Semi-quantitative Evaluation of Access and Coverage (SQUEAC)

Empowerment of women in crisis, integrated nutrition and health intervention, Kabambare health zone, Kabambare territory, Maniema province

Project executed by consortium of People in Need and Médecins du Monde Belgique

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List of acronyms

BCZ	Bureau Central de la Zone
CMAM/PCIMA	Community-based Management of Acute Malnutrition
DRC	Democratic Republic of the Congo
IDP	Internally Displaced Person
IPC	Integrated Food Security Phase Classification
LQAS	Lot Quality Assurance Sampling
MAM	Moderate Acute Malnutrition
MdM	Medicins du Monde
MUAC	Mid Upper Arm Circumference
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OTP	Outpatient Therapeutic Programme
RECO	Community Volunteer
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SQUEAC	Semi Quantitative Evaluation of Access and Coverage
WHO	World Health Organisation

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Executive Summary

In February 2021, a coverage assessment for the Outpatient Therapeutic Programme to treat Severe Acute Malnutrition was conducted across Kabambare Health Zone. The assessment used the SQUEAC (Semi-Quantitative Evaluation of Access and Coverage) methodology and covered nutritional services delivered by People In Need.

The assessment identified the following coverage estimate:

60.5% (95% CI: 46.1% - 73.3%).

The quantitative and qualitative data collection and analysis revealed a series of boosters and barriers to access, providing detailed information on what is positively and negatively affecting coverage.

The discharge outcomes are within the Sphere standards, with the mean cure rate above 75% and defaulting below 15%. Analysis of MUAC on admission demonstrates that cases are enrolled early in to the programme, and a median length of stay of 5 weeks demonstrates good adherence to treatment protocols. Overall, reporting is accurate, however analysis of data showed some areas for improvement including systematic recording of referral source for all cases.

There is a high awareness of the programme in the health zone, largely due to the activities conducted by the Community Volunteer network, known as RECOs. In villages where there is a RECO present, coverage was found to be over the threshold of 50%, whereas in villages without a RECO, coverage was found to be under the threshold of 50%, demonstrating the influence that RECOs have on coverage. Engagement of local leaders and belief that the programme is effective has also boosted acceptance of the programme within the community.

There is some population movement, particularly around Tchuki Health Centre, which has resulted in several cases of defaulting. Across all health centres, there are staff shortages resulting in long waiting times for treatment. Some patients also have to travel long distances for treatment due to the remote nature of the area and insecurity also is a challenge to families trying to access treatment.

Based on the findings of the assessment, a series of recommendations were formulated to be used in future programming across Maniema province (a full list can be found at the end of this report):

- Ensure that referral source is systematically collected
- Ensure that families that are likely to migrate out of health zones are sensitised to the impacts of this and encouraged to find programmes elsewhere
- Ensure that each village in the target health zone has a RECO present
- Train RECOs to follow up on discharged cases
- Train family members in family MUAC approach
- Establish mobile clinics

1   Introduction

1.1   Background

The humanitarian situation in the Democratic Republic of the Congo (DRC) is precarious with over 12.8 million people, mainly in Eastern DRC, in need of humanitarian assistance, representing an increase of 7.2 million people in need compared to 2017.

According to the *Plan Opérationnel d'Urgence* for South Kivu and Maniema (7-12/2019, OCHA), Kabambare Health Zone continues to be one of the most severely affected areas with at least 33 175 persons in immediate need of humanitarian assistance, and is classified as a Priority 1 area by OCHA.

From the 2019 Humanitarian Response Plan, Kabambare remains one of the hotspots in Eastern DRC. According to Integrated Food Security Phase Classification at least 300 000 people in Maniema Province are in IPC level 3 (crisis) or 4 (emergency) and in Kabambare Health Zone, this represents at least 35% of the population.

Access in Maniema is difficult, both physically and for security reasons. In Kabambare, there are a high number of state and non-state armed groups resulting in a low presence of humanitarian actors. Since April 2018 renewed fighting in Kabambare Territory provoked large population displacements as well as severe nutrition and food insecurity. The most recent escalation of violence in Salamabila Health Zone, between July and September 2019, led to yet another large population movement mainly towards the targeted project health areas in Kabambare HZ (of at least 7 000 new IDPs). Furthermore, IDPs have sought refuge in Kabambare Health Zone from the ongoing crisis in Minembwe Health Zone, Fizi territory in South Kivu.

There is also a large number of internally displaced persons (IDPs) and returnees, estimated to be at least 15%. IDPs are often dependent on host families as they lack financial means for basic services, including food and healthcare. Currently, they are well received in the community, however their presence further exhausts the coping mechanisms of local communities.
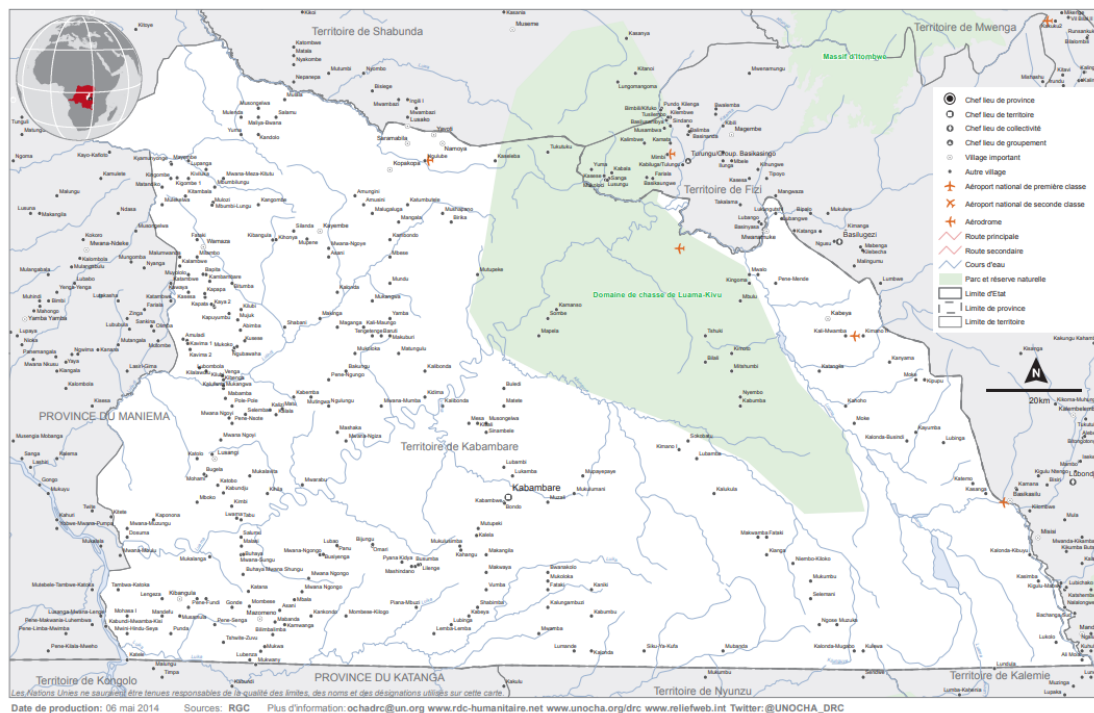
Figure 1: Map of Maniema, DR Congo (OCHA)

1.2   Nutrition and Food Security Situation

Acute malnutrition (wasting) is among one the most life-threatening condition in Kabambare, together with malaria, acute respiratory infections (ARI), watery diarrhoea and typhoid fever. Malnutrition rates in Kabambare Health Zone are continually surpassing emergency thresholds, and at the time of project implementation, were estimated to be at least 5.1% for severe acute malnutrition (SAM) and 12.9% for global acute malnutrition (Plan Opérationnel d'Urgence 2019).

PIN's monitoring data suggested a much more serious situation, out of 3944 children under 5 who were screened in 7 health areas in Kabambare Health Zone by health volunteers, 829 of them (approximately 21%) were found to be SAM.

Food insecurity is widespread with people turning to negative coping mechanisms such as eating fewer meals per day or skipping meals entirely. The lean period is October-December and April-May. A number of factors influence nutrition and food security, including continued population movements (due to high insecurity/armed conflict) leading to decreased agricultural production, inadequate agricultural practices, inadequate food preparation and food storage practices and poor dietary diversity.

Many myths exist around food consumption for pregnant and lactating women who are forbidden from eating papaya, mango, bananas, eggs, chicken and fish for example. Culturally, women are also forbidden from breastfeeding if pregnant as it is believed that breastmilk causes diarrhoea to the breastfed child and that it also negatively influences foetus development. Instead, mothers give their children (often also below 6 months) inadequate complimentary food such as porridge from manioc or fufu.

1.3   Health Situation

Hygiene practices in Kabambare are inadequate; the majority of households do not effectively treat their drinking water which is usually sourced from rivers and unimproved sources, leading to a large number of diarrhoea cases that have a direct impact on health and contribute to malnutrition. Open defecation is normal practice and only a minority of the population has a handwashing facility.

Widespread diseases include malaria, acute respiratory infections, diarrhoea and measles. It is estimated that at least 60% of women give birth at home (MICS 2017-2018). In rural DRC, the infant mortality rate is 118/1 000 and the maternal mortality rate 846/100 000 (UNICEF Atlas Santé DRC 2016). In 2018, at least 300 cases of Sexual and Gender Based Violence were reported in Kabambare Territory, however the real number is likely to be much higher as the majority of cases go unreported.

Limited access and use of quality healthcare services contributes to heightened mortality and morbidity rates. Existing health facilities lack critical resources, including a lack of skilled health workers, medicine and equipment. The cost of medical help, the physical/logistical difficulties to access health services as well as cultural barriers among the population limits the use of existing health services.

Traditional healers are an important part of the (informal) health system. The system of health volunteers (RECOs) enables increased outreach capacities of health centres however there are only few who are active and all in the health zone were trained by PIN.

1.4   Context of the project

The project "Empowerment of women in crisis, integrated nutrition and health intervention, Kabambare health zone, Kabambare territory, Maniema province, DRC" was implemented by PIN and MdM between September 2020 and February 2021, funded by GAC.

The project aimed to contribute to the reduction of morbidity and mortality caused by the nutrition and health crisis in the Kabambare Health Zone (KHZ). The intervention fully covers 3 health areas (HA): Nyambo, Tchuki and Musongela. In total, two health centres (CS Musongela and CS Nyambo) and 1 health reference centre (CSR Tchuki), with a current total population of approximately 31,552 individuals, were supported. Two more health areas (Fimbo-Nyingi and Ndalukala) were added during the last 3 months of the project implementation period. As services for the treatment of malnutrition were established later, and RECOs had less orientation time, the new areas were not covered by this survey. Limited support was also provided to the General Hospital (HGR) of Kabambare-Centre through the involvement of its staff in technical training and financial support for its operations, particularly for the treatment of hospitalized severe acute malnutrition (SAM) cases in UNTI. The project targeted all age and gender groups of IDPs, returnees and host communities, focusing mainly on children under 5 and pregnant and lactating women.

The action aimed to:

- Increase access to life-saving quality nutritional treatment services in supported health facilities for children aged 0-59 months and those suffering from severe acute malnutrition (known hereon as CMAM).
- Improve access to life-saving quality primary health care services and a package of complementary primary health care activities in supported health facilities, especially for

children aged 0-59 months, women of reproductive age and victims of sexual and gender-based violence (w/m).

- Increase the capacity of RECOs (w/m) and community members, especially women, to prevent, identify and refer cases of severe acute malnutrition, priority diseases, SRH and SGBV.
- Improve water, sanitation and hygiene conditions in health facilities in line with the national WASH in Nutrition (WiN) strategy and Infection Prevention Control (IPC) standards.

1.5   Objectives

The principal objective of the SQUEAC evaluation was to assess the coverage of the CMAM component of the intervention, the factors affecting coverage, the barriers and boosters to access, and to develop recommendations for programme improvement.

1.6   Specific Objectives

1. Map out coverage of OTP services in Kabambare Health Zone
2. Identify factors affecting uptake of OTP services
3. Develop specific recommendations, based on assessment outcomes to generate lessons learnt for future programming

2 Methodology

The SQUEAC methodology was chosen in order to determine coverage across Kabambare Health Zone Catchment, and to provide recommendations to improve coverage and a rich body of evidence to underpin them. The SQUEAC took place in the following stages:

Stage 1: An analysis of all quantitative data, collection and analysis of qualitative information and the identification of negative and positive factors effecting coverage from health centres within the catchment.

