

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



Pauktaw IDP Camps, Sittwe, Myanmar  
26/01/2014-12/02/2014





## **EXECUTIVE SUMMARY**

The SQUEAC investigation reported here found the SAM program to be well designed and well run. Program coverage was high:

**92.1% (95% CI = 80.1% - 96.9%)**

This exceeds SPHERE minimum standard and is one of the highest coverage ever observed in a community-based therapeutic feeding program.

Further the investigation found out that:

- The program is well run with very good outcomes in terms of recovery, early detection of cases, lengths of stay, defaulting, and mortality.
- RUTF was well-accepted and intra-household sharing of RUTF was extremely uncommon.

The investigation identified the following barriers to program coverage:

- Lack of knowledge about the program's (i.e. RUTF) use
- Wrong referrals by CHVs

The program should continue operation.

Consideration should be given to expanding the program to treat both SAM and MAM.

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## ACRONYMS

ANC	Anti Natal Care
ARI	Acute Respiratory Infection
CHVs	Community Health volunteers
CI	Credible Interval
CMAM	Community Management of Acute Malnutrition
EPI	Expanded Program of Immunization
FGD	Focus Group Discussion
IDP	Internally Displaced Person
IYCF	Infant and Young Child Feeding Program
MAM	Moderate Acute Malnutrition
MSF	Medicine Sans Frontiers
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SC	Stabilization Centre
SCI	Save The Children International
SFP	Supplementary Feeding Program



## 1. INTRODUCTION

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Rakhine State is one of the least developed parts of Myanmar and is characterized by low income, high levels of poverty, and poor infrastructure and services. The 2009-2010 Integrated Household Living Condition Survey ranks Rakhine State in second-worst position in terms of overall poverty: 43.5 per cent compared to the national average of 25.6 per cent. Rakhine is also susceptible to recurrent natural disasters such as severe storms (cyclones), flooding and mudslides <sup>1</sup>.

Rakhine State, like many parts of Myanmar, has a diverse ethnic population. Historically, the communities co-existed peacefully although integration was limited. The division was reinforced during the Second World War when the Rohingya remained loyal to the British and the Rakhine allied with the Japanese (International Crisis Group, 2013, p.4). Following the Second World War and independence; the Rohingya attempted to stage a rebellion in order to establish Muslim areas in Northern Rakhine state<sup>2</sup>.

This rebellion, combined with earlier conflicts such as violence against foreigners from the Indian sub-continent, paved the antipathy and distrust between the Rohingya Muslims and the Government and between the Rohingya Muslims and the Rakhine people, sentiments which still exists to this today. The rebellion in Rakhine State was followed by a political clampdown and new policies in 1962 which denied majority of Rohingya citizenship. This was followed in 1977 and again in 1991-92 by Government security actions to tackle the alleged illegal immigration which led to exoduses of Rohingya to Bangladesh. A common assertion amongst the Rakhine is that many more 'Bengalis' returned with the support of UNHCR than actually left, and this belief, along with the 'protective' support and services that many of these returnees continue to receive, feeds the sense of injustice and animosity felt by the Rakhine towards the international community<sup>3</sup>.

The latest conflict between these communities was exacerbated by a series of converging factors<sup>4</sup>:

- The easing in military, political and media constraints resulting from the political reform process has allowed for greater space for populations to air and act upon entrenched grievances. This newly available freedom has enabled a large number of organized protests in all townships and with varying demands from the expulsion of INGOs/UN, to the harsher implementation of the 1982 Citizenship Law and improved weaponry for police
- Patterns of political religious and economic opportunism are alleged to have been instrumented in the form of instigation of destabilizing tension and violence; additionally, opportunism has emerged more spontaneously in the wake of violent outbreaks, for example, Rakhine taking over former Muslim market space.
- The alleged rape and murder of an ethnic Rakhine woman by three Muslim men, leading to retaliatory violence against the Muslim population and the subsequent killing of ten Muslim pilgrims.
- The burning of a Muslim village fuelled a second outbreak of violence in October 2012
- The alleged murder of 8 Muslim men attempting to flee to Bangladesh in January 2014

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<sup>1</sup> OCHA, 2013

<sup>2</sup> (International Crisis Group, 2013, p.4)

<sup>3</sup> OCHA, 2013

<sup>4</sup> OCHA, 2013

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- The increased use of technology (mobile phones, smart phones, video technology, DVDs) and social media to rapidly mobilize, manipulate and organize groups.

This latest crisis caused an influx of Internally Displaced Persons in need of emergency assistance. Save the Children International started interventions to address emergency needs among vulnerable groups living in Pauktaw and Sittwe. The support is composed of Outpatient Therapeutic Program for severely acute malnourished children (SAM) (Pauktaw only) on the curative component of nutrition intervention, Infant and Young Child Feeding Programs IYCF) (Sittwe & Pauktaw) on the preventative nutrition component. These activities complement, Water and Sanitation and Hygiene (WASH) programs, Food Aid, Child Protection and education activities. The emergency nutrition program is being implemented in close collaboration with the government of Myanmar, UNICEF, and the respective communities. The project goal is to contribute to the reduction of morbidity and mortality related to acute malnutrition and improves nutrition practices in the target areas.

The SQUEAC evaluation is planned as part of monitoring and evaluation process.

## 2. OBJECTIVES

The overall objective of this assessment was to strengthen routine program monitoring and increase program coverage of the Save the Children International (SCI) program in Pauktaw Township Internally Displaced Persons (IDP) camps. More specifically, the coverage exercise aimed to:

1. Develop specific recommendations based on survey outcomes to improve acceptance and coverage of the nutrition program;
2. Enhance capacities of key SCI technical staff in Rakhine program to undertake a coverage survey using the SQUEAC methodology;
3. Identify barriers to access to the OTP services in Pauktaw camps using data gathered from those cases found with moderate acute malnutrition and not admitted in the program at the time of the survey;
4. Estimate the overall coverage of the Pauktaw nutrition program
5. Give recommendations to Rakhine program based on the survey findings to improve access to the OTP services and increase program coverage in the project areas;

## 3. METHODOLOGY

SQUEAC is a semi-quantitative method that uses the Bayesian method and Bayesian probability theories, rather than the usual frequency method to generate coverage value. A Bayesian approach is 'the explicit use of external evidence in the design, monitoring, analysis, interpretation and reporting of a scientific investigation'. A Bayesian approach is:

- more flexible in adapting to each unique situation
- more efficient in using all available evidence
- more useful in providing relevant quantitative summaries than traditional methods

The SQUEAC investigation is based on the principle of triangulation. This means that data needs to be collected and validated by different sources and different methods. The exercise ends when there is

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redundancy; i.e. no new information is gained from further investigation using different sources or methods. SQUEAC achieves its efficiency by using a three stages approach: the development of the **Prior**, the development of the **Likelihood** and the generation of the **Posterior**. The first two stages aim to identify potential barriers and provide two individual estimations of coverage.

During the *Prior* building process, existing routine data which have previously been collected and compiled are combined with qualitative data to produce a coverage “picture”. Building the *Prior* provides a projection of coverage levels for both the entire target area and also specific areas suspected of relatively high or low coverage within the program’s target zone. The *Likelihood* is built with data collected during a wide area field survey in randomly selected villages. The selection of cases during wide area survey uses a complete shelter-to-shelter enumeration of all households and screening all 6-59 month children.

The last stage, the generation of the *Posterior*, combines the two initial stages and provides the overall coverage estimation, including Credibility Intervals (C.I), by taking into account the “strength” of each component of the equation. The *Posterior* is calculated using the Bayesian calculator.

## a. STAGE 1: BUILDING THE PRIOR

The “*Prior*” can be defined as an expression of our beliefs about the results of the investigation. *Triangulation, Iteration and redundancy* principles guide the data collection. The prior building process begins with routine program data analysis and collection of qualitative data which is used to generate a coverage estimate (prior belief). To do this, various data was collected including:

1. *Program data*
  - Analysis of admission data over time
  - MUAC at admission
  - Discharge Outcomes
  - Length of stay
2. *Qualitative Data*
  - Outreach
  - Follow up
  - Standard of service
  - Barriers
  - Community structure

The main methods of qualitative data collection used were (see annex 4 for details of the sources of this information):

- Informal Discussion Group in the three surveyed IDPs (with separate women and men’s groups)
- Case history in the three surveyed IDPs (from carers of children in the program)
- Semi-structured interview in the three surveyed IDPs (with OTP staff, traditional healers, community leaders and CHVs)
- Simple-structured interview in the three surveyed IDPs (women group, men group and mixed sex group)

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## Mind Map

During the qualitative data phase, which lasted for four days and saw the survey teams visiting three sub camps interviewing 9 communities, 59 CHVs, 9 OTP staff, 2 traditional healers and 2 community leaders, a *MindMap* approach was used to review, discuss and analyse the results gathered. A *MindMap* is a tool designed to facilitate the presentation and analysis of quantitative and/or qualitative data and the relationships between them. Potential barriers to access, as well as information suggesting high or low coverage are grouped thematically. It was thus possible to challenge, correct, verify and refine the team's preconceptions regarding the causes of low or high coverage on a rolling basis allowing the subjects covered during qualitative data collection to be adapted to confirm the new understandings gained. During this investigation, the report was compiled by the participants of the investigation process. The survey consultant and 2 nutrition team managers were involved in compiling the reports. The ability to produce the investigation report using the *Xmind* software was part of the training activities. The produced mindmap can be found in annex 3.

## Composition of Survey Group

The survey group was composed of one SQUEAC consultant, 3 nutrition program managers from the SCI Sittwe nutrition section, 9 OTP staff and 30 CHVs. Training was given at each camp separately due to the fact that mobility of camp based staff was limited..

## Score Ranking

Attributes appearing in the *MindMap* are likely to push the coverage "up" or "down". The various elements don't have the same impact on coverage and a "weight" is given to each one. The exercise starts by listing all positive and all negative elements affecting the coverage in two columns. Later on ranking scores were given for each attribute, generally 10 points for the higher score and 1 point for the lower score. The sum was done for each column. To arrive at reasonable and acceptable weighting scores for each of the factors the tallies of the frequency each factor was mentioned in the interviews and community discussions was compiled along with qualitative data extraction findings, and the significance of the impact of each factor. Two nutrition team managers and the survey consultant were involved in assigning weights.

## The Prior

The *Prior* is the expression of *beliefs* about coverage based on qualitative data (or quantitative data transformed into qualitative data) provided by the *MindMap* exercise. Positives or boosters were added to 0 (the minimum coverage) and negatives or barriers are subtracted from 100 (the maximum possible coverage). The mode is calculated as the mid-point between the "built-up" and "built-down" results.

## **b. STAGE 2: HYPOTHESIS TESTING (SMALL AREA SURVEY AREA)**

The small area survey focuses on potentially *high* and *low* coverage areas. A number of villages are purposely selected to test the hypothesis developed in Stage 1. The sampling method employed was purposive sampling, the attribute considered for selecting the villages was the fact that a village may be an area with low coverage. The qualitative and quantitative findings consistently indicated a high coverage area across the catchment areas. Due to this, the farthest and peripheral villages were selected to disprove the high coverage assumption. Six villages, two from each sub camp, were assumed to be adequate to test hypothesis. These villages were distributed between the survey teams.



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Each team used a House-to-House case-finding methodology to identify cases (as per the case definition) that are either covered or not by the program. The case definition used was designed based

on the OTP admission criteria. The case definition included a child meeting the following criteria (at the time of the survey):

- A child between the age of 6 and 59 months
- A child with a MUAC level below 11.5 cm
- A child with bi lateral pitting oedema
- A child in SC and OTP

Besides these standard criteria, survey teams used local SAM terminologies to increase sensitivity of the case finding method.

The steps for testing a hypothesis/making a classification using SQUEAC small area survey data were:

(a) Set the standard ( $p$ ): The standard ( $p$ ) was set according to SPHERE minimum standards for therapeutic programs in camps (minimum 90% for camps)

(b) Carry out the small area survey

(c) Use the total number of cases found ( $n$ ) and the standard ( $p$ ) to calculate the decision rule. For example, if  $n = 9$  and  $p = 90\%$  then:  $d = n \times p / 100 = 9 \times 90 / 100 = 8.1 = 8$

(d) Apply decision rule: if the number of cases in the program is  $> d$  then the coverage is classified as HIGH (otherwise it is classified as LOW).

## c. STAGE 3: WIDE AREA SURVEY AND CONJUGATE ANALYSIS

In order to improve and make the *Prior* value stronger more data are added. Quantitative data as well as additional qualitative data are collected during a wide area survey. Villages in the different OTP catchment areas are randomly selected to undertake an exhaustive house-to-house *screening*.

### Sampling Method

The method used for the likelihood survey is a two-stage sampling. A sample of villages (quarters of the IDP camp) in the program catchment area is taken first (Stage 1) and then a 'census' sample of current and recovering SAM cases is taken from each and every one of the selected villages (Stage 2). The likelihood survey is a wide-area survey of the entire program catchment area. At first stage a Spatial method was used to select villages. This was done by listing all the villages in the three IDP camp catchment areas and by drawing a sample of villages using systematic random sampling of the lists.



