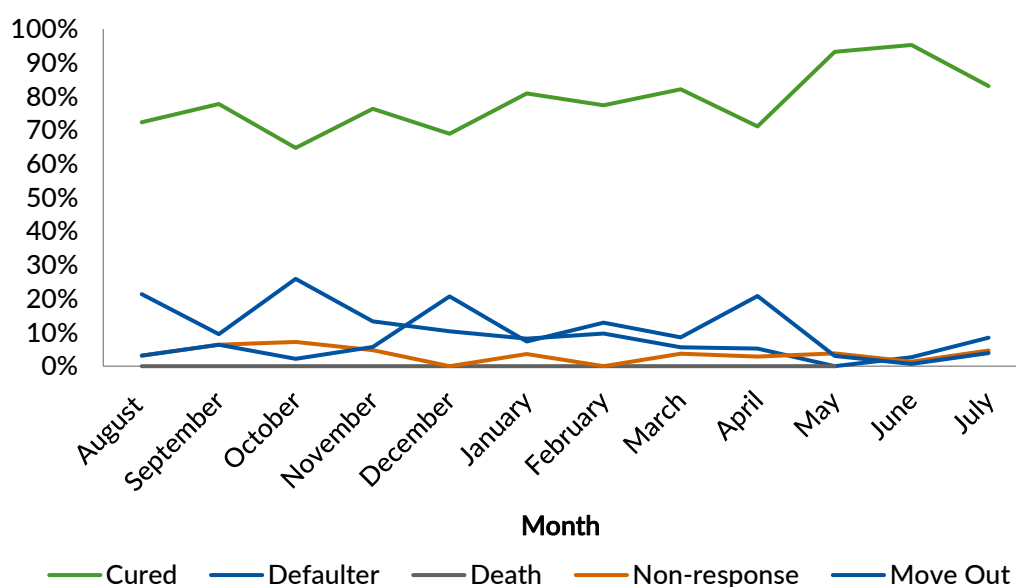


Figure 13: Discharge Outcome over time - Gumbo, Khor Romula and Rajaf East SFP

The mean cure is 79%, which is above the Sphere standard of 75%². Defaulting is at an average of 9.9%, which is acceptable (below the Sphere standard of maximum limit 15%).

² Sphere Association. The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, fourth edition, Geneva, Switzerland, 2018. www.spherestandards.org/handbook

Non-response is low at 3.7%, however the move-out value is 7.2%, and these cases are more likely to have been referred to OTP, which is a proxy indicator of non-response. .

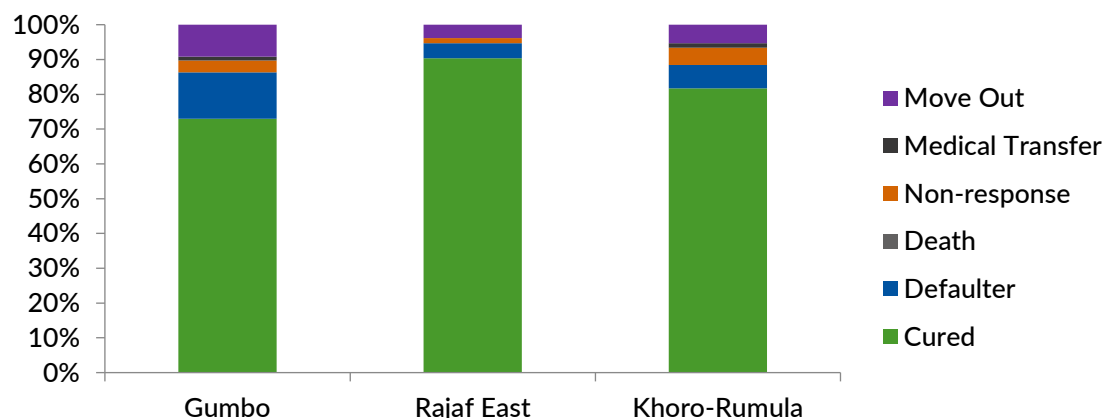


Figure 14: Discharge Outcome by OTP site - Gumbo, Khor Romula and Rajaf East SFP

Similarly to the OTP, Gumbo TSFP has the highest defaulting and move-outs of the three sites, again, probably due to it being a larger, urban centre. When the data is disaggregated, Rajaf East and Khoro-Rumula both are above the Sphere standards for the proportion of cured cases and Gumbo is slightly less than the standard at 73%.