Stage 2: Development and testing of hypotheses to confirm (or deny) assumptions related to areas of high or low coverage, and to ascertain whether coverage is uniform across the assessment area.

Stage 3: Wide-area surveys were conducted to determine coverage estimates of SAM services across Kabambare using Bayesian techniques.

The team consisted of a mixture of 5 women and 9 men. The core team was made up of 8 people, and 6 additional data collectors. For the wide area survey.

The assessment took place over the course of 4 weeks from 15 February to 22 March 2021.

2.1 Limitations

- Although the assessment mostly took place without major problems, there were certain limitations that should be highlighted. Firstly, there were few women on the assessment team. Although there are no explicit limitations on men talking to women, it is likely that some of the data collected (particularly during the qualitative stage) might have been limited by often having a substantially male team converse with female informants, as women may feel intimidated by an all-male team of interviewers. On the other hand, people in the area are used to working with both, female and male RECOs as part of the programme. Male RECOs have not been analysed as significant constraint among the barriers to access the malnutrition treatment.
- Security constraints, recent population movements and sometimes also exaggerated population/household numbers in villages limited data collection in some areas. Some villages were inaccessible and therefore could not be included which could potentially bias the data on coverage. A SQUEAC should be an iterative process, meaning that every step should be discussed in depth amongst the team. Inaccessibility and poor communication channels meant that this could not always happen between the core team and the data collectors. Steps were put in place to reduce the impact of this on the assessment, by including follow ups of qualitative data later on in the assessment for more information on defaulting for example.
- Due to travel restrictions and no accessibility to the zone in the beginning of the COVID-19 pandemic (non-existent access between South Kivu and Maniema from April-June 2021) the malnutrition treatment within the project period was from September 2020 to February 2021; therefore, it was not possible to conduct a full analysis of seasonal variations. In addition, as the project is ending, the findings will not feed directly in to a new project, but will be still used to reflect on the existing project and where possible, to shape PIN's other interventions.

3   Findings: Stage 1 Quantitative Analysis

Quantitative data analysis from electronic records was performed. The period analysed was from September 2020 to January 2021 and included 661 cases. Additional data (such as length of stay, MUAC on admission) was collected additionally from registers and treatment cards. This was used to verify electronic data.

3.1   Seasonal Calendar

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

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Climatic conditions												
Rainy season												
Dry season												
Economic activities												
Planting												
Diseases												
Hungry Season												
Malaria												
Diarrhoea												

3.2   Admissions Data

3.2.1   Admissions Over Time
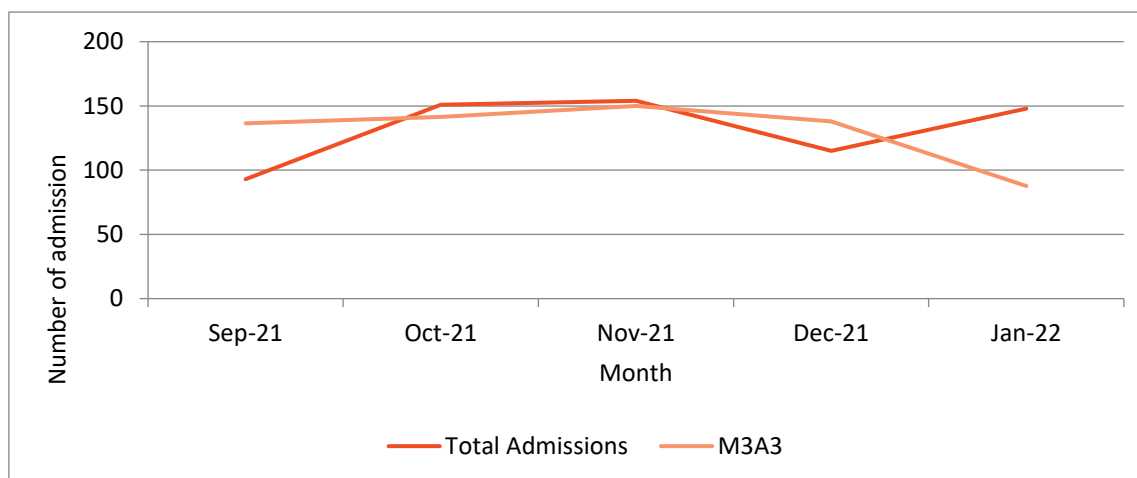
Figure 2: Admissions Over Time

September to October see an increase in admissions as children are referred to the programme. From October to November, the number of admissions plateaus and in December there is a decrease. This decrease is attributed to truck carrying nutritional inputs getting stuck due to the deterioration of roads and lack of UNHAS flights. This resulted in facility stockouts, less referrals and no active screening in the community, the numbers then recover in January[1]. This data disguises low admissions in some health facilities (December and January in Musongela, October in Tchuki and October in Nyembo), this was due to stockouts of nutrition commodities during these months. It could also be due to progressively accelerating activity of RECOs who had been trained by BCZ (Bureau Central de la Zone), PIN and MdM in the month of October.

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[1] The blue line, M3A3, is where medians of sets of three successive data points have been taken, in this case an admission in a given month. The results are then smoothed by taking the arithmetic means of sets of three successive smoothed data points. The more times you apply a moving average, the more smoothing is applied to the data. This allows for a greater long-term analysis of admissions. This way we can see variations over the data period without the abnormal fluctuations distorting the data set.
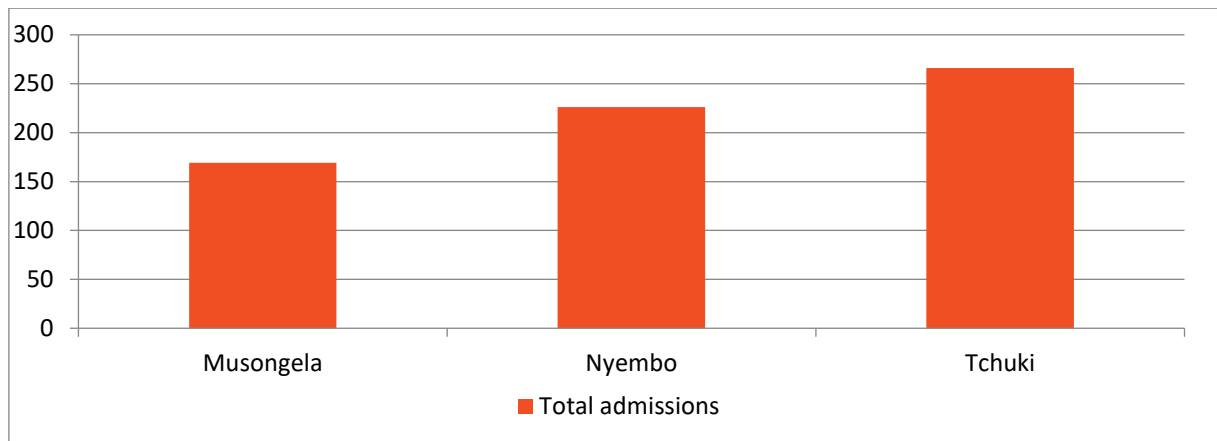
Figure 3: Total Admissions per Health Centre

As the referral health centre with the largest catchment area, Tchuki Referral Health Centre has a higher number of admissions (266) than Nyembo and Musongela. This distribution of admissions across the health centres is expected.

3.2.2   MUAC at Admission

An analysis of MUAC on admission was conducted for all admissions. Given the high proportion of children admitted with WHZ (59%), median MUAC on admission is inflated at 116mm. There are spikes in admissions at 120mm and 110mm indicating digit preference, in addition there are a high number of admissions at 114mm indicating tightening of the MUAC strip to ensure acceptance in to the programme.
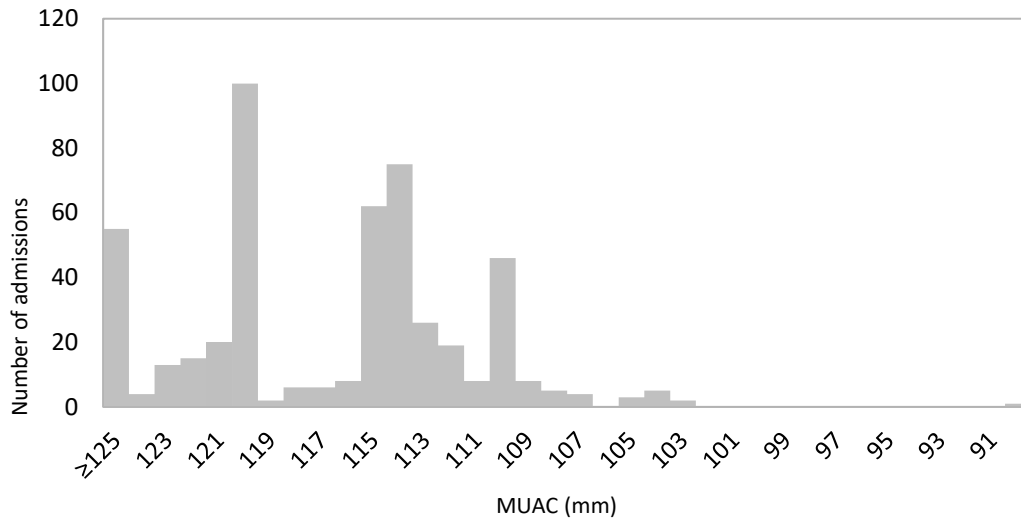
Figure 4: MUAC at Admission

3.3   Discharge Data

3.3.1   Discharges Over Time
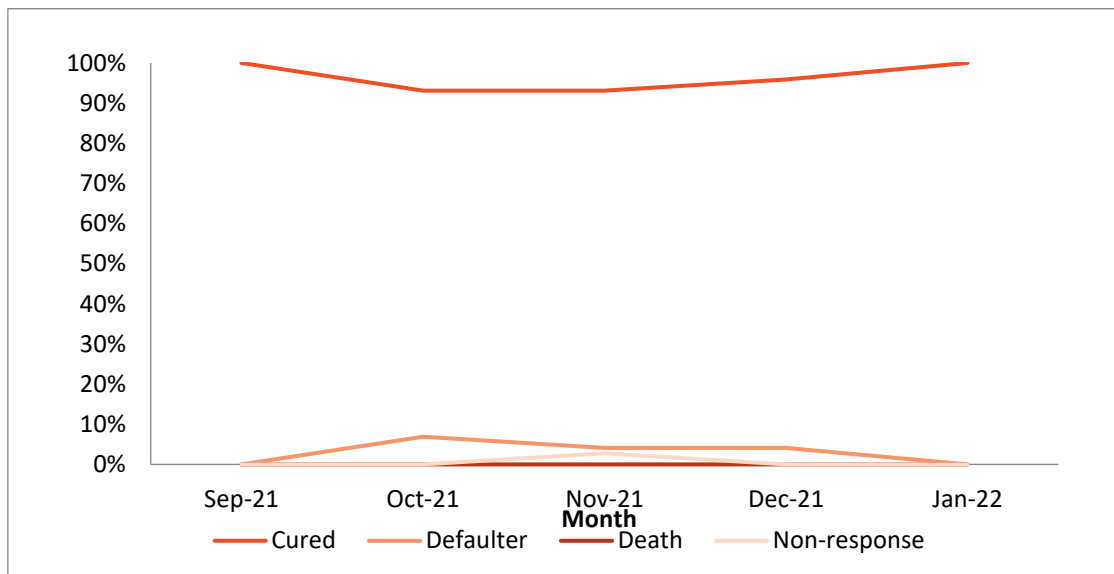
Figure 5: Discharges over time

The mean cure rate of OTPs is 96.5%, which is well above the Sphere standard of 75%.[2] Defaulting rates are at an average of 2.7% which is acceptable (Sphere standard maximum is 15%), and non-responders are 0.8%. When analysed, there is some variation across the sites, especially in defaulting.