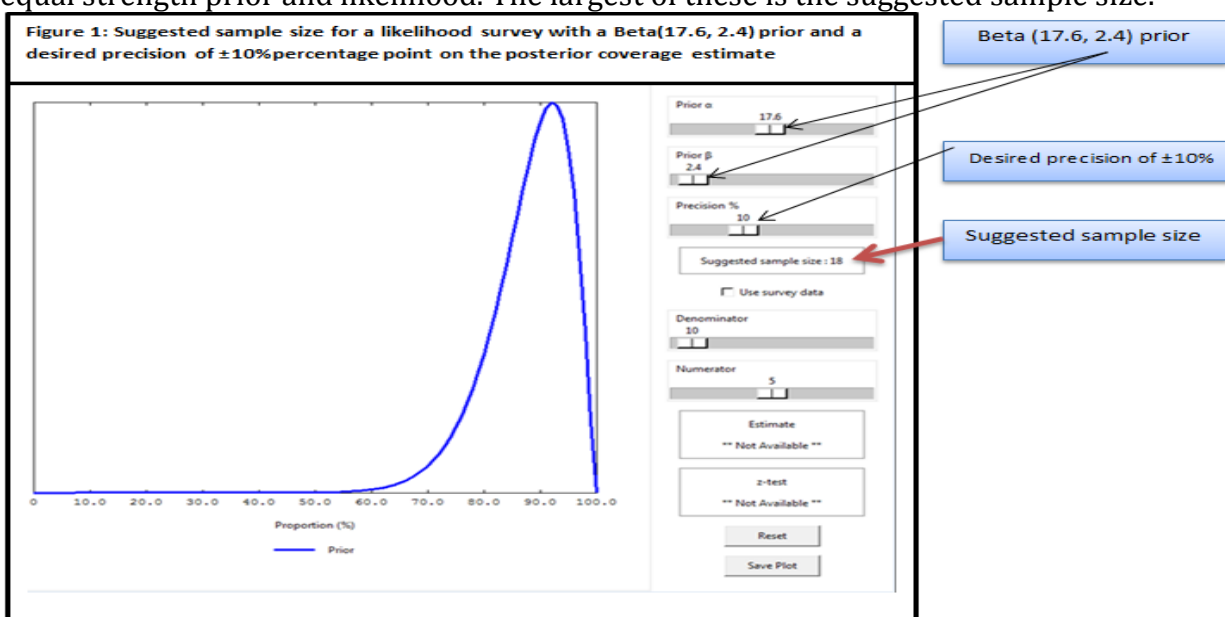
## Sample Size Calculation

The first step to calculate sample size was to determine the minimum number of children to sample to achieve the desired confidence (+/- 10%). The sample size required for a likelihood survey depends on the prior and the precision required for the posterior estimate and can be calculated using the following formula:

$$n = \left\lceil \left( \frac{\text{mode}(1 - \text{mode})}{(\text{Precision} \div 1.96)^2} - (\alpha + \beta - 2) \right) \right\rceil$$

- n is sample size of minimum number of children needed for the likelihood survey
- mode is the mode of the prior. The SQUEAC reported here found a mode of 94% (see main part of report and result was calculated in section 5.1.)
- $\alpha$ Prior and  $\beta$ Prior are the shape parameters of the prior. The SQUEAC reported here found 17.6 and 2.4  $\alpha$ Prior and  $\beta$ Prior, respectively (see main part of report and result was calculated in section 5.1.)
- Precision is the precision required for the posterior estimate. A Precision of +/-10% was taken
- The  $\lceil$  and  $\rceil$  symbols mean round **up** the number between the  $\lceil$  and  $\rceil$  symbols to the nearest whole number.

Taking all this factors into consideration and assuming an equal strength prior and likelihood, SQUEAC Coverage Estimate calculator calculated the sample size needed for the likelihood survey. A finite population correction is also applied based on the (conservative) assumption of an overall population of 120,000 with 20% aged between 6 and 59 months and a SAM prevalence of 2%. *Figure 1* shows the sample size suggested for a likelihood survey with a *Beta(17.6, 2.4)* prior and a desired precision of  $\pm 10$  percentage points on the posterior coverage estimate. Two sample sizes are calculated: One for the specified precision corrected for a finite SAM population and the other for an equal strength prior and likelihood. The largest of these is the suggested sample size.



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In order to achieve a confidence (+/-10%), and based on our prior we needed to identify a minimum of 18 current and recovering cases. To determine the minimum number of villages to sample and achieve 18 cases, we used the following formula:

$$n_{villages} = \left\lceil \frac{n}{((\text{Average village population}_{\text{all age}}) \times \frac{\text{Percentage of population}_{6 \text{ to } 59 \text{ months}}}{100} \times (\frac{\text{Prevalence of SAM}}{100}))} \right\rceil$$

- n= Minimum number of cases required (minimum sample size)
- Average village population= It was calculated to be 251 households per village<sup>5</sup>
- Under five proportion=19% (UNHCR estimate)
- SAM prevalence=5%<sup>6</sup>

$$n_{villages} = \left\lceil \frac{18}{251 \times \frac{19}{100} \times \frac{5}{100}} \right\rceil = 8 \text{ villages}$$

The sampling design used was two stage stratified sampling. SQUEAC and all coverage surveys use a stratified sampling (sampling area) as opposed to population proportional to size methods (sampling population). Stratified sampling is adopted as an assessment of coverage primarily concerns itself whether program service uptake is spatially uniform across all program catchment areas i.e. whether access is ensured irrespective of location. Strata here are defined as a 'village'.

Sample size conclusion: During the wide area survey teams will visit 8 villages in order to get 18 cases that meet the program case definition criteria.

**Stage 2 of Sampling:** As described above Systematic Random Sampling (SSA) was used to ensure spatial representation. This was done by listing all the village names, numbering them and sampling systematically from this sampling frame using the total number of villages, the random interval (total number of villages divided by the number of villages decided to be sampled (8)) and a random start point (this was determined by lottery method for numbers ranging between 1 and the calculated random interval). The calculated random interval was 4. Therefore villages were selected at every 4<sup>th</sup> village from the sampling frame of villages where the Community-based Management of Acute Malnutrition (CMAM) program operates. A total of 8 villages were identified for visits (see annex 2). The selected villages fall in the three sub camps which include 3 host and 5 IDP communities. Villages 2, 4 and 6 of Sin Ta Maw Quarter, villages 1 and 5 of Ba Win Chaung Wa quarter, and villages 1, 3, 4 of Su Li Phat Ran 1 Quarters were selected from Sin Ta Maw, Ah Nauk Ywel and Kyein Ni Pyin sub camps, respectively.

## Data collection and analysis

The teams used house-to-house screening to find the cases of SAM in the 8 selected villages to estimate coverage level. MUAC of the SAM cases were taken and a semi structured questionnaire-

<sup>5</sup> Source: SCI program data. To confirm the accuracy of this data, village level data was collected from camps.

<sup>6</sup> Pauktaw Rapid Nutrition Assessment result (2011) was used for estimating SAM prevalence. Similarly, population estimates were taken from UNHCR.



annexed to this report-was administered on non-covered cases (Annex 8). Specific local definitions of SAM and aetiologies were used to identify children who had SAM (as per case definition above)and then categorize them into SAM cases who were in the program, SAM cases that were not in the program, and recovering cases.

## GENERATION OF THE POSTERIOR

A SQUEAC Bayesian Calculator<sup>7</sup> used to estimate overall coverage of OTP programs was recently developed. The software enables the creation of graphs for the *Prior*, the *Likelihood* and the *Posterior*. The *Posterior*, representing the coverage estimate, was automatically generated by the Calculator indicating a point estimate and 95% credibility interval from the resulting *Posterior*.

FIGURE: 2. STAGES IN SQUEAC



## 4. RESULTS

### 4.1. STAGE 1: Program routine data

The objective of Stage One was to identify areas of low and high coverage and the reasons for coverage failure using routine program data or easy-to-collect quantitative and qualitative data.

The following routine program data were collected<sup>8</sup> and analysed according to the SQUEAC framework:

- Admissions overtime
- Admissions versus need
- Outreach coverage (outreach per household and activities overtime)
- Distribution of MUAC at admission
- Length of stay in treatment before discharged as cured
- Standard program monitoring data:

<sup>7</sup> The calculator can be freely downloaded from <http://www.brixtonhealth.com/bayessqueac.html>

<sup>8</sup> Data of admissions and standard program monitoring figures were already available. However, the SQUEAC team extracted these data all over again with the extra objective of evaluating program recording, reporting (to see whether what is reported matched what is on registers) and understanding of admission and discharge criteria.



- Proportions of exits discharged as cured
- Proportion of exits who died during treatment
- Proportion of exits discharged as non-responders
- Proportion of exits who defaulted during treatment

## 4.1.1. PROGRAM ADMISSIONS (WITH AND WITHOUT SMOOTHING)

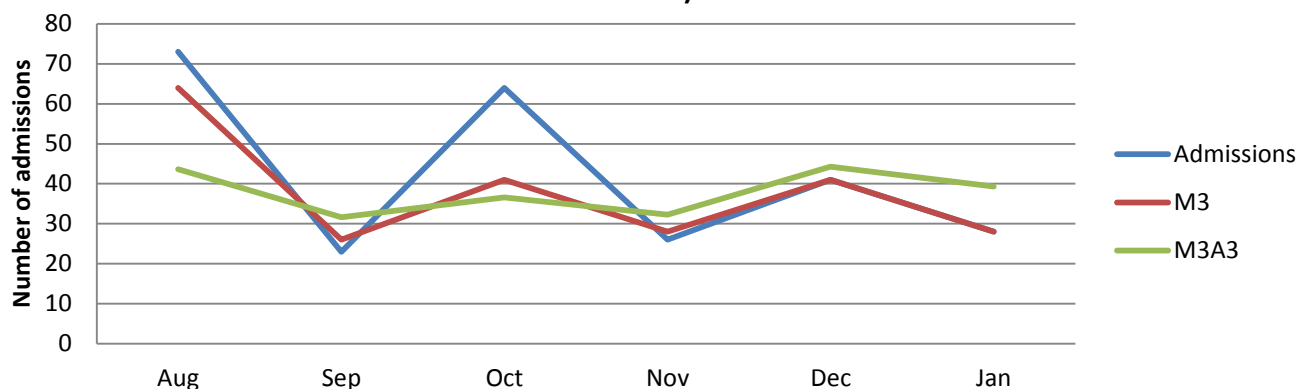
Figure 3 shows the number of admissions over time for the period August 2013- January 2014. The pattern of admissions shows a typically high number of admissions in the first month of program operation as both prevalent and incident cases are found and admitted. It is important to highlight here that this program was managed by MSF before being taken over by SCI. Data for the period of operation during MSF was not available. Hence this data refers for SCI's operation alone. This peak coincides with the period of highest prevalence of diarrhoea, Oedema cases, fever and the hunger gap or when food is less available as the period is a rainy season important livelihood i.e. fishing is interrupted due to tides and storms over the sea (This was confirmed from locally produced disease and critical events calendars developed at the time of the survey), suggesting that the program may be capable of to changes in need.

The second month observed a drastic decrease in admission (or perhaps admission stabilizes) at just 23 cases. This coincides with the initiation of various education sessions on breast feeding and education on complimentary feeding practices; besides mother to mother counselling and mother group establishments. Locally produced disease calendars show an expected period of increased incidence of both diarrhoea and fever in September that would normally lead to in the increased incidence of SAM admissions. This expected increase in admissions was not observed. There are competing explanations for the pattern of admissions seen on September 2013:

- Case-finding and treatment activities for SAM have been displaced by additional work caused by the introduction of IYCF program services. With these explanations 23 cases per month represents the current capacity of the program to find and treat cases.
- The incidence of SAM may have reduced due to improved feeding practices, nutritional counselling and for the fact that most of the cases were admitted in the previous month.



**Figure 3: Patterns of admission overtime and disease calendar (Aug2013-Jan2014)**



Components of the SQUEAC assessment reported here addressed this issue and found that the second bullet point is the more credible explanation. The rigorous screening of the first month captured most of the cases, including border cases, reducing the caseload at community level for a time. The Survey covered three nutrition centres admitting a total of 255 children (blue plot). To further see the seasonal trend, data was smoothed (M3 and M3A3). M3 and M3A3<sup>9</sup> are results of the admission data after smoothing it for median and averages of median for three consecutive periods, respectively.

Along admission trends, seasonal calendars were plotted to see a possible seasonal trend (Annex 6). However, as this is an IDP camp setting which entirely depend on food assistance for their livelihood, seasonal calendars cannot explain the variation in admission overtime. In spite of this fact, it was established that the rainy season is a season with food shortage as fishing is made difficult at this period due to tides and storms in the Bay. The admission trend shows a relative increase during the start of the program and during the hunger gap (Sep-Dec).