2.5.4 Length of Stay Cured

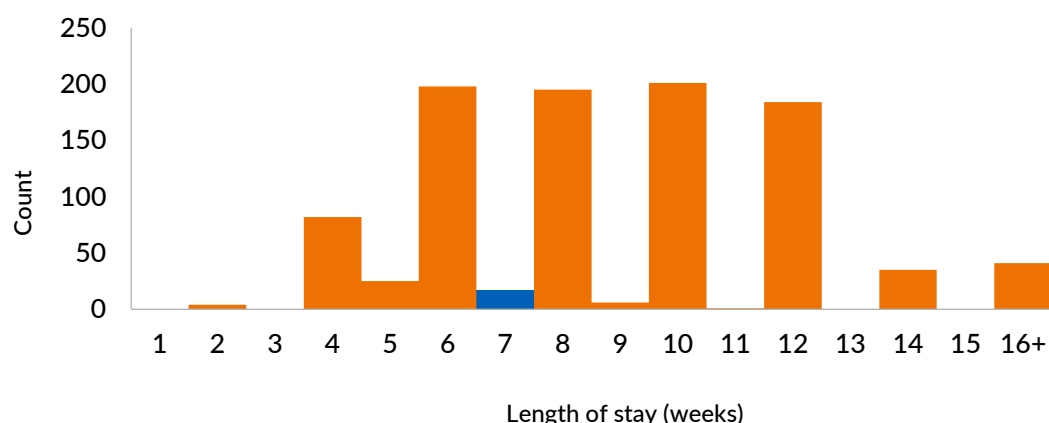


Figure 15: Length of stay before cure - Gumbo, Khor Romula and Rajaf East SFP

The median length of stay for cured cases is 7 weeks, although there is an even spread of discharges from 6 to 12 weeks. The relatively high median MUAC on admission (122mm) would most likely lead to shorter lengths of stay; however, we are seeing a high number of lengths of stay beyond 10 weeks. This therefore suggests that there could be some lack of adherence to protocol, including sharing and selling of products. It could also suggest high levels of disease, which inhibit the absorption of nutrients.

2.5.5 Defaulting over time

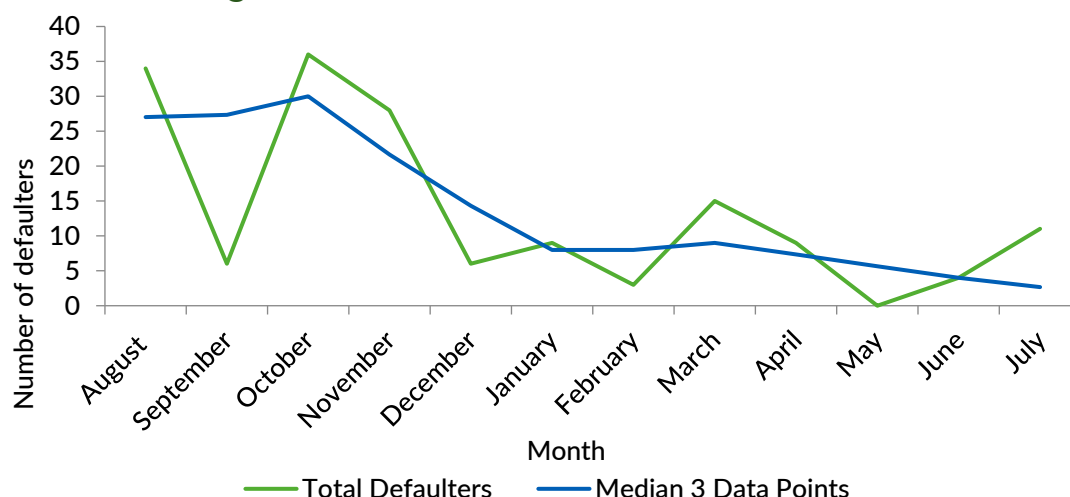


Figure 16: Defaulting over time - Gumbo, Khor Romula and Rajaf East SFP

Despite the erratic appearance, defaulting data follows a similar pattern seen in the OTP data. In October and November, there is a spike in defaulting, before a depression over the Christmas period as reporting reduces. From March through to April, there is a sharp rise as rains begin, access to sites reduces and cultivation activities initiate. Additionally, the cash transfer programme implemented by World Vision, is likely to have caused the spikes in defaulting in October and in March, as beneficiaries were expected to attend training during this period.