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

3.3.2   Discharge Outcomes by Health Centre
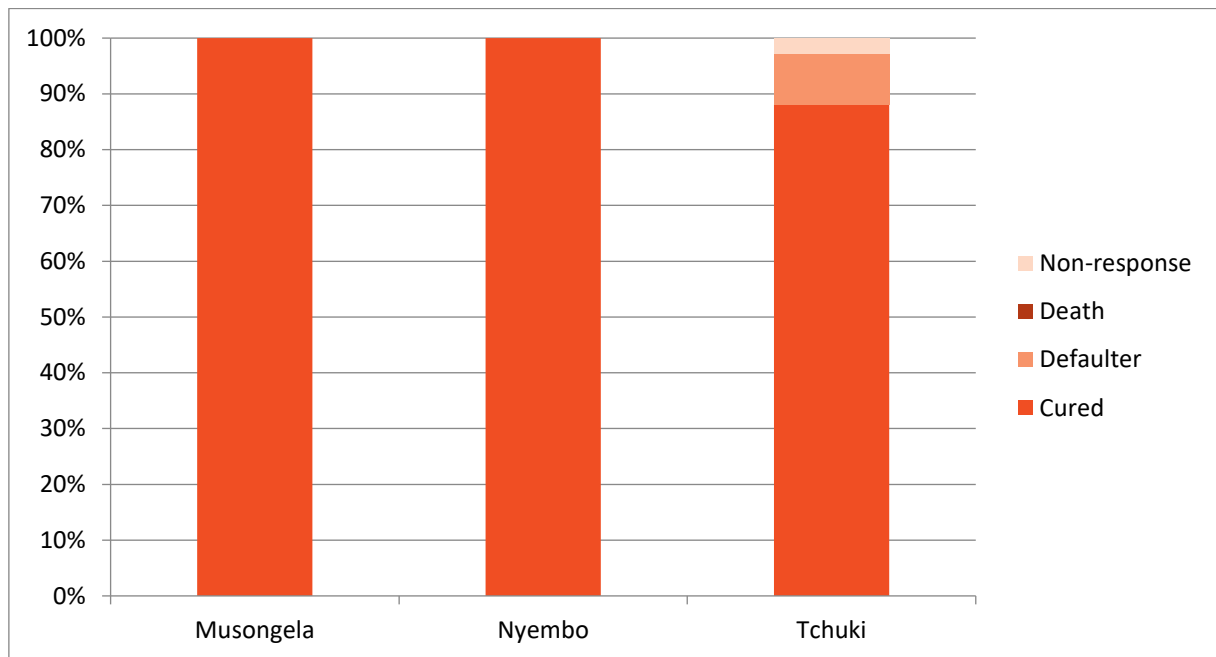
As the data demonstrates, the defaulters (9%) and non-responders (3%) are only seen in Tchuki health centre. It is important to note that the figures seen are still within the Sphere standard limits. In response to this data, the team visited the health centre and the neighbouring communities in order to collect qualitative data to fully understand why this health centre is experiencing more defaulters. The health centre staff had not been able to find the families of these defaulted children as according to community members, they are no longer living in the area. It is likely that the families of these children (temporary IDPs fleeing local conflicts/insecurity in the area or parents/caregivers coming from far remote areas) migrated after first visible improvements in their children´s health back to their families in villages or for work in the fields or fishing during this period and hence cannot be traced.

3.4   Length of Stay

3.4.1   Length of Stay Cured

The median length of stay for cured cases is 5 weeks, with the highest proportion requiring 4 weeks until they are cured. This is an average length of stay and is reflective of the MUAC on admission. It is demonstrating that caregivers are adhering to the instructions given, and the child is likely to be receiving the whole ration of RUTF.
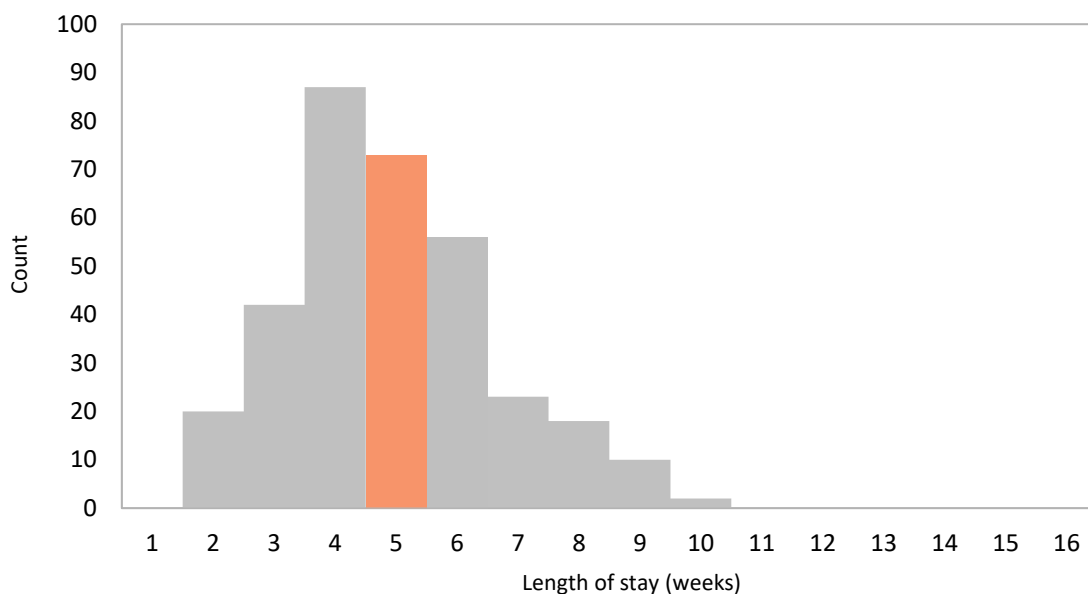
Figure 7: Weeks in programme before discharge cured - all health centres

3.5   Defaulting

Given the low number of defaulters in general (n=13), there was little added value in conducting a full further analysis. The majority of defaulting took place in November and December, and the majority defaulted after 3 weeks in the programme. At this point it could be that the child has made visible progress and therefore caregivers do not feel that it is essential that the child remains in the programme.

3.6   Referral Source

Data on referral source is not systematically collected, and so no analysis could take place. Efforts were made during qualitative data collection and stage 2 and 3 to ascertain how children reach the programme.

3.7   Quantitative Data Quality

Data is generally of good quality in the health centres. Health staff have been trained by Bureau Central de la Zone (BCZ), PIN and MdM on data collection, which is followed up during regular monitoring and monthly supervisions and evaluations of the targeted health centres. Every month, the data is verified by BCZ and possible errors are corrected.

There are some issues with digit preference in MUAC recording. In addition, to ease further analysis, it is highly recommended that referral source is recorded, in order to assess volunteer activities and programme awareness in more detail. The work of community volunteers RECO is recommended to be followed up more to the detail.

4   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 children), community members (community leaders, and women) and programme staff (management staff, RECOs) see appendix 4 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.

4.1   Methodology

The team spent two days learning qualitative interview 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 3 days of qualitative research were conducted. The team worked on stage 1 individually, divided by health areas and in the stage 2 and 3 in pairs, allowing for one person to conduct the interview and manage discussions, and for the other to take notes. The guides used can be found in appendix 2. As the end of each day, teams returned to discuss their findings, which were recorded and organised into positive and negative factors as pictured below. The coding used in the analysis is in appendix 3.

4.2   Findings

In all, 27 interviews were conducted; 12 Key informant Interviews and 15 Focus Group Discussions. In total there were 120 female respondents and 23 male respondents.

In the tables 1 and 2 below, Boosters and Barriers are listed for the three selected health areas of Tchuki, Nyembo and Musongela in the health zone of Kabambare, territory of Kabambare, Maniema province, DR Congo (some which are similar were merged) and a description/justification for each is given.

Table 1: Positive factors influencing programme coverage

Positive Factors - Boosters	
Involvement of RECOs in the programme	The community component of the programme, particularly in the management of malnutrition, is supported by a strong network of community workers (RECO). The activities of these workers in the community have raised awareness and referrals to the programme. In villages where there is a RECO, the respondents were aware of the programme and the children were more likely to have been measured with MUAC. In villages where there is no RECO, there were a few cases where interviewees were not aware of the programme (although they do not have young children), however children were only likely to have been screened if they had been taken to a health centre. Female RECOs was appreciated by many of the women interviewed, because they consider them as community members and they encourage them to bring their children to the health centre.
Positive perception and community acceptance of the programme	The programme is recognised in the community as being effective in quick referral and curing children of malnutrition. It is talked about in a positive way and is cited as a reason for reducing child mortality and improving children's health. The interviewees indicated that they received good service at the healthcare sites and they are well aware of PIN's presence and activities in the health zone of Kabambare. PIN and MdM team have strong acceptance from the population side as observed in the Community Response & Feedback Mechanism and when PIN motorbikes or staff are passing by, people know and greet staff members, demonstrating high awareness across the community. Community and religious leaders are regularly included in the dialogue with NGO partners to ensure acceptance and encouragement of the programme. As part of the programme, local authorities, and sometimes customary chiefs, are consulted on programming and access to ensure community acceptance. These channels of communication are extended within communities, with irregular reports of village chiefs reminding families and households with malnourished children to remind mothers to enrol them in the programme. There is also a strong community network, where neighbours and family members often care for other children to help mothers with children in the programme.
Community outreach by RECOs, Leaders and PIN staff leads to good health seeking behaviour	Awareness raising in the community is a major asset in the successful implementation of the activities carried out in the community. The project provides information through community radio, community sessions, support groups, community conversations and through RECO's weekly work. Increased awareness of available health care options means that carers are seeking care in health centres and hospitals. This self-referral mechanism for illnesses, combined with systematic screening in health facilities, enables patients to

	be referred to care sites. The use of traditional medicine is limited/often left as a second option due to this high level of awareness. This is due to the health counselling sessions that have been provided to carers by RECO and by the health personnel.
Good monitoring of activities by staff and transparency	According to interviewees, the project is very transparent and accountable, i.e. everything that was promised in the project, is being achieved (despite the COVID-19 pandemic delaying the start of treatment). The organisation does not promise things that it cannot deliver and this satisfies the population. The fact that the staff are always present in the field facilitates the smooth running of activities and the success of the project.
Free treatment	The free care introduced in the programme has facilitated access for many people. The knowledge that they will receive free care motivates them and even encourages them to encourage others in the community who have malnourished children to seek care which is otherwise often not affordable for the most vulnerable, including all required costs starting with transport and food expenses to get to the health centre and be able to stay if required.
Capacitation of care providers on CMAM, CPSr, Covid-19	The training offered to the service providers enabled them to carry out the project activities successfully. Although not all the providers participated in the trainings; those who were able acknowledged that the trainings they received will enable them to continue caring well for people with malnutrition problems even after the project is completed. Additional end line data collected demonstrates an improvement across nutrition indicators, including the percentage of mothers able to remember recommended nutrition practices, 60% of children age 20 – 23 months received breastmilk during the previous day and 54% of mothers knew that women can breastfeed during their pregnancy (an increase from 36%).
Performance bonuses for RECO/CODESA, care providers and coverage of transport and food for referred cases requiring inpatient treatment	The performance bonuses received by the providers and RECO were mentioned as a great source of motivation in doing the job. For the referred patients that require inpatient treatment in Tchuki referral health centre or the general hospital, transport and the food provision are a driving force for the project as it ensures that cases not only reach the programme but also remain for the duration of the inpatient treatment.
Material for health facilities - work equipment (raincoats, boots, registers, pens etc.) and motivation kits (e.g. backpacks for their work)	The equipment donated to the Health Facilities (FOSAs) and RECOs enabled them to carry out their activities successfully. Given the geographical accessibility of the area is difficult, especially during the rainy season, the equipment offered to the RECOs enabled them to carry out their activities successfully. The work equipment given to the structures contributed to their good functioning.