This trend continued for the remaining period (October2013-January 2014), a peak admission period followed by a declined admission. Components of the SQUEAC reported here shaded more light on this.

## 4.1.2. ADMISSIONS BY SERVICE DELIVERY UNIT

In order to spot potential low and high coverage areas, admissions were analysed by service delivery unit (i.e. OTP – Figure 4). The three facilities included were Ah Nauk Ywe, Kyein Ni Pyin and Sin Tet Maw IDPs camps. 98, 105, and 52 cases were admitted into Ah Nauk Ywe, Kyein Ni Pyin and Sin Tet Maw, respectively. The 6-59 months population of Ah Nauk Ywe, Kyein Ni Pyin and Sin Tet Maw were 540, 722 and 351, respectively. Sin Tet Maw started operation in October and its population size is the lowest. Hence, the admission from it is the lowest for the analysis period August 2013-Jan 2014. Save the Children conducted a Rapid Nutrition Assessment in December 2012 and found an estimated

<sup>9</sup> M3 is a median of three consecutive months' admission data. A second smoothing was done on the Medians (M3A3). M3A3 data are smoothed by taking the medians of sets of three successive data points (M3). Smoothing is done to hide the random 'noise' component and help reveal the seasonal and trend components of the time-series.

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prevalence of 4% for SAM, the case load for 12 months was calculated<sup>10</sup> to be 122 cases. This is a rough calculation to estimate the need on the ground. We expect roughly around 122 cases to be admitted for a reasonably acceptable coverage. The program had admitted 255 children in the first six months of operation by SCI. This is far more than the reasonable needs expectation on the ground. This comparison reflects that admission in each camp, in fact exceeds with wide margin the expected need on the ground. Coverage seems acceptable with no potential low coverage area.

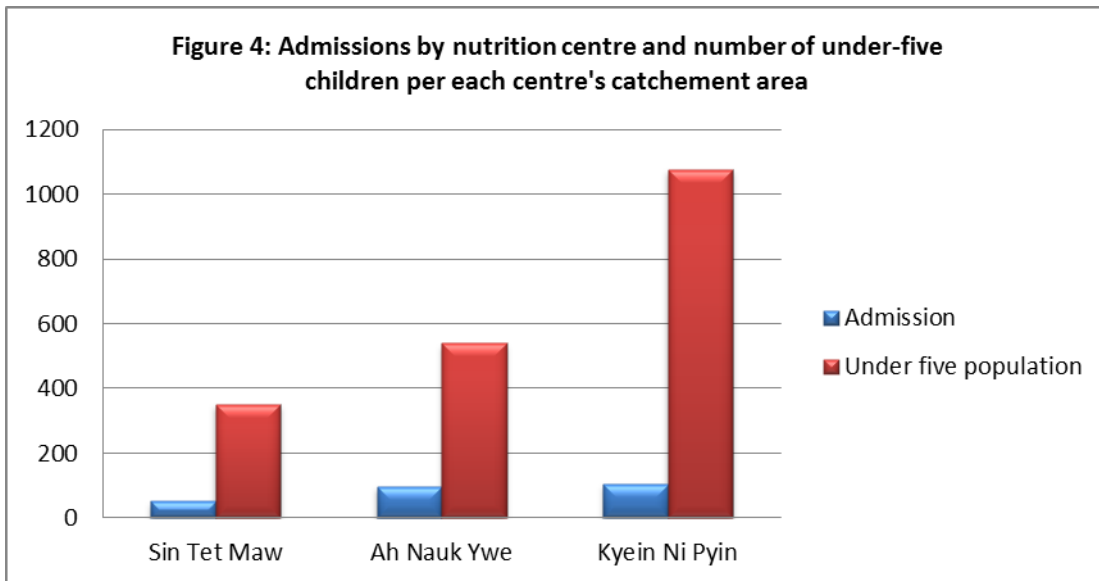
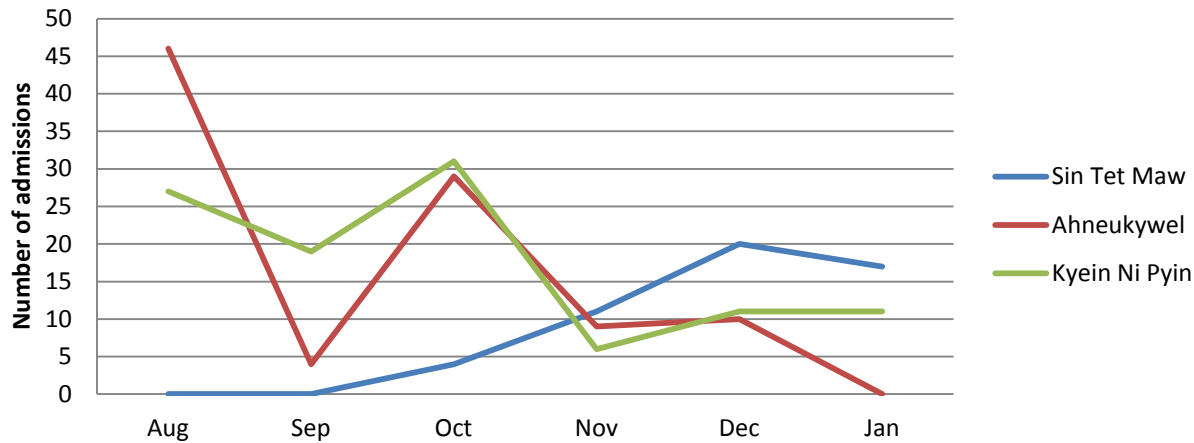


Figure 5 shows a plot of admissions by facility over time. Admissions into Sin Tet Maw were half of admission into Kyein Ni Pyin. As described above the discrepancies are explained due to population size and Sin Tet Maw's late opening (two months following the others). To be specific, Sin Tet Maw's admission was just 4 for October, making its opening a low admission opening. Admissions were higher for the first month for both Ah Nauk Ywe and Kyein Ni Pyin. This was followed by a lower admission on September for both and again an increase on October. Afterward, admissions into both facilities continued to decrease until January. On the other hand, Sin Tet Maw started operation on October with few admissions. I can be said that it started operation on November. Overall admissions into it was lower as compared with other centres, but so does the number of under-five children (Figure %).

<sup>10</sup> Outpatient therapeutic program caseload (assuming 95% of SAM cases can enter outpatient treatment, with a SAM prevalence of 4%, and under-five children population of 1968 children) is  
=  $(1968/100) \times 3.6 = 71$  prevalent cases of SAM without complications (3.6 is 95% of 4% SAM)  
=  $(71 \times 1.6) / 12 \times 12 = 57$  incident cases of SAM without complications for 7 months (till the time of the survey)  
=  $71 + 57 = 128$  = incident and prevalent cases for 6 months (until the time of the survey)  
=  $128 \times 95\% = 122$  = expected caseload for OTP over 6 months with 95% coverage



**Figure 5: Admissions overtime by nutrition centre (Aug2013-Jan2014)**



### 4.1.3. ANALYSIS OF OUTREACH ACTIVITIES DISTANCE TO NUTRITION CENTRE

Efforts were made to map the outreach activities and the location of admissions. However the location data was not available on the OTP register for the fact that all villages are within close range of the service centre.

Both the average and median household per Community Health Volunteer (CHV) is 44, with an equal number assigned to each. All parts of the IDPs in the three surveyed camps were allocated to a CHV. Therefore, the average CHV to household ratio is reasonable based on comparison of days allocated for screening, the settlement type and the number of children per allocated catchment area. Moreover, a document review of outreach visits for the past two months showed regular monthly house to house screening in all the villages, besides associated preventative nutrition services. This strengthens the earlier finding that this program has good *spatial* and *temporal* coverage of outreach activities.

Similarly, to assess the impact of distance on service uptake villages locations were plotted against the distance to nutrition centres. In all three camps, the village to facility access is less than 15 minutes.

### 4.1.4. DISTRIBUTION of MUAC AT ADMISSION

To identify whether the program detects severe acute malnutrition in the community or not, MUAC data at admission were analysed for each facility as well as for the combined Pauktaw program.

Late admissions (children admitted with low critical MUAC) are children who were malnourished but not in the program for a considerable period of time. Availability of late admission means more children in outpatient and inpatient care, a longer treatment period, and elevated number of deaths (poor program performance or efficacy). This will result in bad image for the programs' ability to treat children, which leads to more late presentations and admissions and a cycle of negative feedback would have been created ultimately having an impact on coverage.





Figure 6 shows the MUAC at admission for 255 admissions between August 2013 and January 2014.

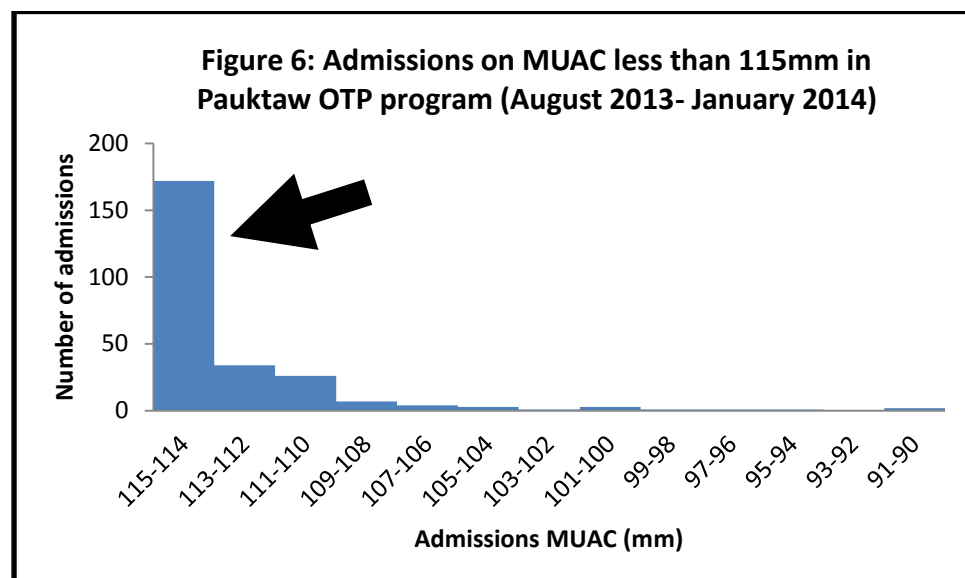


Figure 5 shows most admission were close to program admission criteria (within 115-114 interval of MUAC), rapid decrease in numbers of admission with lower MUACs afterwards (113-112 and 111-110), and short tail of lower MUAC admissions (very small children below 109mm) and a few critical low MUACs (<99mm). The Median MUAC at admission lies in the interval 115-114cm.

The observed distribution of MUAC at admission is consistent with timely case finding and recruitment by the program and/ or timely recognition of SAM and timely treatment seeking by carers.

The observed distribution of MUAC at admission is consistent with a high temporal coverage (i.e. frequent screening) of case finding activities.

### 4.1.5. PROGRAM PERFORMANCE INDICATORS (PROGRAM EXITS)

Quantitative data was collected on the outcome of all activities of the OTP program, and standard indicators for nutritional interventions were calculated. This enabled the effectiveness of program activities to be monitored and related to coverage. Trends in outcomes/exits were monitored to identify any changes in the number of deaths, defaults or non-cured cases and to indicate areas that require further investigation. Table 1 below summarizes program outcomes from August 2013 to January 2014.

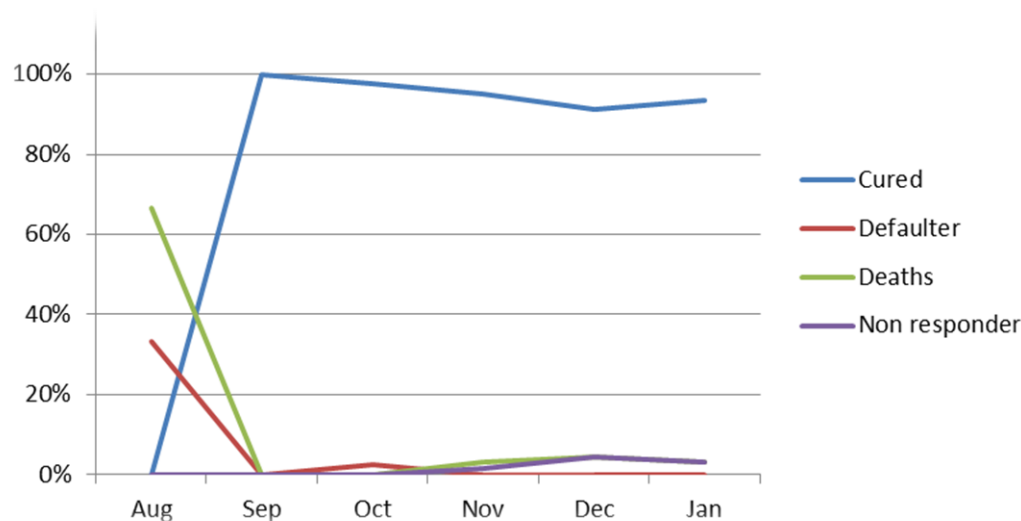
**Table 1: PROGRAM PERFORMANCE INDICATORS, PAUKTAU, AUGUST 2013 TO JANUARY 2014**

Indicator	Number	Percentage	SPHERE
Recovered	176	93%	>75%
Death	2	1%	<5%
Defaulter	7	4%	<15%
Non recovered	4	2%	<10%



This data is consistent with a well-performing therapeutic feeding program.