2.5.6 Weeks in programme before defaulting

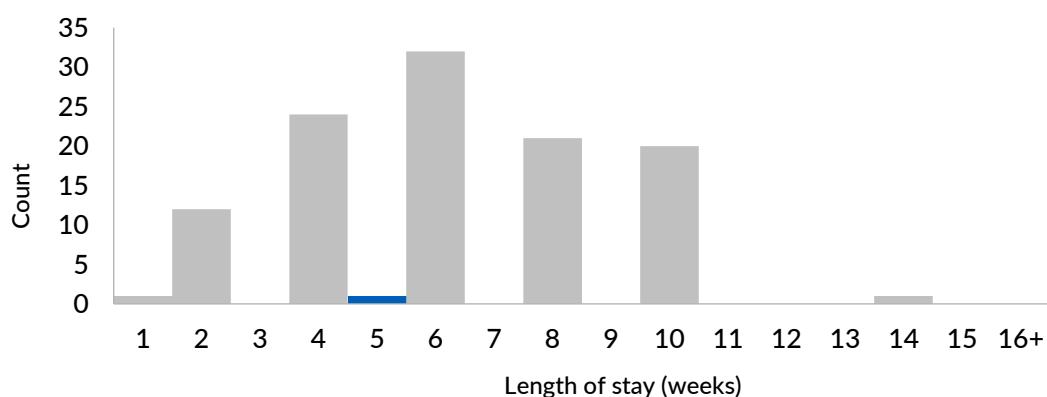


Figure 17: Weeks in programme before default - Gumbo, Khor Romula and Rajaf East SFP

The median length of stay before defaulting is 5 weeks, which is a reasonable amount of time to remain in the programme. Given that the median MUAC on admission is 122mm, it is likely that the children default at a high MUAC. Therefore, the barriers of distance, time to travel and opportunity costs are the probable reasons for defaulting at this stage in treatment.

2.5.7 Referral Source

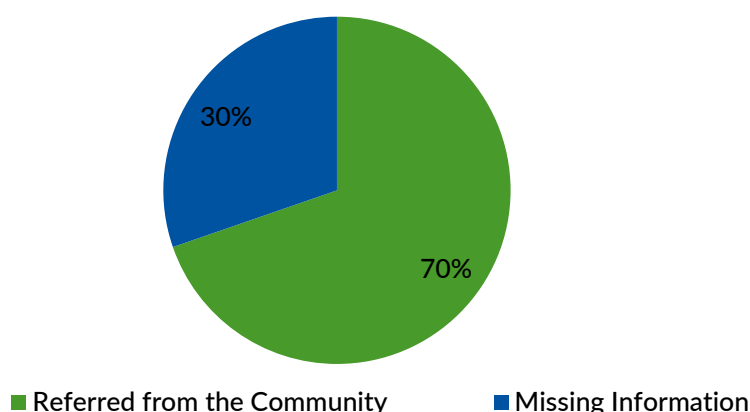


Figure 18: Referral Source - Gumbo, Khor Romula and Rajaf East SFP

Analysis of referral source for SFP provides some insight into awareness of the programme within the community. The most common referral source is 'referral from the community' (70%), however we cannot be certain if this is from volunteers or self-referral. It is likely that this is a mixture of both. It would be an interesting exercise to record more information on the number of referrals that are made across from the PHCUs to the OTPs are attached.

3.0 QUALITATIVE DATA COLLECTION AND ANALYSIS

Qualitative data was collected to complement and provide further information on the quantitative data collection.

Programme stakeholders were first identified. These included programme participants (carers of SAM and MAM children), community members (men, women) and programme staff (management staff, CNVs) see *Annex 1* for a full list of interviews. Both OTP and residential locations were chosen for the qualitative research. Residential locations for the qualitative data collection were chosen based on the following factors; ensuring of good spatial coverage throughout the study sites and locations close and far from OTP sites.

3.1 METHODOLOGY

A day was spent training the team in qualitative research techniques, including focus group discussions and key informant interviews. The team were collectively trained to use all the interview guides and, on the first day of data collection, all the team went to the same area to allow for close supervision from the survey lead, and on-the-job training and feedback. An additional 1 day of qualitative research was conducted. The team worked in pairs, allowing for one person to conduct the interview and manage discussions, and for the other to take notes. At the end of each day, teams returned to discuss their findings, which were recorded and organised into positive and negative factors.