Table 2: Negative factors influencing coverage

Negative Factors - barriers	
Distance and lack of transport and catering facilities by road (if walking for a few days).	Distance was the most frequently cited barrier to access when collecting data in the questionnaires. In some locations, caregivers walk up to 4 hours in each direction. This, combined with seasonality and rainfall, makes access difficult for carers. There are still inaccessible villages where the distance is aggravated by the rains during the rainy season, making roads impassable. In addition, the time needed to travel, combined with other responsibilities such as household chores, childcare, farming and income-generating activities, means that those living further away from a care site are less likely to travel there in the first place, and more likely to default on their obligations. The population do not have the means of transport to reach health centres due to poverty. This lack of means of transport can be explained on two levels: firstly, the population has no means to pay for transport and secondly, there are not many motorbikes in the area. In Nyembo specifically, the providers mentioned lack of means of/for transport. The same barrier is often mentioned by the BCZ to carry out regular monitoring over time when PIN does not support them financially during our intervention.
Limited number of qualified care providers, lack of training in the CS and limited involvement of facility managers in nutritional activities	In the health areas which we support, there is a limited number of care providers (very often 1-2 people per facility). Some facilities have only two qualified providers and this makes it difficult to carry out activities. The limited number of qualified health workers means that some inhabitants do not attend the facilities very often for fear of arriving at the facility and there being no availability of staff. This number has also contributed to the failure to implement the advanced strategy, whereby health staff visit villages within the health zone, vaccinate children and treat some illnesses on the spot. However, in the target health areas, as there are insufficient staff in the facility, there is no way that the providers can move to areas very far away from the facility. Another barrier is the failure of trained providers to provide training on CMAM and antenatal care at the facility level.

| Defaulting | A major problem affecting the programme is defaulting. Although the number reported remains low, the survey of records suggests that the number of defaulters is higher than originally thought. Although the search for defaulters is in place, it does not necessarily provide information on the reasons for their default or their destination. The team has searched for defaulters but unfortunately, they are no longer in the field. By asking neighbours, it was found that these defaulters are leaving the programme and the village to go to places where they find life is easy, i.e., to carry out their activities. In order to gain more evidence on the subject, additional data collection took place to further investigate reasons for defaulting. Respondents explained that the defaulters from Tchuki are joining their husbands to fish in rivers or going to the field to cultivate. Respondents stated that as the treatment is free, they come to Tchuki to access the programme, and when the child looks visibly better, they return to another health area that was not targeted by the project. This corresponds with the median 3-week length of stay before defaulting. Respondents agreed that it is unlikely that patients continue treatment in an alternative health zone after defaulting, and that it is more likely that they buy medicines at the pharmacy or from traditional healers.

However, it is difficult to obtain evidence to determine whether they are transferred to other health centres. Cases that have left the CEP by default will not affect the estimate of CEP coverage as they no longer reside there. However, they are still in communities in need of treatment. |
|---|---|
| Opportunity costs | In order to generate income, women are often engaged in other activities, such as farming or collecting firewood. Women's heavy workloads interfere with participation in the programme, and children often act as caregivers to alleviate this problem. This situation is more pronounced, when women travel long distances (up to 30 km per day) to cultivate the fields, which takes the whole day.

Within the programme, opportunity costs remain an obstacle, with agriculture being the main source of income. |
| Hesitation of the indigenous population / IDPS (specifically pygmies) to be screened by RECO instead of a health care provider. | Hesitancy to be screened was not widely cited, but just a specific group of pygmies sometimes resist screening by RECOs instead of a health care worker. This population has more confidence in health care providers than in RECOs, if not in traditional healers only. |
| The time spent waiting at the Health Centre | Long waiting times are a barrier for some to access care. Mothers are mostly responsible for bringing the children to the facility and have to balance this with other household activities, and so long waiting times can be a deterrent to accessing treatment. |

Stock out of RUTF	As stated in the admissions data, it was reported that stockouts of RUTF had taken place across some health facilities (December and January in Musongela, October in Tchuki and October in Nyembo). This is likely to have resulted in a loss in confidence in the programme for a certain period however RECOs were well informed to provide timely information, and they were recommended to reduce their workload including screening and referrals to prevent cases being referred and then unable to be admitted for treatment.

4.3   Stage 1 Summary

Qualitative data collected and analysed in stage 1 complemented the quantitative data, providing more insight into the positive and negative factors influencing coverage. There is high awareness of malnutrition and the programme due to community engagement in programming (through community leadership activities) and because of the network of Volunteers and regular screening. There is a good perception of the quality of the programme within the community. Factors negatively affecting the programme include the low number of staffs at each facility, resulting in an increased work burden and reluctance of population/patients to come to health centres due to long waiting times.

5 Stage 2: Testing the Hypothesis

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, especially indirectly. Information collected in stage 2 can also be used during the formulation of the prior, ahead of the wide area

5.1 Hypothesis

In villages where there is a RECO present, coverage will be high (>50%). In villages where there is no RECO present, coverage will be low (<50%).

5.2 Justification

During stage 1, it was reported by programme staff that PIN supported RECOs have a strong influence over coverage. In the PIN supported villages, RECOs are either present, or they are expected to travel to a neighbouring village to conduct their activities. Therefore, testing the coverage based on the presence of PIN supported RECOs can provide important information that could feed in to future programming. In addition, given referral source is not routinely recorded, testing this hypothesis could provide the opportunity to gather information around how children reach the programme. It should be noted that villages usually have a RECO, however the activity levels of these RECOs are generally low as they are not provided with substantial support.

5.3 Sampling

Sampling was done in two stages; village sampling and then through exhaustive screening of all children under 5 using MUAC.

Villages were chosen according to the presence of a RECO and their associated village.

Table 3: Selection of villages

Health Area	Village with RECO	Population	Village associated	Population
TCHUKI	Pyanalulanga	316	Mwalo	140
NYEMBO	Kabumba	843	Kombakomba	191
MUSONGELA	Alinguzo	443	Kandolo	93

The following case definitions were used:

Table 4: Programme case definitions

SAM child in the programme	Bilateral pitting oedema or MUAC <115mm and currently in OTP treatment
SAM recovering case	MUAC >115mm but still under-going OTP treatment (RUTF) with a last visit of a maximum of two weeks ago
SAM child not in the programme	Bilateral pitting oedema or MUAC <115mm and not currently in OTP treatment

Since the discharge criteria, for OTP is two consecutive measurements of MUAC ≥115mm some non-SAM cases may still be receiving OTP treatment. This is referred to as a recovering case.

All children under 5 in a village were screened using MUAC. When a case was found, the team would issue a questionnaire, using Kobo according to whether the child was in or out of the programme.

5.4   Findings

The results from Stage 2 are presented below in table 5.

Table 5: Stage 2 Results

AIRE DE SANTE	VILLAGE	SAM covered	SAM uncovered	SAM recovering	Total
TCHUKI	Pyanalulanga		1	2	3
	Mwalo	1		1	2
NYEMBO	Kabumba	3		11	14
	Kombakomba		2		2
MUSONGELA	Alinguzo	5	1		6
	Kandolo		1		1
Totals		9	5	14	29

5.5   Analysis

For the analysis of the results simplified lot quality assurance sampling (LQAS) was done in order to obtain a classification of coverage, and to determine whether the hypotheses were confirmed or denied. Inside the catchment area, the SPHERE standard for coverage of CMAM programmes in rural locations was used, and therefore was set at 50%.

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

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

$d= \lfloor n*p100 \rfloor$

d = decision rule

n= number of cases found

p= coverage standard defined.

Table 6: Decision Rule

Village with RECO	Conclusion	Village without RECO	Conclusion
n = 23 d = 11 covered cases = 21 Exceeds d? Yes	Decision rule exceeded and therefore coverage is classified as being above the standard	n = 5 d = 2 covered cases = 2 Exceeds d? No	Decision rule not exceeded and therefore coverage is classified as being below the standard

5.6   Analysis of SAM cases

In order to gain a better understanding of the reasons for being in or out of the programme, and the influence of RECOs on coverage, additional questions were asked to carers of malnourished children enrolled and not enrolled.
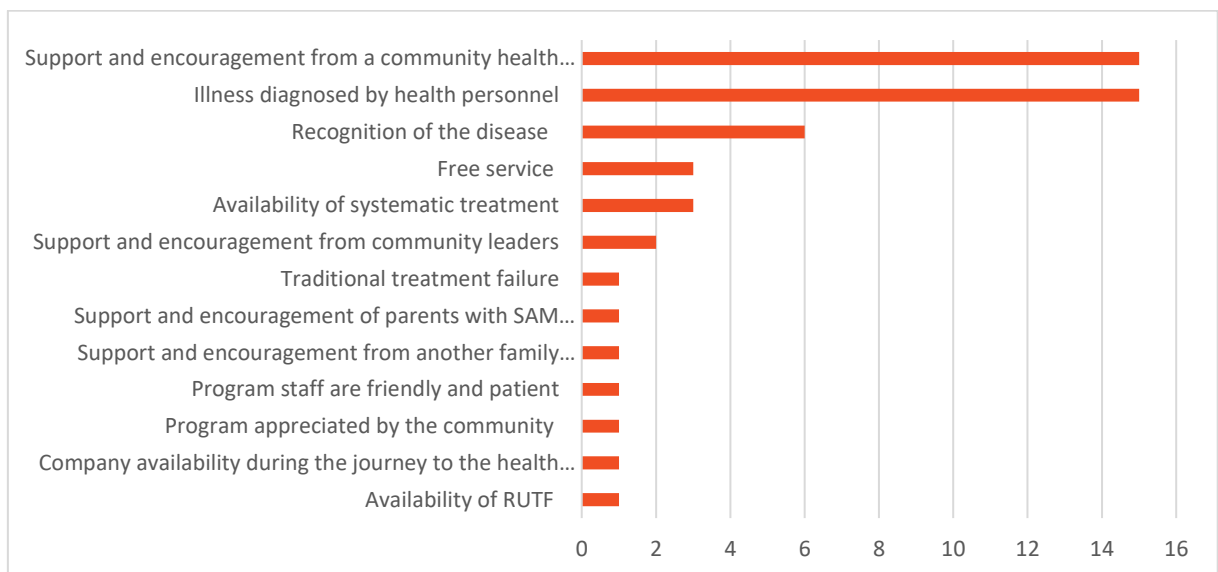
Figure 8: Reasons for enrolment in CMAM programme

In all, five children out of 28 children identified during stage 2 were not in the programme.
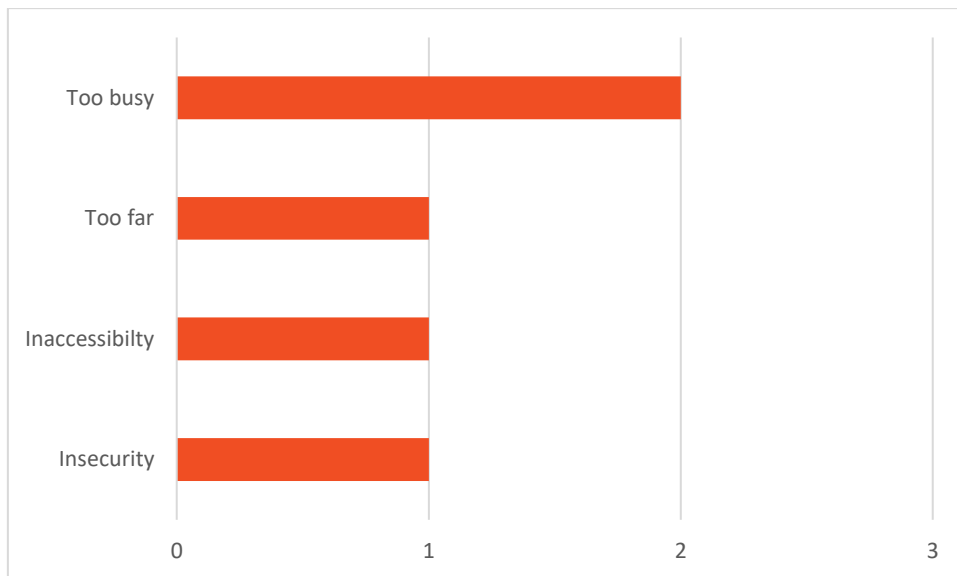
Figure 9: Reasons for non-enrolment