**Figure 7: PERFORMANCE INDICATORS, OTP, PAUKTAW IDPS (Aug 2013-Jan 2014)**



The observed cured, deaths, non-response and default rates are well within international norms for therapeutic feeding programs as defined by SPHERE.

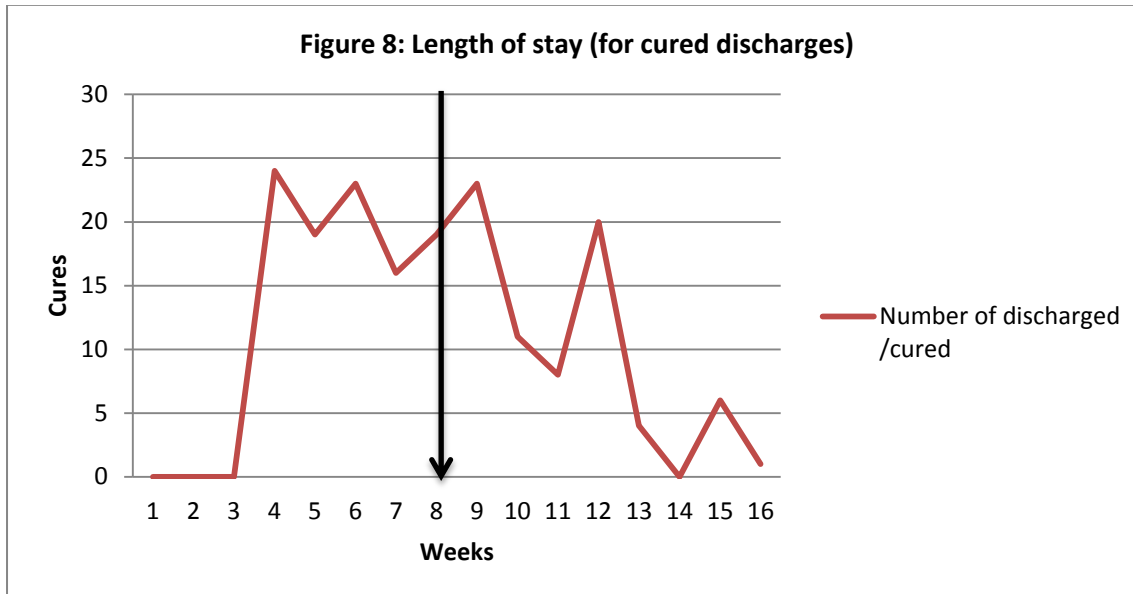
Low rates of mortality, default and non-response are usually associated with good program coverage. The observed mortality and non-response rates are exceptionally low. This may be due to the ability of the program to find and recruit cases in a timely manner (See Figure 6).

#### **4.1.6. LENGTH OF STAY (CURED CASES ONLY)**

Programs with long treatment episodes tend to be unpopular with beneficiaries and suffer from late treatment seeking and high levels of defaulting (both of which are failures of coverage). The duration of treatment episode was investigated using a tally plot of each facility as well as for all 3 facilities (Figure 8).



**Figure 8: Length of stay (for cured discharges)**



The median length of stay is 8 weeks (black arrow on Figure 8). The *median* is the value that divides the distribution into two equally sized parts. Higher coverage programs tend to have a median duration of treatment episodes of less than or equal to 8 weeks. Therefore, discharge of cured children from the OTP was timely. Separate analysis of length of stay by facility showed that this was true across all facilities.

## 4.2. RESULTS FOR QUALITATIVE INVESTIGATION

Stage one comprises of both quantitative and qualitative investigations. For qualitative investigations the principles employed to ensure reliability of findings were triangulation<sup>11</sup> by source and method and sampling to redundancy<sup>12</sup> of a barrier in many places.

The main themes or areas the qualitative data collected included: Outreach; Follow up; Standard of service; Barriers and Community structure. The main data sources were lay people; village chiefs; traditional healers; volunteers; beneficiaries; OTP staff; and mothers of defaulted children. The methods of qualitative data used included informal group discussions, case history, and key informant interviews.

### 4.2.1. KNOWLEDGE AND CAUSES OF MALNUTRITION

Malnutrition is well recognized in Pauktaw camps. Specific local terms for marasmus or kwashiorkor are used to identify the nutritional status of children. *Ahra* is the specific name of malnutrition.

<sup>11</sup> **Triangulation:** A social science technique in which different methods and sources are used in an investigation to confirm findings. The rationale for triangulation is that the use of multiple methods and sources overcomes the weaknesses, intrinsic biases, and problems associated with using individual methods and sources. SQUEAC makes extensive use of triangulation.

<sup>12</sup> **Sampling to redundancy:** A social science technique in which data are collected until no new information comes to light. This technique is often combined with triangulation. SQUEAC makes extensive use of both triangulation and sampling to redundancy.



However, malnutrition was not mentioned as a disease. Communities named diarrhoea, Jontis ('eye becomes yellow when a child is sick of this disease'), Tona ('feeling numb'), coughing, fever, swelling of bodies (not oedema), worms and malaria. The most serious diseases were Tona, malaria and diarrhoea. The most frequent disease is mentioned as diarrhoea. It occurs during the transition from summer to winter. In all FGDs with community members (n=7 focus groups) malnutrition was not mentioned in the common childhood illness list. When shown a picture of a malnourished child, communities recognized it and named it. The causes of malnutrition according to the community include: spirits (they believe the place they are living now used to be a place where the spirits live, now the spirits are smiting them with diseases and malnutrition), the consequence of infection (usually diarrhoea) and lack of food. The signs recognized by the community was that a child becomes slow and inactive when malnourished.

Similarly, interviews with CHV revealed that they know malnutrition and name it too (*Ahra*). All of the CHVs (n=11 female, n=40 male) stated that the use of MUAC had raised the awareness of malnutrition. However, questions regarding the specific signs and symptoms of malnutrition to CHV revealed that their knowledge is limited. All said it is "red MUAC" or Oedema. While this is a correct answer, they failed to explain detailed clinical signs and symptoms of malnutrition.

Two village Doctors (a female who practised for 21 year and a male who practiced for a year) reported that the causes of malnutrition are: poor breast feeding and sickness. If a child becomes sick (especially fever) they become malnourished. Overall, their knowledge of malnutrition is limited. Six Key informant interviews about knowledge of SAM with OTP staff (n=5 male, n=1 female) revealed that they know the detailed signs and symptoms of malnutrition. Poor child caring practices, poverty, diseases, sub-optimal breast feeding, low child birth weight and lack of health services were mentioned as causes of malnutrition.

### Box 1 Roles and engagement of traditional doctors

Traditional doctors treat fever, diarrhoea, malaria, injury and help deliver children. They have reported that they were not involved in the OTP program. They stated that for identifying a malnourished child, CHV measure blood pressure. Based on the results of this investigation, the child will be referred to OTP. The program, according to them, is for children with high blood pressure. Further, they stated that two types of RUTF are given to children: one sour and one sweet (the survey team established the sour to be ORS). The sour RUTF causes malnutrition, said the village doctors. In response to questions whether they know the signs & symptoms of malnourished children they replied that they can't as they need to measure blood pressure to identify it. They stated that the community likes the program but the community recommends having more medication with this treatment. Traditional doctors do not feel included in the program and asked to be provided with 'blood pressure' measuring tape' (MUAC) so that they can help screen children. The program should train these to refer such cases to the OTP for screening, to further strengthen the already existing exhaustive case finding. Specifically, as time passes the program should depend more and more on community level referrals (self-referrals, referral by community leaders and traditional healers as opposed to routine mass screening).



## 4.2.2. HEALTH SEEKING BEHAVIOUR

All of the carers interviewed (n=1 male, n=7 female) reported that their child had been identified by CHV during house to house screening.

In all camps communities stated that they always prefer to go to modern health care providers but as they have limited access they are forced to use local untrained pharmacists' help (Sin Tet Maw IDPs), traditional doctors (Kyein Ni Pyin IDPs) or no services (Ah Nauk Ywe IDPs). Communities reported that they have once a week health care services from MSF but it is inadequate with very limited treatment. Specifically, carers of children with diarrhoea or Acute Respiratory Infection tend to seek help from village doctors or local pharmasists as these illnesses are considered potentially fatal and therefore children are taken to the next mobile clinic day.

In conclusion, health seeking behaviour meets program criteria as their path way to care indicates that carers will seek help from health care providers in the first place. At the MSF health care unit they conduct opportunistic screening. This helps children to be captured well before deterioration. It also increases coverage.

## 4.2.3. COMMUNITY MOBILIZATION AND CASE-FINDING EXHAUSTIVITY

Community mobilization includes participation, awareness, involvement, assissting, delegating and ownership. Interviews were made to assess these components' performance in the overall program implementation. These activities are designed to help nutrition programs to achieve their aim of high program uptake, high coverage and low defaulter rate.

### Box 2: Community mobilization's relation with coverage



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A series of questions were asked to identify this. Fifty one CHV (n=11 female, n=40 male) and 6 OTP (n=1 female, n=5 male) staff as well as 8 FGD (n=2 Male only FGDs , n=4 Female only FGDs, n=2 mixed sex FGDs) participants were interviewed (. The questions revealed that:

- The catchment area per CHV is local to each CHV and small enough for them to know everyone in it and to know any movement in their catchment area. A total of 60 children per CHV proportion is used.
- CHVs use door to door screening to identify malnourished cases. The case finding activity takes 2-4 days per each CHV depending on the camp.
- Each child under five will be measured in all the houses in the camp.
- Screening is regular (i.e. all the children were screened once per month or more frequently).
- Carers will be told the child is a SAM case once screened for malnutrition and found to be a case. The carer will be told to go to a facility and get treatment. The CHV also advises carers to feed the child well and ensure good hygiene practices.
- Carers are given referral slips (Kyein Ni Pyin) or the names of those referred will be handed over to OTP staff for follow up. Furthermore, CHVs follow up to ensure that the referred carers are present for treatment on OTP day.
- No refusal was reported. Carers are willing to take their children for treatment.
- There was no reported stigma regarding malnutrition or those who are in the program.
- The program is liked by the community at large. All interviewed community members reported that RUTF cures children very quickly, they wanted all under five children to be in this program and they strongly recommended that it continues providing life saving services. This revealed the appreciation the community have for the OTP .
- OTP staff estimated that as much as 20% (2 out of every 10) of the referrals from CHV are wrong referrals. Wrong referrals are those children with a MUAC>11.5 or WHM<sup>13</sup>>70% (healthy) but referred by CHVs as malnourished. The source of this error was ascribed either to recovering between the period of referral and visiting the nutrition centre or wrong measurement<sup>14</sup>.
- Carers present their children at the nutrition centre for checking their nutritional status. Most will be found healthy. In this case proper messages will be communicated. However, some carers were reported to be unhappy. The same holds true for CHVs screening. They reported that most carers are unhappy when they are told their children are not malnourished. There is a huge pressure on CHVs to admit children by the community irrespective of the outcome of MUAC measurement. For this reason most CHVs recommended to have a blanket distribution of RUTF for all. This demonstrates a lack of understanding of the objective of the program of both the community and CHVs.

<sup>13</sup> Community referrals are entirely done using MUAC. But after reaching the facility, OTP staff screen children using percentage of the median criteria.

<sup>14</sup> The OTP center opens once per week. A child may have 2-6 days before coming to the facility. They may recover in the meantime. This is true as most of the MUAC on admission is 11.4 or 11.5.

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- Previously a local NGO (Myanmar Healthcare Assistants Association) used to provide SFP services. Due to this the community expects children with MAM to be admitted, which is not the case. The community seems to be disillusioned about the program's entry criteria.
- The program involves community and traditional leaders. They were reported to be very instrumental in solving conflicts such as the community demands to have all their children admitted in the program. However, traditional healers (see Box 1) were not included.

To summarize, case finding is exhaustive. All volunteers are well aware of the detailed and step by step ways of case finding. Wrong referrals from volunteers were observed (20%). There is a strong communication of information and feedback between OTP staff and volunteers. There were no refusals, reported stigma and defaulters. Follow up is in place. CHVs appreciate the program. This is all indicative of a high coverage level.

## 4.2.4. Areas of High and Low Coverage

The data collected from routine program data and qualitative interviews were combined to provide information about where coverage could be satisfactory and where it could be unsatisfactory, as well as information about the likely barriers to service access and uptake that existed within the program. This information was used to state the hypothesis which was tested in the next stage. Based on all collected data the program was ***hypothesised to be of high coverage in all three separate camps and their respective catchment area. This was tested in the Hypothesis testing stage (stage 2).***



## 5. STAGE TWO: HYPOTHESIS TESTING

Stage two confirms the location of areas of high and low coverage and the reasons for the coverage failure that was identified in stage one (above) using small-area surveys. In this case, it tested whether coverage was above 90% across all camps as hypothesized by the findings so far.