In all, 12 interviews were conducted in the outside sites (Gumbo and Rajaf East were selected). There were 38 female respondents and 5 male respondents, see appendix 2 for a full list of interviews. Data has been organised and presented in table 2 below.

Table 2: Qualitative Data

Awareness of the symptoms, causes and effects of acute malnutrition	The community (men, women) demonstrated awareness of the most severe symptoms of acute malnutrition, listing oedema, marasmus, skin lesions, lethargy, hair colour changes and hair loss. Mostly, respondents described the impact of acute malnutrition as death, with few listing the impacts on development and productivity as the effects. Informants were able to identify at least one cause of malnutrition such as lack of food, diarrhoea or poor care and hygiene practices.
Programmatic awareness	Programmatic awareness was variable across communities interviewed. Most community members were aware of the programme, and recognised in the community as effective at curing children of malnutrition. However, some respondents (including those with under 5s in the household) had never heard of the programme or seen a MUAC tape. This also corresponded with CNV activity, where there were CNVs, community members tended to be more knowledgeable.
CNV activity	There is an active network of CNVs operating at village level, and interviews with them displayed that they are knowledgeable and motivated towards their work. In the communities that they operate in, they are well known, however data collection highlighted that this is very patchy. In some locations (particularly near Gumbo, where areas are sprawling and difficult to define), only half of the settlement is covered, resulting in awareness and screening in that part, but little programmatic awareness and no screening in the remainder. CNVs stated that lack of transport is a barrier to screening villages that are hard to reach, and so those villages are not screened. However, this barrier is more closely related to the selection process of CNVs, whereby community leaders select CNVs from the town, and not from the village they are supposed to serve, resulting in less familiarity with the communities that they serve, and further distances for CNVs to travel. CNVs are responsible for sharing health messages, though they do not conduct any follow-ups of cases in the community. Given the defaulting in Gumbo in particular, this may be a useful mechanism to draw on.
Health Seeking Behaviour	Respondents are aware of the different healthcare options that are available to them and regularly access healthcare for their children. There was little evidence of using traditional medicines, although there were accounts of mothers using local foods to formulate nutritional pastes (including groundnuts) to nurse their children back to health (this was in a hard to reach location). Depending on the location of the village and proximity to PHCUs, there can be preference for private healthcare options, military hospitals and local pharmacies, none of which screen for malnutrition. There was

additional confusion about which centres provide certain treatments, and varying levels of awareness of the different NGOs that are providing services (for example in a village that is closer to Gumbo OTP, community members spoke of visiting Don Bosco instead), highlighting gaps for location specific sensitisation. Programme staff also noted their concerns over the lack of attendance of those who are referred to the stabilisation centre in Al Sabbah hospital due to the distance that caregivers have to travel, and the lack of support to take care of other children. There is little follow up of these cases, and there are concerns that they become lost in the system.

Distance	Distance was a commonly cited barrier to access during data collection in the outside sites. In some locations, caregivers are walking up to 2.5 hours in each direction. Most have insufficient funds to use public transport and so the distance in which caregivers have to travel results in defaulting. Additionally, there was anecdotal evidence from programme staff that when a child requires SC treatment, the distance to travel from their villages to Al Sabah children's hospital in Juba discourages caregivers from seeking treatment.
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Insecurity (outside sites)	Although the situation in the past 18 months has stabilised somewhat, there are still isolated incidences of insecurity (such as robberies and alleged kidnappings) which prevent those in villages further away from sites from reaching them.
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Opportunity Costs	Many of the households are female headed, and the urban environment of many of them results in a depletion in community networks. In addition, living in and around Juba is expensive and it can be difficult to make ends meet. Therefore, many mothers engage in activities such as firewood collection, charcoal making, attending markets to sell goods, as well as household and cultivation activities. This reduces the time they have available to attend the OTP, and attending the OTP reduces the time they have to partake in these activities in order to support other children and family members.
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Stigma	There is some stigma affecting mothers whose children are enrolled in the OTP. One mother explained that other community members judged her and thought that she was unable to take care of her children properly.
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Sharing and Selling of RUTF and RUSF	Sharing of nutrition commodities amongst family members is believed to be common practice in the communities around Juba. The length of stay data provides some evidence to this; however, the non-response rates are not alarmingly high. Selling in the outside sites is less common, as the markets selling it are closer to the PoC, and so respondents cited that the supply on sale is coming from the PoC.
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4.2 HYPOTHESIS – GUMBO, KHOR ROMULA AND RAJAF EAST

Stage 2 is designed to check stage 1 findings; it can be used as a 'checkpoint' to ensure that our findings from stage 1 are a true reflection of the programme. It can also be used to deep dive and inform the prior. Stage 2 is also an opportunity to collect additional information on an area of interest that may have an indirect impact on programme coverage. As we had already made the decision to not proceed to stage 3, it was decided to focus on an area that can positively inform future programming.