Two had previously been in the programme and discharged as cured.
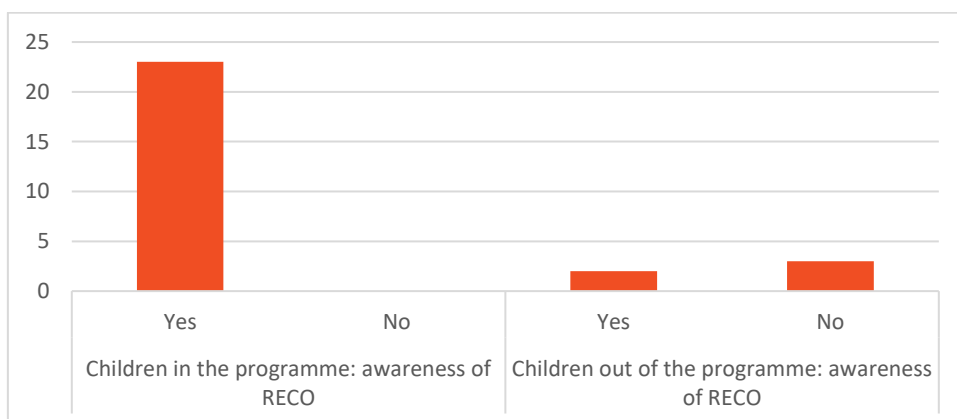
5.7   RECO Activity

Figure 10: Awareness of RECO

All households (n=23) in the programme knew who their RECO was. Of the five out of the programme, two out of five were aware of who their RECO was, demonstrating the presence of RECOs in villages on the awareness of them.
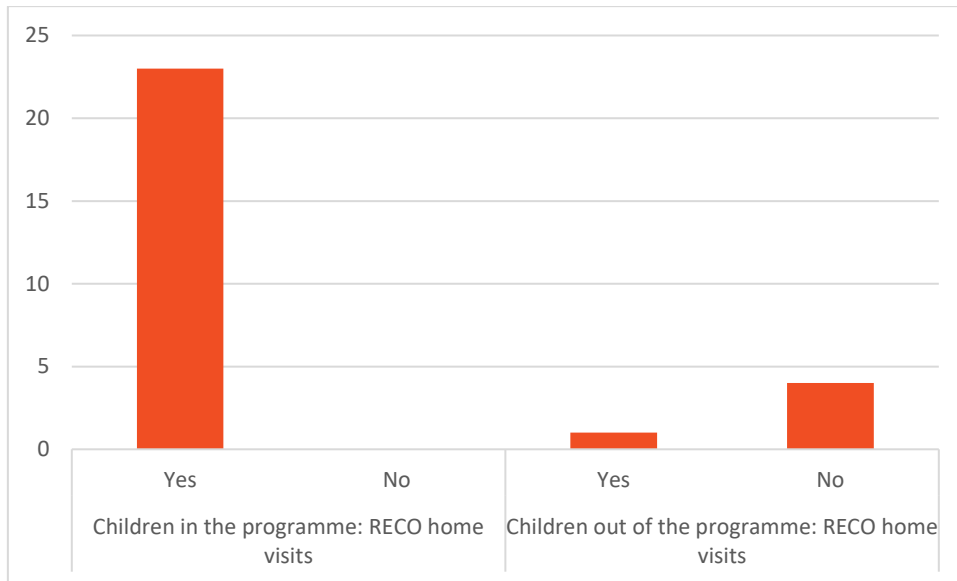
Figure 11: Home visits by RECO

All of the children in the programme had received a home visit by their RECO, the majority within the previous 3 weeks. Only one out of the five children out of the programme had been visited in the home by the RECO, highlighting the importance of these visits.

5.8   Stage 2 Conclusion

A comparison between locations with RECOs and the neighbouring villages that RECOs support demonstrated the impact that RECOs have on programme coverage. The hypothesis was proven and the SQUEAC was able to move forward to the next stage.

6 Building the Prior

A prior belief of coverage for the catchment area was developed using all the information collected during Stages 1 and 2. A number of different methods were used: unweighted boosters and barriers, weighted boosters and barriers and histogram of belief.

6.1 Simple Scoring of Boosters and Barriers

A prior was calculated through simple scoring of boosters and barriers. The boosters and barriers were listed and a score of five was given to each one. The sum of the scores of the boosters and barriers was then taken to calculate a prior mode. This method accounts for the quantity of boosters and barriers to influence the prior, not the relative importance of each.

6.2 Weighted Scoring of Boosters and Barriers

Another method used to calculate the prior was to take the same list of boosters and barriers and give them a weighted score (between one and five) depending on their relative importance. The team worked together, having analysed all of the evidence from Stages 1 and 2, to allocate a score that represented the relative effect each factor has on coverage. For each factor, the following were considered: the prevalence of the factor, how much of the survey area it relates to, the strength of the evidence and how much impact it has on coverage. The team reflected on the evidence from the first two stages of the assessment that had been placed on the walls of the training room. A list of all of the coded, scored and unweighted boosters and barriers can be found in appendix 5.

6.3 Histogram of Belief

Histogram priors were developed collectively by the project team, each coverage value (x-axis) was discussed, and a belief of whether coverage is likely to be that value determined (y-axis).

The following equation was used to calculate the prior:

$$prior\ mode = \frac{sum\ of\ boosters + (100 - sum\ of\ barriers)}{2}$$

Table 7: Building of the prior

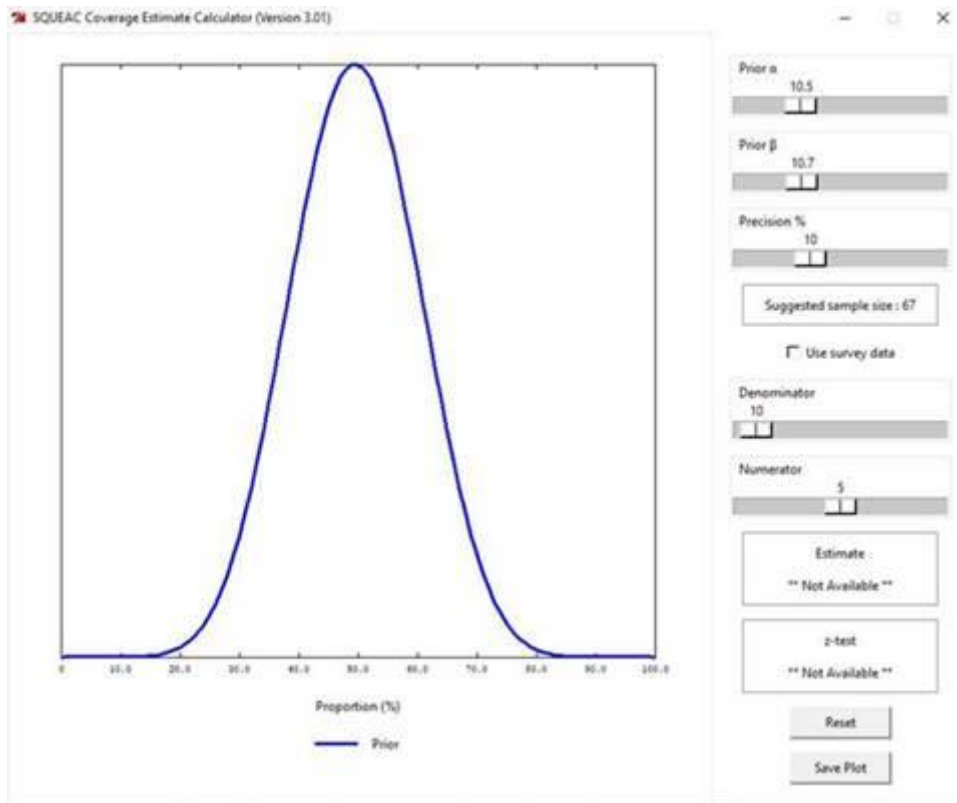| Method	Prior Score
Unweighted BBQ	50
Weighted BBQ	55
Histogram of Belief	50 (25-75)
Mean	52.5

Figure 12: Prior Belief of Coverage

7   Stage 3: Wide Area Survey

The principal objective of Stage 3 is to provide an estimate for coverage. This firstly requires the development of a likelihood by way of a wide area survey, and then, using a Bayesian conjugate analysis, combine the prior and the likelihood to produce the posterior coverage estimate. Using the prior calculated at the beginning of Stage 3, the Bayesian SQUEAC calculator established a suggested sample size of 67 for the large area survey. Given the advanced planning required to ensure the safety and security of the team, sampling took place well in advance using a generic figure of 33 cases as calculated by the Bayes SQUEAC software.
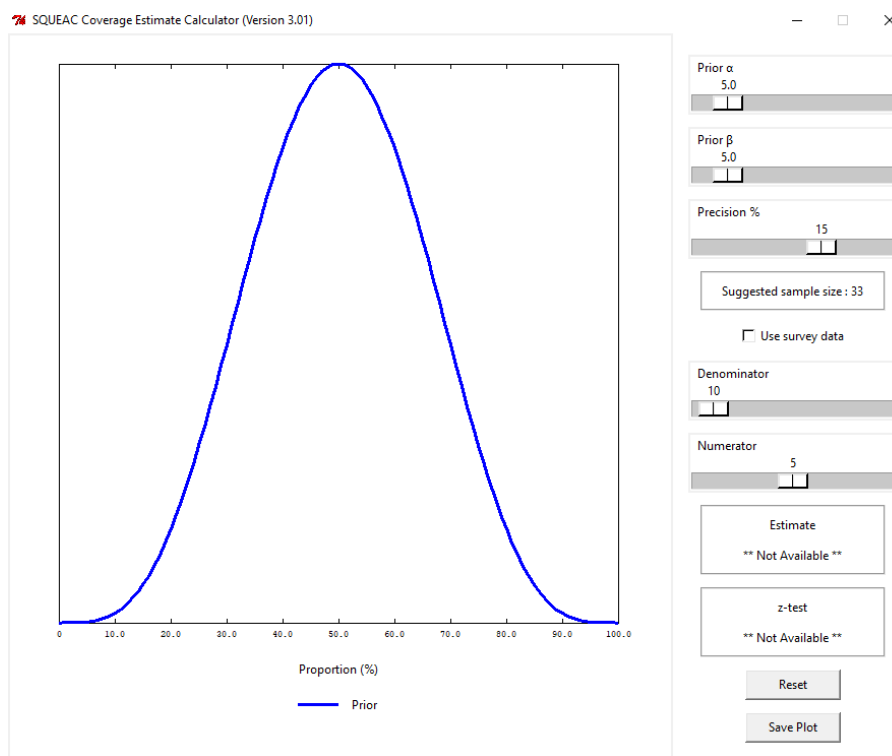
Figure 13: Adapted prior for sampling

7.1   Sampling

The number of villages to sample to reach the target sample size of n = 33, was calculated using estimated population size, population structure and prevalence of SAM using the following formula:

$$n_{villages} = \left\lceil \frac{n}{average\ village\ population_{all\ ages} \times \frac{percentage\ of\ population_{6-59\ months}}{100} \times \frac{SAM\ prevalence}{100}} \right\rceil$$

The specific calculation for Kabambare was as follows:

-    n = 33
-    % of population 6-59 months = 17
-    Prevalence of SAM = 3.1
-    Average village population = 608

$$n = \left\lceil \frac{33}{608 \times \frac{17}{100} \times \frac{3.1}{100}} \right\rceil$$

7.2   Sampling Framework

A two-stage sampling method was used; the first stage ensured the selection of a spatially representative sample of blocks/zones. The second stage used door-to-door sampling to find all SAM children in selected villages.

-   First Stage: A detailed map of Kabambare was not available; therefore, a spatially stratified sampling method (list method) was employed, using lists provided by programme staff. Fourteen villages were removed from the list due to security and/or physical inaccessibility concerns, it was reported that there were no inhabitants in these villages however this could not be verified.

-   Second Stage: This method was further strengthened by using door-to-door sampling to ensure all SAM cases were found. Similarly, to Stage 2, every child under 5 years of age in the sampled area was screened using MUAC.

A questionnaire for caregivers of covered and uncovered MAM/SAM cases was also used in order to understand the boosters and barriers for each case (see the CMN website for similar). Kobo Toolbox was used to enhance data quality and make it easier for the team. The wide area survey was conducted over 9 days, with the teams managing to cover about 2 villages per day.

7.3   Results of the Wide Area Survey

The single coverage estimator was used to estimate coverage for the assessment. This method is effective in by accounting for both SAM cases and recovering cases in and out of the programme. Recovering cases out of the programme are those cases who recover from SAM without receiving programmatic treatment[9].