Stage two uses Lot Quality Assurance Survey (LQAS) techniques to test coverage level per small area surveyed. Analysis of data using the LQAS technique involves examining the number of cases found ( $n$ ) and the number of covered cases found. If the number of covered cases found exceeds a threshold value ( $d$ ) then coverage is classified as being satisfactory (High or >90%). If the number of covered cases found does not exceed this threshold value ( $d$ ) then coverage is classified as being unsatisfactory (Low or <90%). The value of  $d$  depends on the number of cases found ( $n$ ) and the standard against which coverage is being evaluated. A specific combination of  $n$  and  $d$  is called a sampling plan.

The SPHERE minimum standard for coverage of OTP in refugee (and IDP) Camps is >90%. The following formula was used to calculate a value of  $d$  appropriate for classifying coverage as being above or below a standard of 90% for any sample size ( $n$ ):

$d = n \times \frac{p}{2}$ , for IDPs with a SPHERE minimum standard of 90%, formula for  $d$  will be:

$$d = n \times \frac{90}{2}$$

$n$ =sample size (number of cases found in a small area survey)

$p$ =Threshold value (90%)

$d$ =decision value

- If the number of covered cases >  $d$  then classify coverage as acceptable (i.e. above the target threshold)
- If the number of covered cases  $\leq D$  then classify coverage as unacceptable (i.e. below target threshold)

Quarters are sampled from each centre's catchment area purposely, the purpose being areas where coverage may likely be weak so as to disprove the hypothesis hitherto proposed. House-to-house screening was selected as a means of identifying SAM children at second stage sampling. The survey area is a camp setting with well-ordered settlements which supports the choice of house-to-house screening over active and adaptive case finding methodology of capturing cases. To help the house-to-house screening, the survey team used local informants, women who work in preventative nutrition intervention and are well aware of each village, and took a (verbal) household census before asking to measure children. This avoided the problem of sick or sleeping children being missed. In each house in the selected village all children were measured.



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The main findings of the small area surveys are summarized in Table 2 below.

**Table 2: Small area survey findings**

Camp	Sub camp	Total cases	Total covered	Decision rule	Classification	Conclusion
Kyein Ni Pyin	Suiparalel-1-I	3	3	$D$ $= Total\ cases \frac{90}{100}$ $= 3 \times \frac{90}{100} = 2.7$ $= 2$	3>2, Therefore coverage is greater than 90%	Coverage is above 90% in Kyein Ni Pyin camp. Hypothesis is confirmed.
Kyein Ni Pyin	Suiparalel-1-II	3	3	$D$ $= Total\ cases \frac{90}{100}$ $= 3 \times \frac{90}{100} = 2.7$ $= 2$	3>2, Therefore coverage is greater than 90%	Coverage is above 90% in Kyein Ni Pyin camp. Hypothesis is confirmed
Sin Tet Maw	Myae Bon	2	2	$D$ $= Total\ cases \frac{90}{100}$ $= 2 \times \frac{90}{100} = 1.8$ $= 1$	2>1 Therefore coverage is greater than 90%	Coverage is above 90% in Sin Tet Maw camp. Hypothesis is confirmed

The small area survey result showed that coverage was high and above the SPHERE standard across all camps as hypothesized in the previous section. Combining the findings of Stage one and Stage two a prior coverage level was developed.

## 5.1.1. SUMMARY OF QUALITATIVE AND QUANTITATIVE INVESTIGATION

The results from qualitative data collection were largely similar across areas and health delivery units, therefore the results from focus group discussions and key informant interviews are combined for all sites. The data was triangulated for ensuring its reliability. Triangulation was done by asking similar questions to different sources and employing different methods of data collection. The most common barriers to coverage and reasons for non-coverage are presented in Table 3.

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**Table 3: Summary of results from qualitative investigations: Boosters and barriers to access**

Boosters	Findings
Active and motivated CHVs	Review of timetable of activities and field interviews confirm a continuous screening at community level.
	Case histories of sample children currently in the program found that many (n=7) came to the program after having been referred by volunteers.
	Informal group discussions with community members revealed that there is a competition to be a CHV as job opportunities are hard to come by. These revealed the level of commitment to be a CHV.
	An evaluation of the CHV to village population ratio confirmed a complete and an acceptable CHV-household ratio.
Early treatment seeking behavior	Tallies of MUAC on admission revealed that the majority of cases were admitted close to program admission criteria
	Data on referral source (of program records) showing self-referrals
	FGDs with community members found that they seek care first from mobile clinic and nutrition centers
Effective interface between program, CHV, SCI and community	Key informant interviews with OTP staff and CHVs (separately) established that there is an effective coordination of activities between community, CHVs and the stabilization center run by MSF. This includes activities like follow up, referrals and reporting of referred cases.
	Confirmation from records: regular schedule of case finding activities (each CHV with specific location and time for their work clearly outlined), supervision lists confirming regular screening, referral slips archived and/or records of reports from CHVs field visit documented and referral slips to SC in place. Procedures for tracking of children referred to stabilization centre are in place,
	Community leaders, community and traditional healers all reported a regular co-ordination and communication between the program and CHVs and the community.
Community understanding of program admission criteria	MUAC cut-off point was identified by community members, CHVs and program beneficiaries correctly.
General good opinion of program by community	Focus group discussions revealed that the program is well known, accepted and quite appreciated for its 'immediate' cure capacity.
	Interviews with different stakeholders in the community revealed that there is a very strong pressure to have every child in the program. This is a revealed preference and a proxy indicator of the desirability of the program
	The name given by the community suggested a positive perception towards the services. 'Ahra Ton' or nutrition school is the name of the program for the community.
Admissions consistent with high coverage	Plot of admission overtime (routine data) and stage of the program versus the disease, seasonal and critical events calendar revealed a smooth admission across time and facilities which is characteristic of a program that responds to its dynamic environment.
Early detection of cases	Admission MUAC level proved cases come to the program very early in their sickness episode
Small-area surveys	No uncovered cases were found (after screening 110 cases)
Consistent supply of RUTF	Reviews of records as well as interviews with community members, CHVs, and carers of current and past cases revealed a continuous supply of RUTF.
Proximity	Analysis of distance from home location of each quarter as well as carers' perception of distance confirmed distance is not a limiting factor to attend the program.

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Barriers	Findings
Rejection of wrong referrals from CHVs as well as healthy self-referrals from community <sup>15</sup>	Key informant interview with OTP staff in all three camps revealed an estimated 20% of the referrals from CHVs are wrong referrals (children are healthy). Similarly, they stated that there are mothers with healthy children visiting facilities to get screened and admitted.
	Across all camps, communities recommended or in multiple (5 FGDs) times complained that children should be included in the program, despite their MUAC level (community have knowledge that 'Red MUAC' level is the criteria for admitting children). This might have created considerable pressure on CHVs to refer many cases <sup>16</sup> .
	One community leader stated that he had to intervene to address the community's collective demand that all under-five children get admitted, irrespective of their MUAC level.
Lack of knowledge about the purpose of the program (community)	FGDs with community members revealed that in spite of an admission of the knowledge that the program is for the malnourished, there is a widespread tendency to consider it as a food program.
	Despite a complete knowledge that the program is for treating SAM children, there is a gap in the way messages are communicated to the wider community. It was established from questions meant to reveal this that the program is largely seen as a benefit rather than as treatment.
Lack of knowledge about malnutrition both from community and CHVs side.	FGDs with the community revealed that severe wasting is recognized but ascribed to superstitions. It was not recognized as a disease.
	CHVs and the community, but not OTP staff, entirely associate the signs and symptoms to only 'red MUAC'. Of the 51 CHVs interviewed non were able to say three signs and symptoms of malnutrition

<sup>15</sup> The recent closure of the supplementary feeding program seems to contribute to this (SFP closed → community get confused as to how a MUAC red continued to be admitted while the yellows do not need treatment any more → CHVs pressured and continue to send normal or MAM children)

<sup>16</sup> MUAC tapes can be gently tightened or loosened to make the difference between 11.7 and 11.5.



## 5.2. DEVELOPING A PRIOR

The information collected in stage 1 and 2 was separated between factors that reflect positively about SAM coverage and factors that reflect poorly (Table 3). Each factor was ranked using a simple weighed (0-10) point system. All positive factors were added to the minimum possible coverage (0%) while all the negative factors were subtracted from the highest possible coverage (100%). Findings of both stage 1 and 2 were used to develop the prior coverage level.

**Table 4: Prior (Compilation of stage 1 and 2)**

Boosters (positives)	weight	Barriers <sup>17</sup>	weight
Active volunteers and strong community mobilization with follow up	10	Problem associated with programs operation (Rejection of healthy children and wrong referrals, Absence of SFP, Poor knowledge about malnutrition from volunteers side and sub-optimal use of key community figures like traditional healers)	5
No reported stigma	10	Lack of awareness about programs purpose and malnutrition-community	5
Perception of CMAM	7	Cultural barriers	2
Community leaders involved	5		
Health seeking behavior	7		
A good level of awareness about malnutrition	5		
Program knowledge	7		
Good interface with SC	10		
Length of stay acceptable	10		
Early treatment seeking (results of MUAC at admission)	10		
Quality of service delivery as shown by high cure rate, low mortality and default rate	10		
Acceptable admissions over time (it reflects that the programme meets need)	9		
	100		12
Boosters impact	=0+100 =100%		=100- 12=88 %
Prior	94%		
Prior alpha	17.6		
Prior beta	2.4		

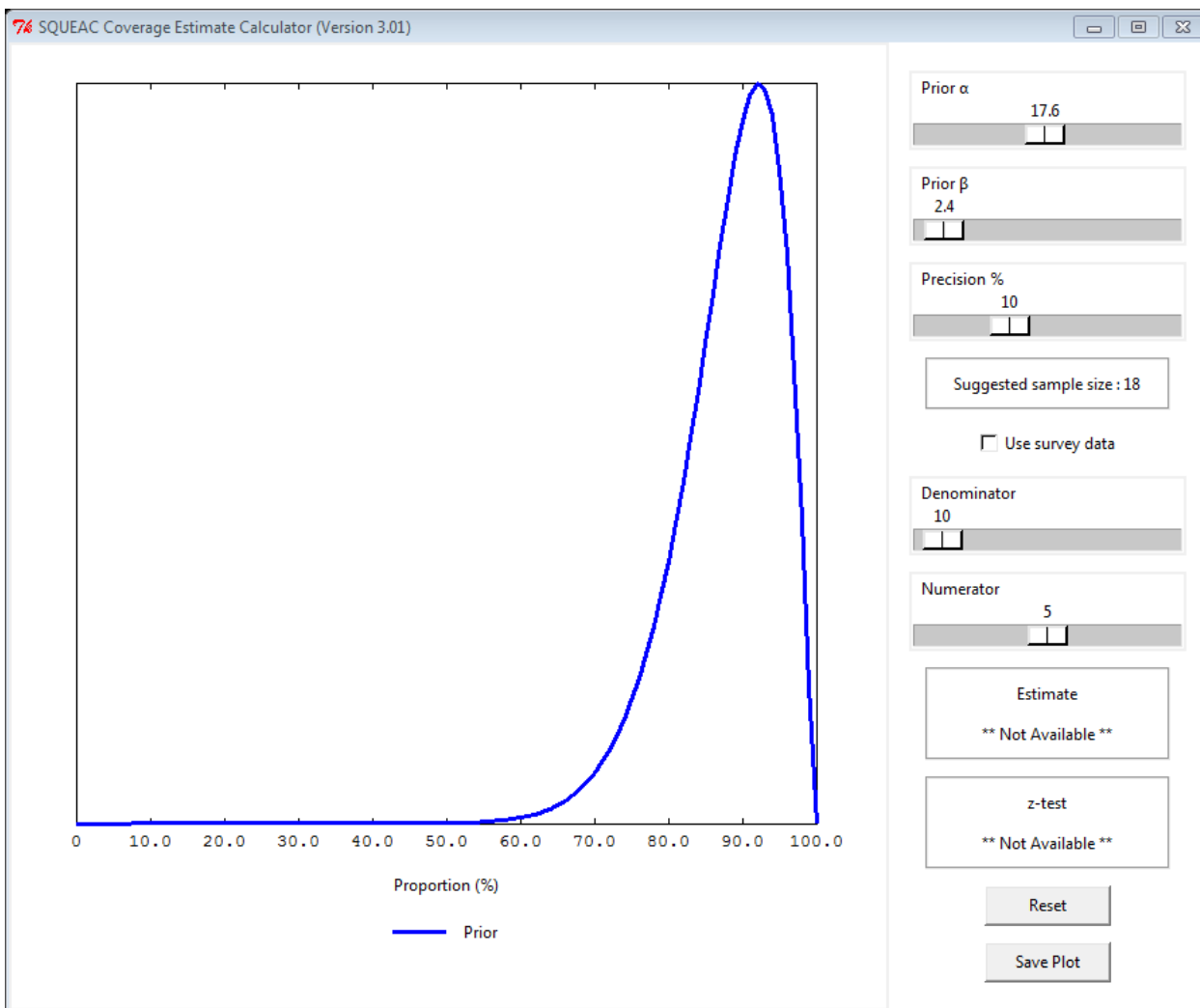
The prior was calculated by taking the median of 100% (what was added to 0, which is the lowest coverage that can be) and 88% (subtractions of negatives from the maximum possible coverage). The median or the prior coverage was 94%. Using the Bayes SQUEAC calculator, the  $\alpha$ Prior and  $\beta$ Prior

<sup>17</sup> Barriers are summarized and given less weight as their impact on coverage level was not huge at this stage. For instance, staff communicates proper messages to carers of healthy or rejected children.



values were found to be 17.6 and 2.4, respectively. The prior distribution is shown in Figure 9 below. The modal value (prior) was plotted using the Bayes SQUEAC Calculator with a precision of +/- 10% at 95% credible interval (confidence interval). Alpha prior of 17.6 and the beta prior of 2.4 were used to shape the prior mode. The final curve used for a prior is presented in Figure 9.