HYPOTHESIS:

Children with a CNV present have coverage above the standard of 70%, children without the presence of a CNV have coverage below the standard of 70%.

4.2.1 Justification

The coverage of CNVs is patchy. It was evident during stage 1, that areas with a CNV present have higher awareness of the programme and of malnutrition. Those without were less likely to know about the programme or know children enrolled in the programme. It was therefore decided to investigate the extent of the impact of the presence of CNVs on coverage.

4.2.2 Sampling

Sampling was done in two stages: village sampling and then sampling of SAM and MAM children in each village.

Four villages were chosen from catchment areas in Gumbo and Khoro Rumula. A village with a CNV and a village without a CNV were selected, however when we arrived in one of the selected villages in the Khoro Rumula catchment area, there was a CNV present. Therefore, the analysis has been conducted by population type (and not by location); those with CNVs and those without CNVs.

All children under five were screened in the village using MUAC. When a case was found, the team would issue a questionnaire according to whether the child was in the programme or out of the programme.

The case definitions in table 3 were used.

Table 3: Case definitions

SAM child	Bilateral pitting oedema or MUAC <115mm
SAM recovering case	MUAC >115mm but still under-going OTP treatment (RUTF)
MAM child	MUAC ≥115mm and <125mm
MAM recovering case	MUAC ≥125mm but still undergoing TSFP treatment (RUSF)

4.2.3 Findings

The results from the outside sites are presented below in tables 4 and 5.

Table 4: Stage 2 Analysis - SAM Rajaf East and Gumbo area

Catchment	Village	SAM covered	SAM uncovered	SAM recovering	Total
Khoru Rumula	Rajaf West	1	1	0	2
	Hai Kampala	0	0	1	1
Gumbo	Mutala	0	0	0	0
	Kadoro	0	3	0	3

Table 5: Stage 2 Analysis - MAM Rajaf East and Gumbo area

Catchment	Village	MAM covered	MAM uncovered	MAM recovering	Total
Khoru Rumula	Rajaf West	3	3	0	6
	Hai Kampala	3	0	2	5
Gumbo	Mutala	0	7	0	7
	Kadoro	0	2	0	2

For the analysis of the results, Simplified Lot Quality Assurance Sampling (LQAS) was conducted in order to obtain a classification of coverage, and to determine whether the hypotheses were confirmed or denied. The SPHERE standard for coverage of CMAM programmes in urban of 70% was used. Note that the lack of clarity with regards to which villages had and which villages did not have a CNV present, means that analysis has been conducted through analysis of coverage in those who have a CNV present, and those who do not (i.e. through population and not through geographical location).

The following formula was used to determine the decision rule for the hypothesis:

$$d = \left\lceil n \times \frac{70}{100} \right\rceil$$

$$d = \lceil n \times p \rceil$$

d = decision rule

n= number of cases found

p= coverage standard defined

4.2.4 Analysis

Table 6: Stage 2 Analysis - Outside sites

SAM			
Cases with CNV presence	Conclusion	Cases without CNV presence	Conclusion
n=2 d=1 covered cases=2 Exceeds d? Yes	Decision rule met therefore coverage classified as being above the standard.	n=4 d=2 covered cases=0 Exceeds d? No	Decision rule not met therefore coverage classified as being below the standard

MAM			
Cases with CNV presence	Conclusion	Cases without CNV presence	Conclusion
n=11 d=7 covered cases=6 Exceeds d? No	Decision rule not met therefore coverage classified as being below the standard	n= 9 d=6 covered cases=2 Exceeds d? No	Decision rule not met therefore coverage classified as being below the standard