The following formula is used where C_{in}= covered SAM cases, C_{out}= uncovered SAM cases, R_{in} = recovering cases in the program and Rout = recovering cases not in the programme:

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

The Cin, Cout and Rin are all collected during the wide-area survey although Rout must be estimated. The number of recovering cases not in the programme (Rout) is calculated using the formula below. A critical element of this is a correction factor that has been with knowledge of the length of time an untreated case of SAM or MAM takes to recover.

$$R_{out} \approx \frac{1}{k} \times \left(R_{in} \times \frac{C_{in} + C_{out} + 1}{C_{in} + 1} - R_{in} \right)$$

Table 8 below shows the total number of cases found in the wide area survey and the final calculation of Rout.

SAM Covered	6
SAM Recovering In	13
SAM Uncovered	6
SAM Recovering out	3
Total SAM cases	28

Therefore, the coverage estimate calculated using the single coverage estimate is 60.5% (46.1% - 73.3%). The Bayes SQUEAC calculator presents a posterior curve (red), based on the conjugate analysis of the prior (blue) and the likelihood (green). The analysis displays if there is conflict between the prior and the likelihood, or if the prior is in accordance with the likelihood and we can accept the results.

Prior α 10.5

Prior β 10.6

Precision % 10

Suggested sample size : 67

☑ Use survey data

Denominator 28

Numerator 19

Estimate
60.5% (46.1% - 73.3%)
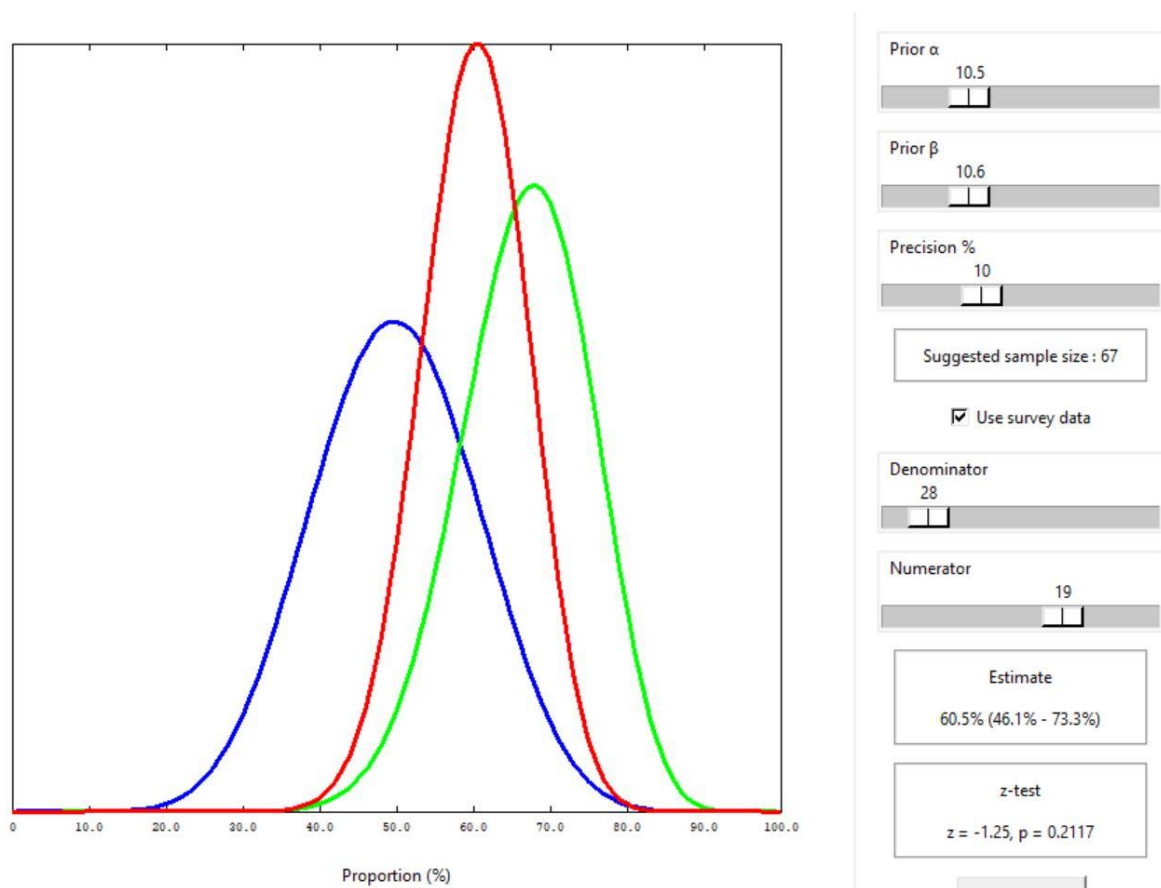
z-test
z = -1.25, p = 0.2117

Proportion (%)

Figure 14: Conjugate Analysis

There are no conflicts between the prior and the likelihood and the coverage estimations can be accepted.

7.4   Children in the Programme

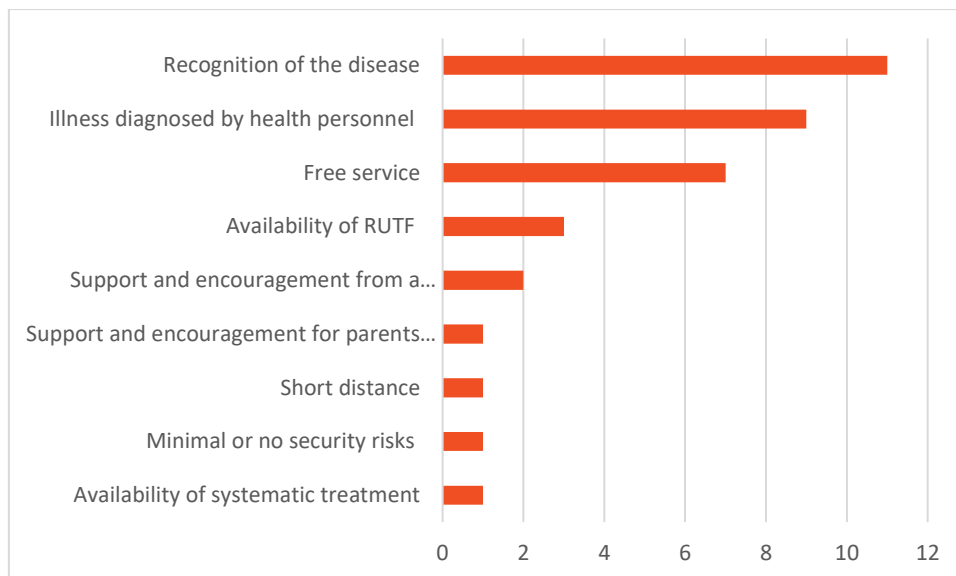Reasons for enrolment in the programme are displayed in figure 15.

Figure 15: Reasons for enrolment in the programme

The main reason for enrolling in the programme given by caregivers with children in the programme is that they themselves recognised the signs and symptoms of malnutrition, or that the child was diagnosed with malnutrition by a health worker. This highlights high awareness of malnutrition in the community, and also good health seeking behaviours within caregivers. The free service on offer also is an incentive for enrolment in to the programme, this is likely linked with the high levels of food insecurity in the area and no other humanitarian/state actor operating in the food security/agriculture sector.

7.5   Children out of the programme

Of the children out of the programme, all six caregivers believed that their child is sick; two believing the cause to be malnutrition and one malaria. The other three however, did not know the cause of sickness, indicating that there are still some gaps in community awareness.

Five out of the six caregivers are aware that the health centre can provide treatment for malnutrition, however only one has indicated that they will seek treatment at the health centre. Others will resort to purchasing medicines at pharmacies and markets or consulting a traditional healer, concerningly, two will not seek treatment. It is important to note that of the eight cases found out of the programme (including stage 2 data), interviewed caregivers stated that decisions around treatment are made by their husbands.
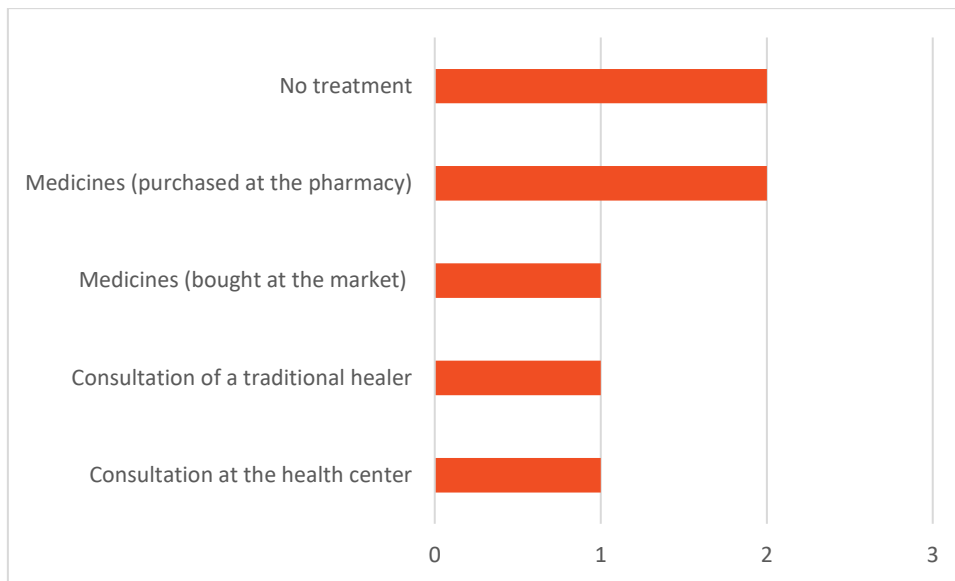
Figure 16: Treatment Plan

Interviewed caregivers were asked about specific reasons for not bringing the child to the health centre:

- Fear of hospital stay
- Non-availability of means of transport
- Sick family member
- The amount of RUTF for treatment at home is too low to justify one trip
- Too busy
- Too far