**Figure 9: The Beta (17.6, 2.4) prior in Bayes SQUEAC**



A simulation of the BAYES SQUEAC calculator was used to estimate the sample size of the wide area survey using the modal prior of 94%, alpha prior and Beta prior of 17.6 and 2.4. A likelihood sample size of 18 SAM children was calculated. This was checked against the minimum sample size:

Minimum sample size= alpha prior + Beta prior -2=17.6+2.4-2=18

Minimum sample size is  $\geq 18$ .



## 6. STAGE THREE: LIKELIHOOD SURVEY

The objective of Stage 3 was to provide an estimate of overall program coverage using Bayesian techniques. To do this, the evaluation relied on the standard Bayesian beta binomially conjugate the analysis.

### 4.4.1. LIKELIHOOD (WIDE AREA COVERAGE RESULT)

During the likelihood survey stage, 25 cases were identified, of the 340 screened in 8 sampled villages. Of the 25 cases captured by the survey, 23 children were receiving treatment in the program while 2 were not in program.

Of the 23 children who were in program, 3 (13%) were in the program previously (they were readmissions). Of the three readmissions, two were relapses and one was a defaulter. Causes of relapse were: shortage of RUTF (or 'stopping the RUTF treatment') and diarrhoea. For all three readmissions this was the second time they got admitted for treatment. Therefore readmission is happening but it is not a significant proportion of the total cases that were in the program at the time of the survey. The number of children per household who were in the program was also assessed. It was found that all of the 23 children who were in the program at the time of the survey were the only ones in their household to be in the program.

Of the 23 children who were in the program: 4 were referred by OTP staff and the rest were screened by CHVs. This indicates the effectiveness of outreach work in identifying and admitting cases to the program.

Of those who were found uncovered by the program (n=2), one was a past case who was attending the program and had been discharged as cured and the other one was a new case (Edematous).

The survey likelihood data was summarized using the numerator and a denominator as shown below to calculate the coverage. The period coverage estimator was used because of the program's reasonably effective case-finding which results in timely identification and referral. Hence coverage was calculated as:

*Period Coverage*

$$= \frac{\text{No. of current (SAM) cases and recovering cases attending the program}}{\text{No. of current (MAM) and recovering cases attending the program} + \text{No. of current (MAM) cases not attending the program}} \times 100$$

The numerator and the denominator were obtained from the results for the wide area survey using the formula:

$$\text{Period Coverage} = \frac{23}{23 + 2} \times 100 = 92\%$$

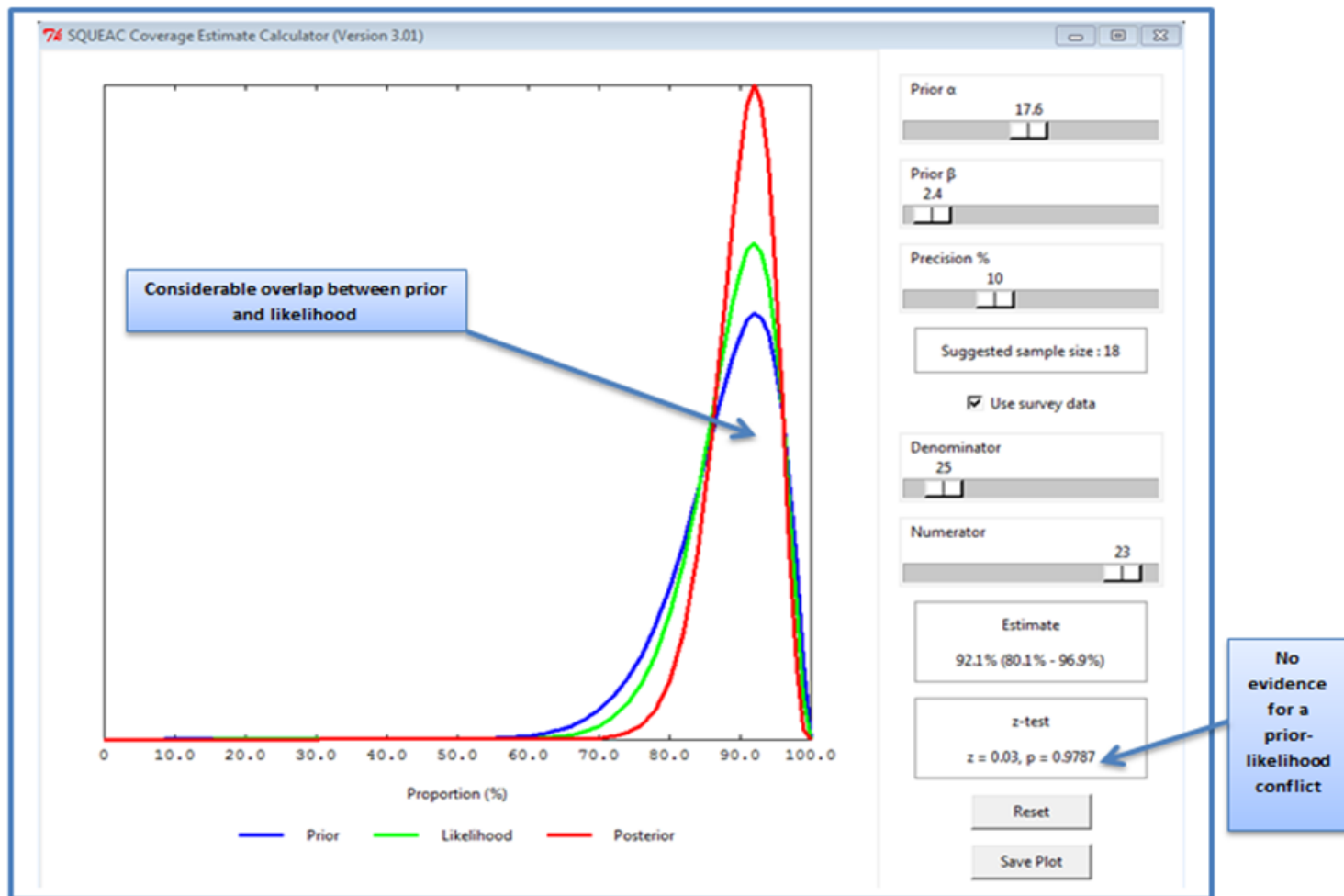
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The data was analysed using the Bayes SQUEAC calculator (see Figure 10). The wide area survey data of numerator (23) and denominator (25) were entered into the Bayes SQUEAC calculator. The program coverage is estimated to be **92.1% (95% CI = 80.3%–96.9%)**. **Therefore, coverage exceeds (>90%) the minimum standard set by SPHERE for selective feeding programs.**

**Figure 10: PRIOR, LIKELIHOOD, AND POSTERIOR DENSITIES FOR THE ANALYSIS PRESENTED IN THIS REPORT**



The result confirmed the prior, as there is considerable overlap between the prior and Likelihood (Figure 10 blue and green plots). The z test found a p-value of 0.9787, indicating a complete overlap between the prior and the likelihood. A simple test to confirm that is to see the prior level (94% on Figure 9) and to compare it with the results of the likelihood survey level (using the above formula-92%). Since 94% (the prior) and 92% (the Likelihood) are very close to each other, we can confirm the overlap. Further, a simple visual inspection of Figure 10 revealed that all the three lie one over the other. Had there been a conflict, they would disperse and we can easily detect conflict of the different estimates.



## 7. CONCLUSIONS AND RECCOMENDATIONS

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In the IDP camps where the SCI OTP program has been running for 7 months the coverage of the nutrition treatment program was 92.1% (95% CI = 80.3%–96.9%), i.e., above the SPHERE standard set for selective feeding programs in camp settings (minimum coverage level >90% coverage for programs in camps).

The SQUEAC tool was used as a monitoring and an informative process of coverage determination of the CMAM program in Pauktaw IDP camps. It was a monitoring tool in the sense that it tracked implementation of the program against the requirements laid down in the CMAM international and national protocols, such as early treatment seeking, length of stay in the program and care as long as it is needed, to mention a few.

Rigorous regular screening, motivated staff and CHVs, adherence to protocol, communities' health seeking behaviour meeting program's case definition, and quality of service delivery as shown by high cure rates, low mortality and default rates were some of the boosters that helped the program achieve high program coverage. Furthermore the investigation found that:

- Mortality rate, early detection of SAM cases (admissions MUAC) and length of stay in the program are above acceptable standards.
- Registers are kept well.
- Good knowledge regarding complications associated with SAM and key messages by OTP staff was observed.

Identified barriers were lack of knowledge of the **purpose** of the program, awareness of the problem of malnutrition (both community and CHVs), wrong referrals by CHVs as well as the presentation of healthy children by carers. The program is appropriately using key community figures and the community network. However, traditional doctors and pharmacists were not included or trained to do opportunistic screening.

One of the principles of the CMAM model of care delivery is increasing the awareness of malnutrition in the community. The basic first step is for people to be able to recognize the signs of malnutrition. This is the primary objective of all community mobilization activities. Rejection of referrals by MUAC seriously undermines the way CHVs are regarded and the program admission is conducted.

The recent closure of the supplementary feeding program seems to have created much confusion among the community. Moreover, the investigation found that CHVs are under considerable pressure to admit all under-five children.





At the time of the survey, carers of rejected referrals, the majority of which were moderately malnourished, received advice detailing that their child was not malnourished but at risk of developing malnutrition. Guidance provided included that carers should feed the child more food and that s/he be brought back to the nutrition centre should their condition worsen or they become ill. This guidance and explanation helped its negative impact on coverage to be low.

To help the program maintain this high coverage, the following recommendations are made:

### **Recommendations for wider Humanitarian Community**

- Challenges faced by the community regarding access to health services are increasing relapse of cases. This will increase the proportion of readmissions into the program. Consider strengthening health services provision. Moreover, CHVs should be given clear advice that relapsed and defaulted cases should be referred for admission into the program. Similarly, carers should be given clear advice at discharge that relapsed cases are eligible for readmission and that they should return to the program should their child relapse.