4.2.5 Analysis of SAM cases

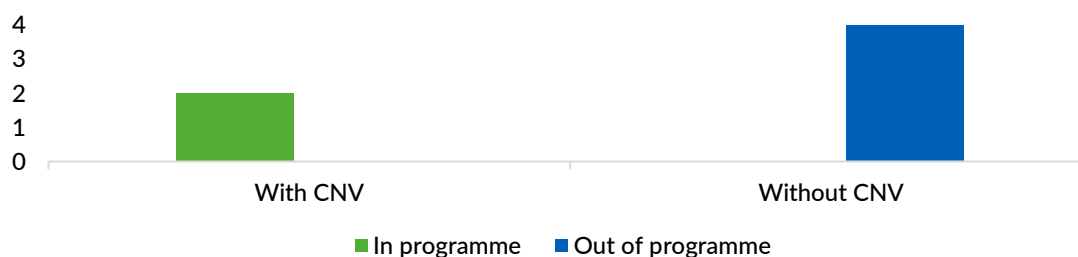


Figure 19: SAM Cases With and Without CNVs

Analysis of SAM cases in and out of the programme display a clear disaggregation between those with a CNV and those without. Those with a CNV present had been screened within the last two weeks and were given information about the CMAM programme by CNVs. The reasons given for enrolment were the short distance to travel and appreciation of the programme by the community.

Of the SAM cases not enrolled in the programme, three had been in the programme before, two of which had been discharged as cured, the third defaulting due to migration to another state. The caregiver of the fourth SAM child had not heard of the programme. None has a CNV working in their community.

The reasons for non-enrolment are displayed below in figure 20. Busy with other activities was the main reason given, followed by distance and previous rejection of a child.

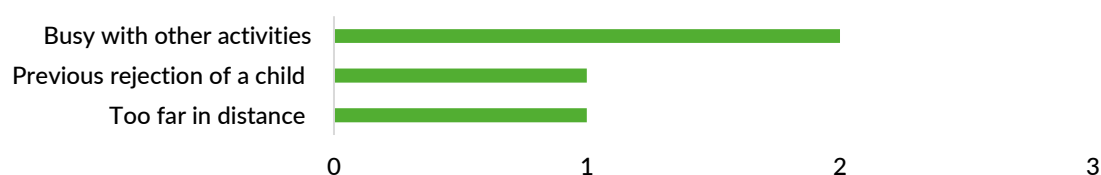


Figure 20: Reason for non-enrolment - SAM Cases

4.2.6 Analysis of MAM cases

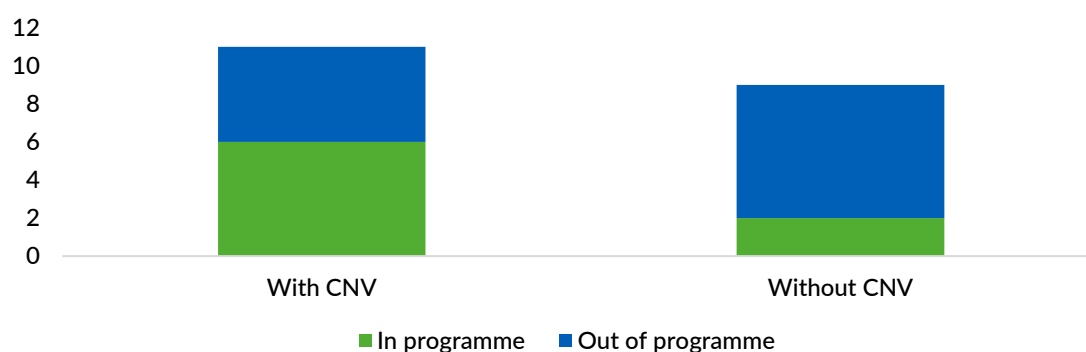


Figure 21: MAM Cases With and Without CNVs

Of the eight cases in the programme, six have a CNV present who had screened the child in the last month or less. Of the 12 cases not enrolled in the programme, five have a CNV present in their community, however one child had not been screened, the remaining four had been screened within the last two weeks. A further analysis of the MUAC measurements of these cases demonstrates that three of the children have a MUAC of 12.3cm or more, indicating that they were likely to be close to becoming MAM when they were measured. This highlights the need for the provision of close monitoring and counselling when children are at this stage.