7.6   Additional Information on RECOs

To build additionally on stage 2 data, questions relating to awareness and home visits by RECOs were included in stage 3. The majority (96%) of respondents are aware of their RECO, indicating good community sensitisation activities.
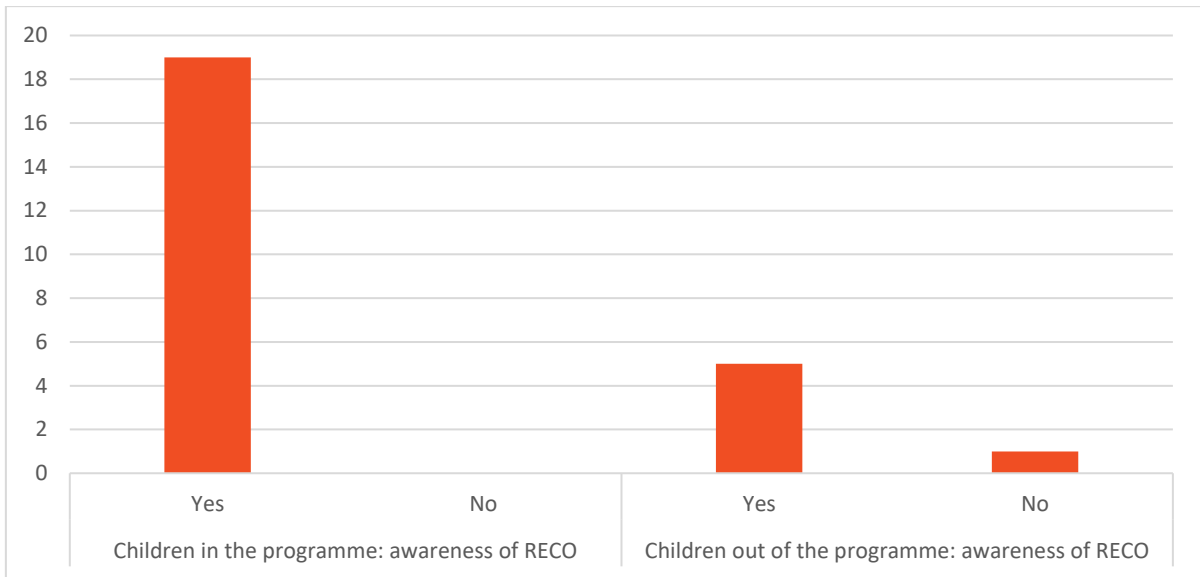
Of the four children out of the programme, who have received home visits by RECOs, all had been visited in the last 3 weeks, suggesting that at the time of the visit, they already had moderate acute malnutrition and their condition deteriorated, or there was an issue in the measurement done by the RECO.
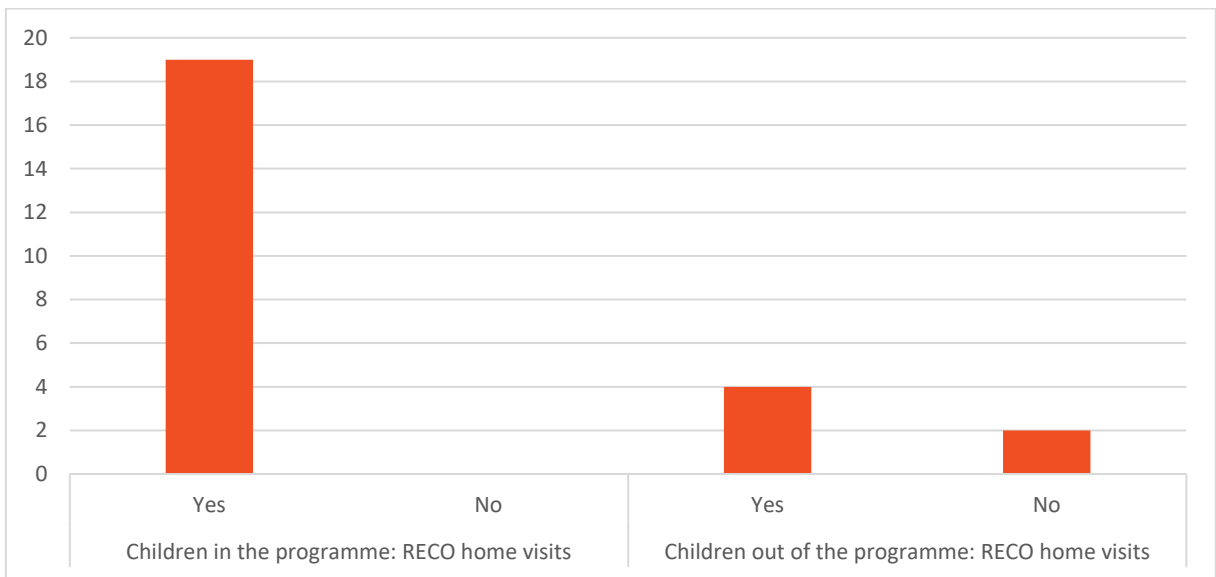
8   Conclusion

At 60.5% (46.1% - 73.3%), coverage is above the Sphere Standard for a rural setting. This is in line with the information found in stage 1 and 2, where the barriers to coverage, including distance to travel, low staffing at health centres resulting in long waiting times and busy workloads of mothers impact the ability of the programme to reach every child. Stage 2 demonstrated the clear impact that RECOs have on coverage, due to their community mobilisation and screening activities.

It is evident that the programme is having a demonstratable impact on the nutrition situation of communities in Kabambare Health Zone. Over 600 children have been treated for a life-threatening condition from September 2020 to January 2021, and it is imperative that these services continue to be available for the most vulnerable communities whilst levels of acute malnutrition remain unacceptably high. For these communities, there is often no other option than to rely on the presence of humanitarian assistance. The emergency intervention in nutrition and in health of PIN and MdM in Kabambare has been lifesaving for many in need.

9   Recommendations

A series of recommendations were formulated in conjunction with members of the SQUEAC team:

Table 9: Recommendations

Finding	Recommendation
Gaps in data collected	In future programming, ensure that referral source is systematically collected
	Provide top up training to health workers on the importance of recording correct measurements rather than rounding up or down (so called digit preference)
Defaulting	Ensure that families that are likely to migrate are aware that they should attend health services somewhere else and explore the potential to provide extra rations of RUTF
	Explore option to provide more rations for children who come from far for treatment so that they stay until the end/longer in the programme
	List the mothers who come from far as residents of Tchuki and sensitize them to not leave the programme before their children are discharged successfully from the treatment
Relapse	Train RECOs to follow up on discharged cases
	Continue to train family members in family MUAC approach, exploring the approach for PLWs as well
	Utilise approaches such as Positive Deviance to explore further the solutions to preventing malnutrition that already exist in the community
Hesitation of the indigenous population	Conduct formative research to design a sensitisation approach to target hard to reach populations
Long distances to health centres	In future projects, it is suggested to establish mobile clinics that can provide services to hard-to-reach populations on a given day
	Train RECOs in Integrated Community Case Management (iCCM), to provide essential health and nutrition services to the communities in which they operate in
	Motivate health centre staff to visit hard to reach communities through provision of bicycles and exploration of providing per diems
Long waiting times	Utilise RECOs to provide assistance to health workers on CMAM clinic days
The work of RECO community volunteers	Support and capitalize on RECO's work by further supervision of the quality of their work; continue on the job trainings and organise refresher trainings, including the quality of MUAC measurements, referrals and data recording, to ensure that the data regularly collected and the referred population gets the highest possible value and service

10 Appendices

Appendix 1

Name	Position
Ismael Rhubane	S+E Officer
Zuzana Břehová	Project Manager
Jean Paul Baderha	Nutrition and WASH Field Coordinator
Antoine Tigre	Health, Nutrition and WASH Supervisor
Justin Kalume	Health, Nutrition and WASH Supervisor
Alain Musimbi	Health, Nutrition and WASH Community Mobilizer
Emily Hockenhull (remote)	Nutrition and Public Health Advisor
Lucie Chlubnová (remote)	Desk Officer DRC
Gloire Baganda	Data Collector
Faradja Masudi	Data Collector
Patient Musuwa	Data Collector
Heri Kasiwa	Data Collector
Selemani Destin	Data Collector

Appendix 2

GUIDE1: Prestataires de soins (nutri)

LA PRISE EN CHARGE

1. Comment identifiez-vous les cas de MAS ?
2. Pouvez-vous décrire le protocole de traitement des enfants atteints de malnutrition aiguë disponible dans cet établissement de santé ou dans les établissements de santé de cette communauté ? (Sondez : Les critères d'admission et de sortie de la MAS ? Existe-t-il un protocole ? Le personnel utilise-t-il ce protocole ?)
3. Comment le programme MAS est-il intégré aux autres programmes de l'établissement ?
4. Comment les cas de MAS sont-ils admis dans le programme ? Sondez pour les références/auto-références/filtrages au sein de l'établissement
5. Les abondons – est ce que cela est-elle un défi dans votre programme ?
   - Quand les abandons se produisent-ils le plus souvent et quelles sont les raisons probables de ces défaillances ?
   - Existe-t-il un mécanisme permettant de ramener les cas d'abandon dans le programme ? Expliquez-le
6. Pouvez-vous décrire une formation sur la prise en charge de la malnutrition que vous avez suivie ?

7. Pouvez-vous décrire le soutien technique et le retour d'information que vous recevez de votre (vos) superviseur(s) ? (Cherchez à savoir qui/à quelle fréquence vous avez suivi une formation sur le terrain)
8. Selon vous, quelles sont vos recommandations pour améliorer les services de la prise en charge de la MAS dans votre CS ?
9. C'est quoi qui marche bien selon vous dans le cadre de la prise en charge ?
10. Selon vous, quels sont les obstacles dans l'accès aux soins de traitement de malnutrition et des moteurs d'accès aux soins de malnutrition ?

Community MOBILIZATION ACTIVITIES

11. Quelles sont les activités de mobilisation de la communauté déjà en cours pour promouvoir l'utilisation des services de traitement de la malnutrition ?
12. Le dépistage est-il effectué au niveau communautaire ? (Quand et à quelle fréquence ?)
13. Qui est responsable de la mobilisation de la communauté ?
14. Qu'est-ce qui fonctionne le mieux ?
15. Quels sont les principaux facteurs qui affectent l'accès aux services de traitement de la MAS dans la communauté ?
16. (Sondez : la structure de l'équipe, les rapports, la façon dont vous travaillez avec les volontaires de la communauté)
17. A votre avis, quelles sont les personnalités et les groupes communautaires les plus appropriés pour mener des activités de mobilisation communautaire pour la prise en charge de la MAS ?
18. (Sondez : les chefs religieux, les guérisseurs traditionnels, les groupes de mères, les groupes de pères, les groupes de jeunes, les bénévoles, les RECO)
19. Le programme est-il confronté à des difficultés pour mener à bien ses activités de mobilisation de la communauté et de dépistage ?

GUIDE 2: Membres de la communauté et informateurs clés

1. Avez-vous des connaissances sur l'identification de la malnutrition, les signes et les symptômes?
2. Quels sont les impacts de la malnutrition sur un enfant et sur la communauté ?
3. Lorsqu'un enfant est malade, où cherchez-vous d'abord une solution ?
4. Si vous fréquentez le CS, est-ce qu'ils dépistent la malnutrition des enfants en utilisant le MUAC ?
5. Le personnel du CS vous a-t-il déjà donné des informations sur les services de traitement de la malnutrition ?
6. Savez-vous où la malnutrition peut être traitée / avez-vous connaissance d'un programme qui traite la malnutrition ?
7. Connaissez-vous des enfants qui participent à ce programme ?
   i. Si oui, demandez-leur ce qu'ils pensent du programme ? (Sondez !! Pourquoi ont-ils une bonne ou une mauvaise perception ?)
8. Connaissez-vous des enfants qui sont dans le programme, mais qui sont partis ou ont cessé de venir ?
9. Quelles en sont les raisons ?
10. Qu'est-ce qui peut inciter la famille à faire revenir ces enfants au programme ?
11. Connaissez-vous des enfants mal nourris qui ne font PAS partie du programme ?
12. Quelles en sont les raisons ?

13.　　A quelle distance se trouve l'UNTA du bloc/village ? –notez pour chaque participant

UNTA	Distance (in kms)	Distance (hrs)	Perception de la distance (proche, loin, trés loin)

Quel est l'impact de la distance sur l'accès au traitement de la malnutrition ?

14.　　Savez-vous où vous pouvez acheter des PPNS ou des LT ?

Si oui :

Où ?

Combien ?

Connaissez-vous quelqu'un qui l'achète ?

15.　　Selon vous, quels sont les obstacles dans l'accès aux soins de traitement de malnutrition et des moteurs d'accès aux soins de malnutrition ?

COMMUNITY MOBILIZATION ACTIVITIES

2.　　Montrez la bande MUAC et demandez s'ils l'ont vue ?

Où l'avez-vous vue et avec qui ?

Quand l'avez-vous vue pour la dernière fois (MUAC) et à quoi servait-elle ?

Y a-t-il des gens dans ce village qui l'utilisent (MUAC) sur vos enfants ?

Si oui, à quelle fréquence visitent-ils les maisons et examinent-ils les enfants ?

2.　　Savez-vous comment un enfant mal nourri est référé ou peut être admis dans un programme de malnutrition ?

(s'ils n'expliquent pas que c'est le rôle des RECOs)

Les RECO visitent-ils une famille avec un enfant mal nourri

GUIDE 3: RECO – RELAIS COMMUNAUTAIRES

1.　　Combien de temps avez-vous travaillé en tant que RECO ? Quelles sont vos principales activités et leur fréquence ?
(Sondez : heures de travail par semaine ou par mois, engagement bénévole non rémunéré, motivation, défis, rapports)

2.　　Quels sont vos rôles en matière de nutrition en tant que RECO ?

3.　　Quel soutien recevez-vous et de qui ? (Sondez : formation, matériel et utilisation, charge de travail, etc.)

Malnutrition and OTP/TSFP services

4.   Où les communautés cherchent-elles d'abord à soigner un enfant malade ? Pourquoi ?

5.   Où les communautés cherchent-elles en premier lieu à soigner un enfant malnutri ? Pourquoi ?

6.   Comment la communauté perçoit-elle les enfants souffrant de malnutrition ? Pourquoi ?

Pensez-vous que cette condition est stigmatisée ? Pourquoi ?

7.   Pouvez-vous décrire le programme qui traite les cas de MAS ?

8.   Selon vous, quels sont les obstacles dans l'accès aux soins de traitement de malnutrition et des moteurs d'accès aux soins de malnutrition ?