### **Recommendations for SCI (future programming)**

- As the community is entirely dependent on food assistance, the program should continue providing lifesaving nutrition services. Similarly, there is a need for MAM treatment (i.e. SFP)
- Traditional healers should be trained on screening so as not to lose this influential community-based voice

### **Recommendations for SCI Nut Team (with immediate effect)**

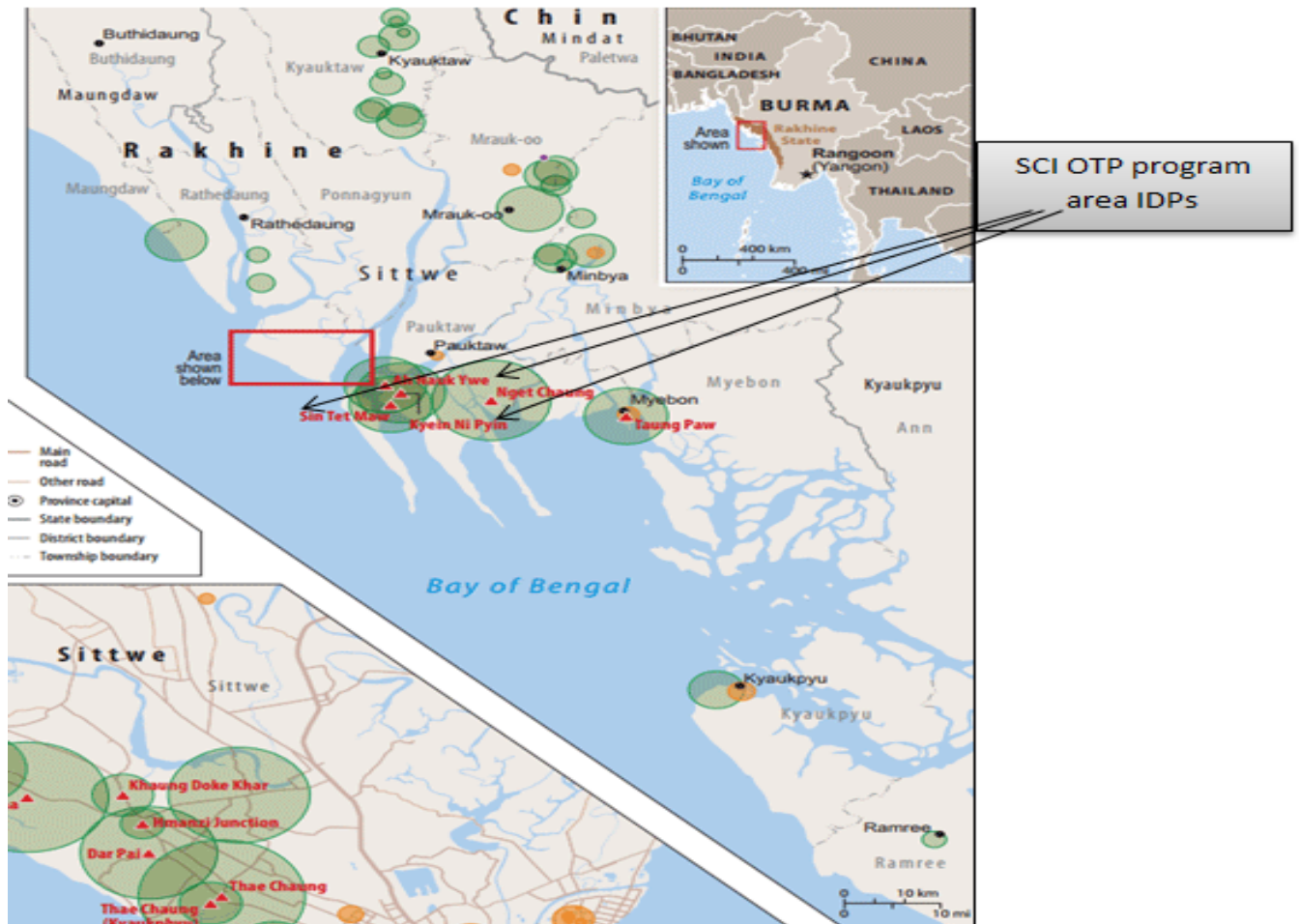
- Carers of rejected children should be given clear advice that they should return to the program if their child's condition worsens or the child becomes ill.
- The program entry criteria should be clarified with all program staff as well as the community. Spot checks should be made at all sites to ensure that program entry criteria are being followed and remedial actions taken if required.
- A program information and public relations strategy should be developed and implemented. The emphasis should be on creating a system with universal coverage capable of delivering a message about SAM, its signs and symptoms and its cure (RUTF).
- CHVs should be trained on the problem of malnutrition. The emphasis should be on creating awareness of signs and symptoms of malnutrition.

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



## ANNEX 1: PAUKTAW IDPS OTP PROGRAM MAP, RAKHINE STATE, MYANAMAR





## ANNEX 2: TABLE OF SURVEYED QUARTERS

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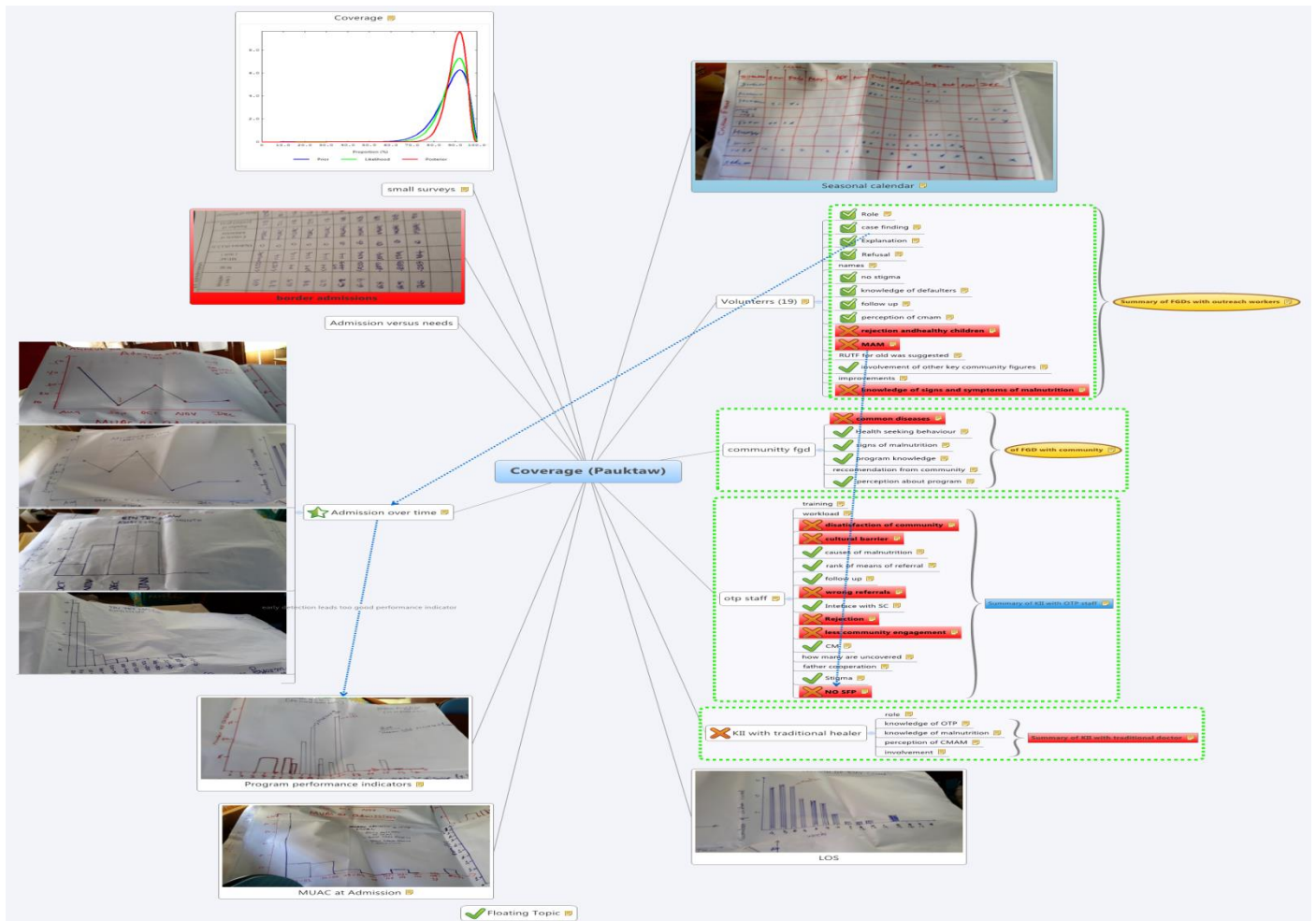
Camp	Quarter	Villages (sub quarters)
Sin Ta Maw	Sin Ta Mow	Q2
		Q4
		Q6
Ah Nauk Ywel	Ba Win Chaung Wa	Q1
		Q5
Kyein Ni Pyin	Su Li Phat Ran 1	Q1
		Q3
		Q4

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



## ANNEX 3: MIND MAP





## ANNEX 4: BOOSTERS AND BARRIERS TO ACCESS AND TRIANGULATION BY SOURCES

### Summary of results from qualitative investigations: Boosters and barriers to access

Boosters	Source No (see next table for Key to numbers)	Barriers	Source No(see next table for Key to numbers)
Active and motivated volunteers	1, 2, 3, 4,5,6	Rejection of healthy children and wrong referrals	1,2,3,4,5
No stigma	1,2,7	Absence of SFP	1,2
General good opinion of program in communities	1,2,4, 5,6,7	Poor knowledge about malnutrition from volunteers side	2
Community leaders involved	1,2	Lack of awareness about malnutrition-community	4,1,5,7
Health seeking behavior meeting program's recruitment strategy	1,2,7,4	Lack of awareness about programs	1,2,7,5,4,8
Awareness about malnutrition	4,7,5,1	Cultural barriers	1,2
Program knowledge	4,5	Community involvement sub optimal	1,8
Good interface with SC	1		
Length of stay acceptable	3		
Early detection of cases as depicted by results of MUAC at admission	3		
Quality of service delivery as shown by high cure rate, low mortality and default rate	3		
Acceptable admissions over time (it reflects it meets need)	3		

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



Key to the above summary table (annex 4 above)

Source	Number given
CHVs	1
Program Staff	2
Review of record	3
Case Study	4
FGD with community	5
Seasonal calendar	6
Carer interview	7
Traditional healer	8

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



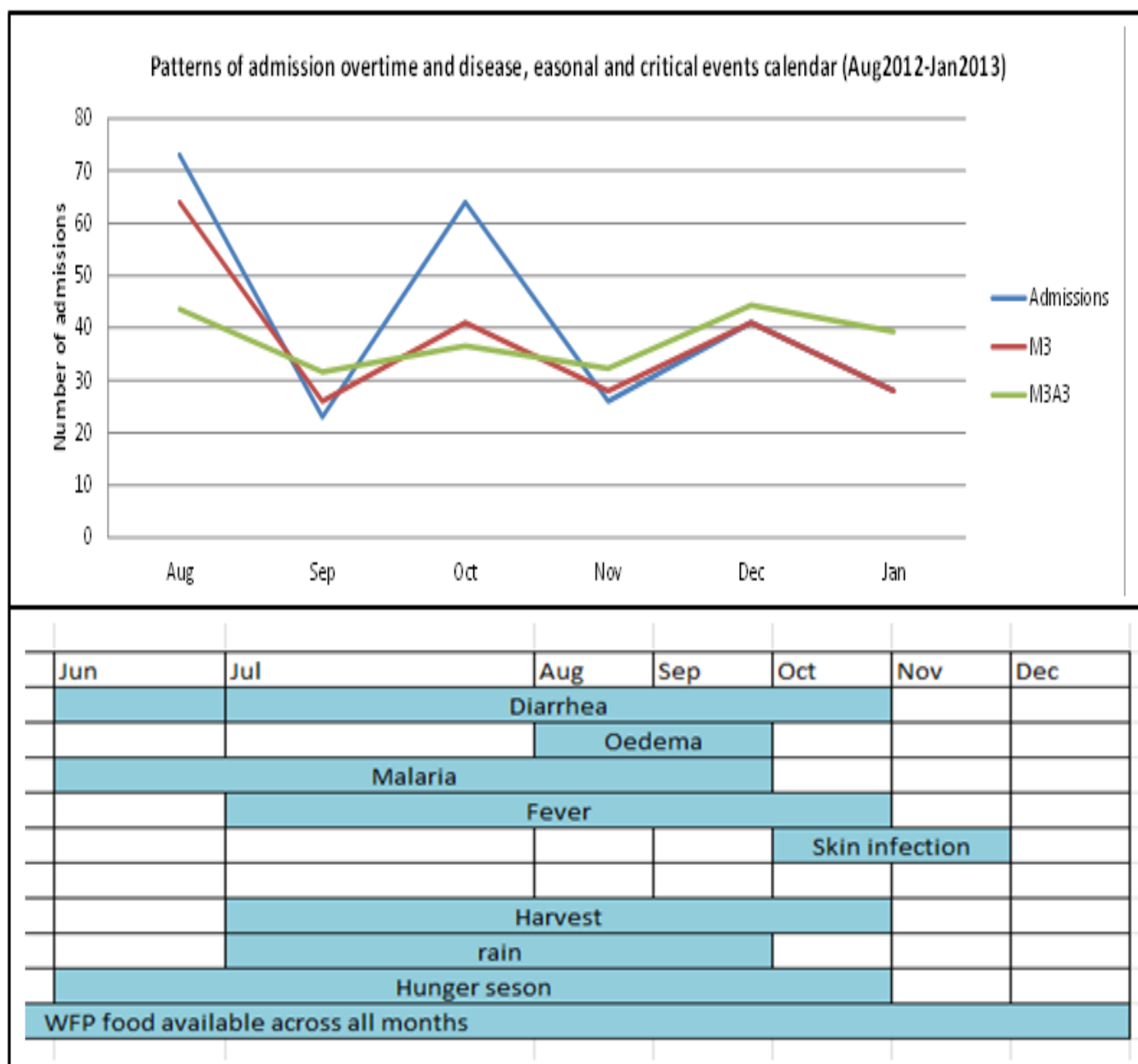
## ANNEX 5: EXAMPLES OF RECORDS WITH BORDER CASES MUAC ON ADMISSION

Columns indicated by red arrows indicate a MUAC level of 11.4. This was characteristic of all admissions. This is reflected on MUAC on admission histogram of Figure 5. On Figure 5 it can be seen that 68% of admissions in the past 7 months were admitted with a MUAC level in the interval 115-114 and 80 % were admitted within 113-115. This indicates early detection. On the flip side, the finding of qualitative data strongly suggests this causes pressure on CHVs (demands to be admitted, irrespective of MUAC level)

Height (cm)	WH	MUAC (mm)	Oedema (D1,2)	Criteria of Admission	Number of Product given	Date of Birth
69	<250	MUAC	0	MURC	25	20/12
77	<250	114	0	MURC	25	20/12
65	M	114	0	MURC	25	20/12
78	>M	114	0	MURC	25	20/12
62	<M	114	0	MURC	25	20/12
62	M	114	0	MURC	25	20/12
67	<250	114	0	MURC	25	20/12
68	<250	114	0	MURC	25	20/12
65	<250	114	0	MURC	25	20/12
76	<250	114	0	MURC	25	20/12



## ANNEX 6: SEASONAL CALENDAR AND TRENDS IN ADMISSION







# ANNEX 7: QUESTIONNAIRES USED FOR HYPOTHESIS TESTING AND LIKELIHOOD SURVEY

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## Questionnaire for the carers of children (Severe cases) who are NOT in the programme

Name of IDP camp \_\_\_\_\_

Name of sub camp \_\_\_\_\_

Name or number of village \_\_\_\_\_

Name of Child \_\_\_\_\_

Team No \_\_\_\_\_

1. DO YOU THINK YOUR CHILD IS MALNOURISHED?

YES  NO

2. ARE YOU AWARE OF THE EXISTENCE OF A PROGRAMME WHICH CAN HELP MALNOURISHED CHILDREN?

YES  NO (→ stop!)