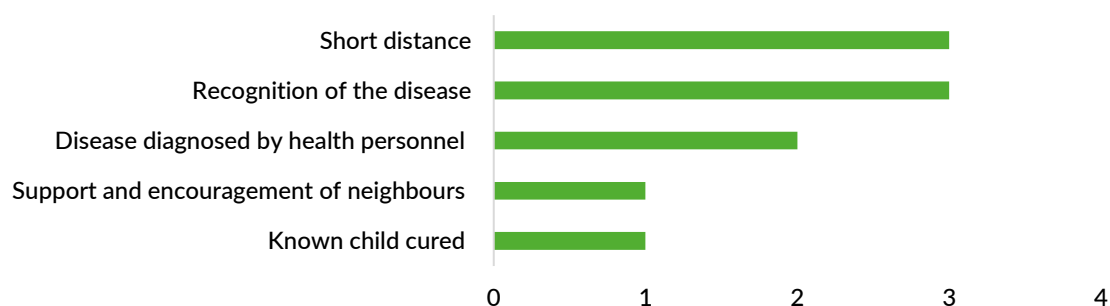


Figure 22: Reason for enrolment – MAM Cases

Reasons for enrolment displayed in figure 22 include the proximity of the OTP site to the home of the caregiver and the recognition of the disease in the child. Diagnosis of malnutrition by health personnel results in enrolment, and a positive perception of the programme through knowing cured children and support of the community also contributes to enrolment.

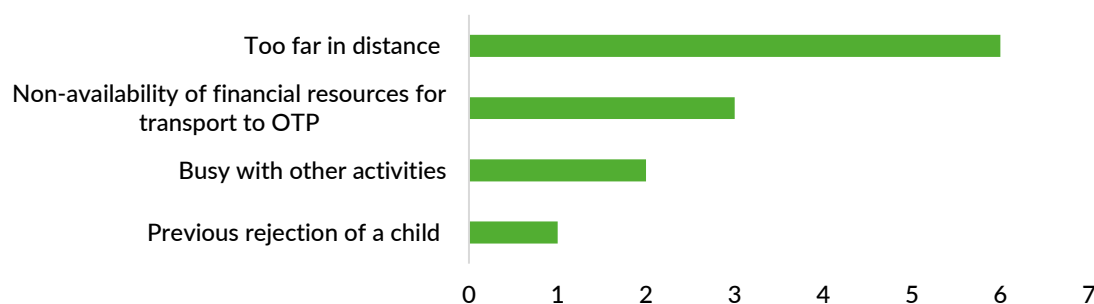


Figure 23: Reasons for non-enrolment in the programme – MAM

Reasons for non-enrolment displayed in figure 23 are predominantly related to accessing services, because of either the distance or the cost of transport to access services. Two respondents cited that they were too busy with other activities and one stated that being rejected from the programme previously was a reason for not returning.

Due to programmatic changes, it was decided that the benefit of conducting a stage 3 would be limited, and the data collected as part of stage 1 and stage 2 would provide sufficient information to further understand the positive factors and challenges affecting programming, in order to make changes to improve coverage.

5.0 CONCLUSION

Quantitative data collected in stage 1 provided insight into the strengths and shortcomings of the programme. The discharge outcomes hover around the Sphere standards, with the mean cure rate slightly below 75% in OTP, and 79% in SFP. Defaulting remains around 15%. The quality of the data is generally high, with reporting accurate.

Qualitative data collection complemented the quantitative data, and gave insight into positive and negative factors affecting coverage.

Overall, there is good awareness of the signs, symptoms and causes of malnutrition, however often the symptoms cited are the most severe, suggesting that MAM cases could be missed. Most people are aware of the programme; although awareness remains patchy with not all community members informed. This is linked to the patchy CNV coverage, whereby some communities have active CNVs, and others are lacking. Additionally, there are many healthcare options available, including private clinics, other NGO led OTP sites, military hospitals, pharmacies, and therefore, although health seeking behaviour is generally good, the first point of access is not always at a PHCU or OTP, where the child would be screened. There is also confusion about OTP catchment areas, and where treatment should be sought.

Distance, cost of transport and insecurity remain barriers to access. Data was collected from villages that are a two hour walk to OTP sites, and so it would be more appropriate in this context, for caregivers to use public transport, however many have insufficient funds for this. Whilst the security situation is much calmer, isolated incidents of robbery and alleged kidnappings are deterrents to many women travelling on their own.