Screening

9.   Pouvez-vous décrire la procédure de référencement ?

10.   Quelle est la fréquence des dépistages ?

11.   Avez-vous des difficultés à mettre en œuvre les dépistages ?

12.   Avez-vous rencontré des personnes s'occupant d'un enfant qui ont refusé de l'amener à l'établissement de santé après l'avoir refer ? Si oui, quelles étaient leurs raisons ? Qu'avez-vous fait de ces cas ?

13.   Quelle est la procédure que vous utilisez pour suivre les enfants qui ne participent pas au programme ?

Recommendations

14.   Selon vous, qu'est-ce qui rendrait la PEC de la malnutrition plus facile, plus confortable et plus familier à utiliser par votre communauté ?
(Sondez : les défis existants et les facteurs positifs, les recommandations)

15.   Quelles sont les recommandations pour améliorer la mobilisation de la communauté pour la prise en charge de la malnutrition? (Sonder : recherche de cas, recherche de défaillants, sensibilisation, augmenter l'utilisation des services par la communauté ?

GUIDE 4: PARENTS (MAMANS) DES ENFENTS DANS LE PROGRAMME (PEC DE LA MAS)

1.   Selon vous, qu'est-ce qui a causé la malnutrition de votre enfant ? Y a-t-il d'autres causes possibles ?

Quelles sont les autres causes possibles de malnutrition pour les autres enfants de la communauté ? (Utilisez le terme local pour désigner la malnutrition)

1. Que pense la communauté d'un enfant mal nourri ?

Pensez-vous que cette condition est stigmatisée ? Pourquoi ?

2. Pendant combien de temps votre enfant a-t-il été mal nourri avant de rejoindre le programme ?

3. Avez-vous utilisé d'autres moyens de traitement pour la maladie de votre enfant avant de vous rendre à l'établissement de santé ?

Si oui, quels moyens avez-vous utilisés et où ? Pourquoi avez-vous choisi de venir au centre de santé ? S'il s'agit d'une femme, quelle a été la réaction de votre mari ?

4. Comment votre enfant a-t-il été inscrit au programme de nutrition ?
   (Décrivez le processus, qui l'a diagnostiqué, où il a été diagnostiqué)
5. Avez-vous visité le CS lorsque votre enfant était malade ?

Si oui :

- Quel traitement a été fourni ?
- Y a-t-il eu un dépistage de la malnutrition ?

6. Depuis combien de temps votre enfant participe-t-il au programme ? Quel a été l'impact de ce programme sur votre enfant ?
7. Votre enfant a-t-il déjà été admis à l'UNTA/UNTI ? L'un de vos autres enfants a-t-il déjà été admis à l'UNTA/UNTI ? (Renseignez-vous sur les dates approximatives et demandez des cartes de traitement)
8. Si oui, pouvez-vous décrire le traitement reçu auparavant ?
9. Quelle est la réaction de votre famille ou de votre communauté face à la participation de votre enfant au programme ?
10. Donnez-vous les PPNs prescrit à qq'un d'autre que l'enfant concerné ? Si oui pourquoi ? Est-ce que les membres de la communauté ou de la famille vous font la pression de partager les PPNs ? Si ou comment vous y faites face ?
11. Selon vous, quels sont les obstacles dans l'accès aux soins de traitement de malnutrition et des moteurs d'accès aux soins de malnutrition ?

COMMUNITY MOBILIZATION ACTIVITIES

12. Le RECO ou les agents de santé se rendent-ils chez vous ? Si oui, quels sont les services offerts lors de la visite ?
13. À quand remonte la dernière visite du RECO à votre domicile ?
14. Connaissez-vous d'autres enfants mal nourris dans le voisinage ?
15. Avez-vous, dans le passé, orienté d'autres enfants vers un traitement ?
    Orienterez-vous un autre enfant vers ce programme si vous pensez qu'il est malade de malnutrition ?

CHALLENGES TO TREATMENT

16. Qu'est-ce qui vous ferait renoncer à participer au programme lorsque vous en seriez obligé ?
17. Connaissez-vous des enfants qui souffrent de malnutrition mais qui ne participent pas au programme ? Quelles en sont les raisons ?
18. Connaissez-vous des enfants qui ont quitté le programme en cours de traitement (enfants défaillants) ? Quelles en sont les raisons ?
19. Selon vous, que peut-on faire pour éviter que les enfants ne quittent le programme avant la fin du traitement (enfants défaillants) ?
20. Y a-t-il toujours un agent de santé disponible à l'établissement de santé lorsque vous vous présentez ?
21. Combien de temps attendez-vous habituellement entre le moment où vous vous rendez à l'établissement et celui où votre enfant reçoit son traitement ?

22. A quelle distance se trouve l'établissement de santé du village ou du quartier ? (pour une personne qui s'occupe d'un enfant) -

CS	Distance (in kms)	Distance (hrs)	Perception de la distance (proche, loin, trés loin)

Quel est l'impact de la distance sur l'accès au traitement de la malnutrition ?

23. Quelles sont vos recommandations pour rendre le service de la prise en charge de la MAS plus facile et plus confortable à utiliser pour vous et les autres soignants ?

Parents (mamans) des enfants qui ont definitivement abandonnés le traitment

1. Pendant combien de temps votre enfant a-t-il souffert de malnutrition avant de rejoindre le programme ?
2. Comment votre enfant a-t-il été inscrit au programme de nutrition ?
   a. (Décrivez le processus, qui l'a diagnostiqué, où il a été diagnostiqué)
3. Pouvez-vous décrire le traitement qui a été administré à votre enfant ?
4. Depuis combien de temps votre enfant participe-t-il au programme ? Avez-vous eu le sentiment que le programme a eu un impact sur votre enfant ?
5. Votre enfant avait-il déjà été admis auparavant à l'UNTA/UNTI ?
6. L'un de vos autres enfants a-t-il déjà été admis à l'UNTA/UNTI ? (Renseignez-vous sur les dates approximatives et demandez des cartes de traitement)
7. Si oui, Ont-ils terminé leur traitement ?
8. Si non, Quelle était la raison pour laquelle vous n'avez pas poursuivi le traitement ?
9. Quels changements peuvent être apportés au programme pour garantir que votre enfant et les autres enfants poursuivent leur traitement ?
10. Selon vous, quels sont les obstacles dans l'accès aux soins de traitement de malnutrition et des moteurs d'accès aux soins de malnutrition ?

Parents (mamans) des enfants qui NE Sont PAS DANS PROGRAMME et ont un enfant MAS

1) Pensez-vous que votre enfant est malade ?
   Sondez, quels sont les symptômes de votre enfant ?
2) Depuis combien de temps votre enfant est-il malade ?
3) Avez-vous essayé d'autres traitements pour votre enfant ?
4) Votre enfant a-t-il récemment subi un test de dépistage de la malnutrition ?
   Par qui ?
5) Connaissez-vous un programme qui traite les enfants contre la malnutrition ?
6) Votre enfant a-t-il déjà participé à un programme de nutrition ?
7) Connaissez-vous des enfants qui participent à ce programme ?
   Si oui, demandez-leur ce qu'ils pensent du programme ? (Sondez !! Pourquoi ont-ils une bonne ou une mauvaise perception ?)
8) Quelles sont les raisons pour lesquelles vous n'emmèneriez pas votre enfant dans le programme ?

9) Demandez dans les villages : à quelle distance se trouve l'UNTA du village ? (Pour une personne qui s'occupe d'un enfant)

UNTA	Distance (in km)	Distance (hrs)	Perception de la distance (proche, loin, tres loin)

10) Quel moyen de transport utilisent-ils généralement pour se rendre à l'installation ?
11) Quel est l'impact de la distance sur l'accès au traitement de la malnutrition ?
12) Selon vous, quels sont les obstacles dans l'accès aux soins de traitement de malnutrition et des moteurs d'accès aux soins de malnutrition ?

Appendix 3

Coding used for Qualitative Data Analysis:

Location	Code	Methodology	Code	Source	Code
Musongela	I	FGD	A	Community Leaders	1
Nyembo	II	Semi-structured Interview	B	Women with children in the programme	2
Tchuki	III			Women with children not in the programme	3
				RECO	4
				Care Providers	5

Appendix 4

List of interviews

Tchuki health area:

1FGD with community leaders: 5 participants including one woman and five men;

2 interviews with healthcare providers;

2 interview with RECOs including a woman and a man;

2 FGD with mothers with children in the program: 14 participants

2FGD with mothers without children in the program: 13 participants.

Nyembo health area:

1 FGD with community leaders: 5 participants including a woman and four men;

2 interviews with RECOs including a man and a woman;

2 interview with healthcare providers;

2FGD with mothers of children in the program: 18 participants

2FGD with mothers of children who are not in the program: 20 participants.

Musongela health area:

1FGD with community leaders: 6 participants including 5 men and 1 woman;

2 interview with healthcare providers;

2 interview with RECOs including a woman and a man;

2FGD with mothers of children in the program: 18 participants;

2 FGD with mothers of children who are not in the program: 21 participants.

Appendix 5

Weighted and Unweighted Boosters and Barriers

Boosters		Unweighted	Weighted	Barriers		Unweighted	Weighted
Acceptation de prjet dans le communauté	Acceptance of the project in the community	5	5	Distance de CS	Distance from CS	5	5
Implication de RECO dans le programme	Involvement of RECO in the programme	5	5	Manque de moyene de transport	Lack of means of transport	5	5
Bon suivi des activites por staff PIN	Good follow-up of activities by PIN staff	5	4	Ruptures d'infants	Infant breakdowns	5	3
Transparance redabilite de projet	Transparency and project accountability	5	5	Nombre limite de prestataires de soins	Limited number of care providers	5	4
Gratuite de soins	Free treatment	5	4	Pas de gratuite de soins pour les enfants non eible - discrimination	No free care for non eible children - discrimination	5	1
Permance des infants nut aux CS	Permission for infant nutrition at the CS	5	4	Manque de moyene de transporte pour realiser la strategie awanee	Lack of means of transport to implement the awareness strategy	5	3
Strategie avancee realisee pour PIN	Advanced strategy realised for PIN	5	3	Hesitation de population autochtome/IDPs - pygmees nouveaux	Hesitation of autochthonous population/IDPs - new pygmies	5	2

Capacitation de staff sur PCIMA	Staff capacity on PCIMA		5	4	Manque de moyen de restauration	Lack of catering facilities	5	2
Sensibilisation por RECO de tradiens	Awareness raising for RECO of traditional people		5	3	Le temps d'attente au CS	Waiting time at the SC	5	3
Primes de performance pour RECO, CODES, FOSA	Performance bonuses for RECO, CODES, FOSA		5	4	Nombre de prestataire de soins forme sur PCMA et ANJE limite	Number of care providers trained on PCMA and ANJE limit	5	4
Material pour FOSA, RECO equipment, kits	Material for FOSA, RECO equipment, kits		5	4	Non-restitution de formation PCIMA/ANJE pour les prestataires qui ont ete forme animaux de CS	Non-restitution of CIMIC/ANJE training for providers who have been trained in animal health care.	5	4
implication de mamans PB dans le depistage actif	Involvement of PB mothers in active screening		5	3	Dimotivation de prestataires par la mauvaise repartition de primes de performance	Reduction in the motivation of service providers due to the poor distribution of performance bonuses	5	5
Sensibilisation dans la communaute	Raising awareness in the community		5	4	Implication limite de responsable des structures dans les activites nutritionelles	Limited involvement of the responsible of the structures in the nutritional activities.	5	3
Couverture de transport et	Transport blanket and food		5	5	Manque de equipment de travail pour la strat avancee	Lack of work equipment for the advanced strat	5	3

nouriture pour les cas referes	for referred cases			par prestataires (impermeables, bottes…)	by providers (mackintoshes, boots…)		
47			57				47

Appendix 6

Villages sampled in stage 3

Lubilo
 Yalala
 Kachoka 2
 Mwanamamba
 Meza
 Kimoto
 Mbulu
 Bilali
 Kalindika
 Sangabo
 Methodiste

Inaccessible Villages due to Insecurity

Mbukulwa
 Bulungu
 Kaswi
 Lukaje
 M'mange
 Mpaka
 Shibadenda
 Etula
Liwe (kole)
 Kutchu
 Adandji
 Amaanga
 Aena
 Ebukudo