Stage 2 was designed to gather further information and assess factors that affect coverage. Due to the perceived patchy CNV coverage, it was decided to evaluate the impact that CNV presence has on a child being enrolled or not enrolled in the programme. For SAM cases, the results demonstrate that CNVs have a positive influence on coverage, however for MAM cases it was slightly more inconclusive, as coverage was below the 70% threshold in both cases with a CNV and without. However further analysis did demonstrate that the cases that were found out of the programme, yet had been recently screened by a CNV, had high MUACs (above 12.3cm), and so it is likely that their condition has deteriorated since screening. Thus highlighting the importance of ensuring that CNVs are trained to counsel mothers of these vulnerable children, or of introducing mother's MUAC, to equip mothers to be able to monitor their own children.

Recommendations

Based on the findings of this assessment, a number of recommendations have been formulated with the assessment team:

Community Level Activities -

- Currently Community Mobilisers are involved in screening at OTP sites. It is recommended that they should only work at community level to increase the reach of the community activities, and not be incorporated in to screening at centre level.
- Additionally, Community Mobilisers can play a bigger role in mapping, ensuring that CNVs are reaching all target locations and highlighting areas that are not screened.
- Currently CNVs are expected to travel large distances, as many of them have been recruited from the town, and not from the community in which they serve. Therefore it is recommended that all CNVs are recruited from the village level to minimise the distances that they are expected to travel and also increase the impacts of their activities in the village (for example the community will be more aware of who their CNV is).
- To further the reach of screening activities in hard to reach and/or insecure areas, Concern can support Community Based Organisations to conduct screening activities.
- Continue conducting mass MUAC screening at least every six months

Distance and Insecurity-

- Introduce mobile nutrition centre where teams travel to reach distant locations on a set day either weekly or biweekly
- Distance results in mothers not wanting to leave other children at home due to the time it takes in travelling to the clinic/nutrition centre – and so it is recommended to use community mobilisation to engage other family members/community members in childcare
- Nutrition team at the nutrition centre to give priority to beneficiaries coming from far villages and encourage them to travel together

Integration of Stabilisation Centre-

- The interface between the OTP sites and stabilisation centre results in a strong likelihood that cases are not followed up between the stabilisation centre and the OTP. It is recommended that transport to Al Sabah Children's Hospital is strengthened, as it is believed that referred cases do not always present themselves. This could be through using Concern Worldwide cars, utilising the hospital ambulances or better still, providing a transport allowance to mothers.
- Provide transport cost to mothers/caregivers of children referred to SC to/from Al Sabah Hospital
- Assign a social worker in Al-Sabah hospital to facilitate admission and discharges of SC cases who are coming from the three sites
- Encourage nutrition and health partners to lobby to integrate a stabilisation centre into an existing primary health centre, such as Kimu, Kuweit or Gumbo through a health system strengthening approach.

Selling and Sharing of RUTF and RUSF-

- Engage community leadership on a clamp down on selling and enforce sachet returns with the consequence of centre feeding
- Conduct further investigation into boxes of RUTF being sold at markets and in shops
- Reinforce messages at OTP and community level around protocol, particularly sharing of nutrition commodities.

Limitations

Given the reduction in the scope of the exercise, the number of days allocated to qualitative data collection were limited and thus the number of catchment areas we were able to visit and total number of interviews were reduced. However, a strong body of qualitative data was still collected and this can be used to effect programmatic change to improve coverage.

Appendix 1

Date	Informant Type	Interview Method	Location	Number of participants
24 th October 2018	Community members	Informal Group Discussion	Serkat	3 (women)
	Community members	Informal Group Discussion	Serkat	4 (3 women, 1 man)
	Mothers of child in the programme	Focus Group Discussion	Gumbo OTP	10 (women)
	Mothers of child in the programme	Focus Group Discussion	Gumbo OTP	11 (women)
	Community members	Key Informant Interview	Gumbo	1 (woman)
	Mothers of child in the programme	Focus Group Discussion	Gumbo OTP	4 (women)
	OTP staff	Key Informant Interview	Gumbo OTP	1 (male)
	Community Members	Informal Group Discussion	Gumbo	5 (4 women and 1 man)
	Mothers of child in the programme	Key Informant Interview	Gumbo OTP	1 (woman)
25 th October 2018	Community Members	Key Informant Interview	<i>Island in the Nile</i>	1 (woman)
	CNV	Key Informant Interview	<i>Island in the Nile</i>	1 (man)
	Community Leader	Key Informant Interview	<i>Island in the Nile</i>	1 (man)