If yes, what is the program's name? \_\_\_\_\_

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

- Too far (How long does it take to walk? .....hours)
- No time / too busy. What is the parent doing instead? \_\_\_\_\_
- Mother is sick
- The mother cannot carry more than one child
- The mother feels ashamed or shy about coming
- Security problems
- There is no one else who can take care of the other siblings
- The amount of RUTF was too little to justify the journey
- The child has been rejected by the programme already. When? \_\_\_\_\_ (approx.)
- Other parents' children have been rejected

My husband refused

- I thought it was necessary to be enrolled at the hospital first
- I do not think the programme can help my child (prefer traditional healer, etc.)
- Other reasons (specify): \_\_\_\_\_

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



## 4. WAS YOUR CHILD PREVIOUSLY ADMITTED TO THE PROGRAMME?

YES  NO (→ stop!)

If yes, why is he/she not enrolled any more?

Defaulted (when?..... why?.....)

Condition improved and discharged by the programme (when?.....)

Discharged because he/she was not recovering (when?.....)

Other: \_\_\_\_\_

(Thank the carer)

## **Questionnaire for mothers/carers of children CURRENTLY enrolled in the OTP/SC programme**

Name of IDP camp \_\_\_\_\_ Name of sub camp \_\_\_\_\_ NAME OF VILLAGE \_\_\_\_\_

Name of Child \_\_\_\_\_

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

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

3. Try to establish why the child has returned

a. returned defaulter

b. relapsed into severe malnutrition

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

\_\_\_\_\_

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

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

\_\_\_\_\_



## ANNEX 8: GUIDES USED FOR QUALITATIVE INTERVIEWS

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### GUIDES FOR LAY PEOPLE

The discussion should flow naturally and leads/interesting points should be followed/explored as they come up. The question list should not be rigidly adhered to. This is just a guide as to the kind of topics which are important and the type of questions which could be asked. The direction the discussion takes will depend on what is said by the participants. It is always important to probe and ask follow up questions.

### UNDERSTANDING OF MALNUTRITION

1. What are the common health problems that children experience here?
2. Which are the most frequent? Rank.
3. Are any more frequent at certain times of the year? When? Why?
4. Which are the most serious? Rank. Why?

*If malnutrition mentioned ask:*

5. What symptoms do these children have?
6. What terms do you commonly use to describe this condition?
7. Which children get this condition? Why?

### HEALTH SEEKING BEHAVIOUR

8. What do you do when your child has this (insert name of most common illnesses) problem? a. Probe fully for different illnesses

*If clinic/hospital mentioned:*

9. Which? How far is it? Why do you go there?
10. Is there any alternative/anything else you might do/anyone you might ask for advice nearer home?

11. What factors determine which treatment / approach you use for a particular illness?

Probe on:

- a. Cost

Access

- c. Father permission
- d. Habit/familiarity

*If malnutrition not already mentioned ask/show pictures:*

12. Have you seen children like this (those who have lost weight/become very thin or whose feet/legs/hands have started to swell?
13. What do you call this condition?
14. When do you see this condition?
15. Which children get this condition? Why?
16. What do you do when your children get this condition? Why?

### AWARENESS OF CMAM SERVICE

17. Do you know of a place where this condition can be treated?
18. How did you hear about it? a. Who told you?

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



b. When?

c. What do you know about it?

19. What are children given for this condition?

*If people think the RUTF is a food ask:*

a. What sort of food is it?

b. What do you call it?

c. Who can eat it?

d. What foods do you give your children to make them healthy/strong?

20. Do you know children receiving this treatment?

21. Do you know children who have this problem but who are not going for this treatment? Why?

## PERCEPTIONS OF CMAM

22. What are people saying about this service?

23. What do you think of this service?

*If people say it is good ask:*

a. What is good about it?

24. How are children identified for treatment? a. Have you seen anyone doing this in your community?

*If people know the volunteer/have seen the MUAC ask:*

b. How often does the volunteer measure children?

25. Do you know of children who have been to the clinic and have not been given the treatment? a. If yes, why not?

b. What were they told?

c. How did they feel?

26. Do you know of any children who have stopped going for treatment? a. Why is this?

b. What would encourage them to return?

*If carers of beneficiaries are in the group ask separately as a case study:*

27. Tell me about your experience of the service?

28. What have you said to other people about it?

*If carers of defaulters are in the group ask separately as a case study:*

29. Why did you stop going? a. After how many weeks?

b. What have you said to other people?

c. How is your child's health now?

d. What would encourage you to take your child back to the clinic?

30. What messages do you want us to pass to the people organising the CMAM service?

## KNOWLEDGE OF CMAM

1. Are you aware of any nutrition service at your local clinic?

2. Who told you about it?

3. When did you hear about it?

4. What do you know about it? a. Target children?

b. Admission criteria?

c. Treatment given?

d. Free treatment?

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



- e. OTP day?
- f. Identification of children?

## ROLE / SENSITISATION

- 5. Have you told others about the service? How? When? a. Usual channels/message dissemination?

## BARRIERS

- 6. Are you aware of any children who need treatment but are unable to access services? a. What stops them coming? (distance/family/beliefs/other)
- b. How could we reach these children/encourage them to attend?

## KNOWLEDGE OF CASES

- 7. Do you know any children receiving treatment? a. What can you tell me about them?
- 8. Do you know any children who have defaulted/stopped coming? a. Why is that?
- b. How can we encourage them to return for treatment?
- c. What do other key community figures think of it?
- d. If I wanted to find all malnourished children with the same problem in your community i. what would be a better question to ask
  - ii. what questions should I avoid asking
  - iii. who do you think would be best to identify such children your settlement
  - iv. What do people in this area say/think of families with such children? (Probe if there is any stigma of malnutrition in the area/settlement)

## COMMUNICATIONS

- 9. Do you know who the volunteer is for this service? a. When did you last see them?
- b. What do they do? (frequency and organisation of activities)
- 10. Have you had any feedback from the volunteer/clinic staff/MoH officials about the service? a. Do you know what the results are?

## PERCEPTIONS OF CMAM

- 11. What are people saying about CMAM?
- 12. What do you think of the service?

## IMPROVEMENTS

- 13. How can we improve the service?
- 14. Do you have any messages for those running the service?



## **SEMI-STRUCTURED GUIDES USED TO INTERVIEW OTP STAFF**

### **CMAM INVOLVEMENT AND CHALLENGES**

1. How long have you been working on CMAM? a. Are all staff in the clinic involved/trained on CMAM?
2. Who trained you on CMAM? a. Have you had refresher training?  
b. Is there any additional training you feel you need?
3. What contact/support have you had with the focal people/Ministry to help you in your job?
4. What difficulties, if any, do you have on the CMAM day? a. High number of patients  
b. Time  
c. Completing paperwork accurately and keeping up to date

### **CALENDAR**

5. What are the main childhood diseases you see in the clinic? a. Which is the most common? Rank.  
b. What time of year do they occur?
6. What do you think are the causes of malnutrition here?

### **REFERRAL**

7. How do children usually come to the clinic for CMAM? a. Referred by volunteer  
b. Heard about it from other beneficiary  
c. Heard about it from other person in the village  
d. Heard about it at the clinic  
e. Heard via the radio/town crier etc.  
f. Other source  
g. Rank in order

### **REFERRAL AND FOLLOW UP**

8. Do children who are referred by the volunteer come with a referral slip/paper? a. What do you do with the referral slips?
9. Does the volunteer check that children they have referred actually present at the clinic? a. Do you report back to volunteers on the number of children you have seen that are referred by them?
10. Have you had any wrong referrals from the volunteer? a. How many?  
b. What was the problem?  
c. What did you do?  
d. Did you report back to the volunteer?  
How do you refer patients to the stabilisation centre? a. Do you give them a slip?  
b. How do you know if they have arrived at the SC?  
c. Do you know what happens to them?  
d. When patients are referred back do they come with any paperwork?

### **REJECTION**

12. How many healthy children have presented at the CMAM clinic? a. How many every week?



b. Why do you think these mothers come with healthy children?

13. What do you say to mothers of healthy children? a. What words do you use?

b. What explanation do you give?

c. How do mothers react?

## DEFAULTING

14. How many children are absent for more than 1 week during the course of treatment? a. Why do you think this is?

15. How many children default? a. Why do you think this is?

b. Is there a pattern

16. What do you do when a child has not turned up for treatment? Probe for: a. Absentees

b. Defaulters

17. Do you think husbands of mothers whose children are malnourished would stop/have stopped them from taking the child to the OTP site?

18. How could we encourage children to return for treatment?

19. What barriers prevent mothers from bringing their children to the OTP?

20. If I wanted to find children with the same problem in your community a. what would be what be a better question to ask

b. what questions should I avoid asking

c. who do you think would be best to identify such children your settlement

21. Is there any stigma associated with malnutrition in this area?

## COMMUNICATIONS

22. How often do you see the volunteers?

23. How do you communicate with the volunteers?

24. Do you ask volunteers to follow up on absentees / defaulters? a. Why/why not?

b. How do they report back?

c. Have any children returned?

## IMPROVEMENTS

25. What improvements could be made to CMAM?

More information/training

b. 2nd day for CMAM

c. Contact with Ministry staff/focal people

26. What messages do you want us to pass to the people organising CMAM?



## **SIMPLE STRUCTURED GUIDES USED TO INTERVIEW CNVS**

### **ROLE**

1. How long have you been a volunteer?
2. What are your main activities?
3. How often do you do these activities?
4. What are do you cover for case finding? a. How long does it take you?
5. How do you decide which children to measure?

### **EXPLANATION**

6. What do you tell the mother when you identify a case? a. Do any mothers refuse to go to the clinic? Why?
7. What do you say about the new treatment?
8. What name do you call the treatment? a. What do the mothers call it?
  - b. If I wanted to find children with the same problem in your community i. what would be a better question to ask?
  - ii. what questions should I avoid asking
  - iii. who do you think would be best to identify such children your settlement
9. Is there any stigma associated with malnutrition in this area/settlement?

### **REFERRAL AND FOLLOW UP**

10. Do you give the mother a referral slip/paper when you refer the child to the clinic? a. Why/why not?
  - b. How do you know if the child actually went to the clinic?
11. Are you aware of any children who have stopped coming? a. Why is that?
  - b. How can we encourage them to return?
  - c. Do you think husbands of mothers whose children are malnourished would stop them from taking the child to the OTP site?
12. Are you ever asked to follow up on cases who are absent / have defaulted? a. How does the nurse communicate with you?
  - b. How do you report back?

### **COMMUNICATIONS**

13. How often are you in contact with clinic staff?
14. Have clinic staff told you how many children are being treated/how many have been cured/how many have defaulted?
15. Have you had any further contact with children you have r
  - a. Do you know how many were cured?
  - b. Do you know if any defaulted? Why?
16. What have mothers said to you about CMAM? a. What are people saying/thinking about CMAM?
17. Have you talked with village / religious leaders or other people about CMAM since it started? a. Why/why not? How? On what occasion?

### **IMPROVEMENTS**

18. How do you think CMAM could be improved?
19. What would help you in your job as a volunteer? a. Do you enjoy being a volunteer?
  - b. What difficulties, if any, do you have doing your job as a volunteer?





## SEMI STRUCTURED GUIDES FOR BENEFICIARIES

### UNDERSTANDING OF MALNUTRITION

1. When did you first notice that your child was unwell? a. What was wrong with him?
- b. What symptoms did he have?
- c. What did you do to help the child get better?
- d. *If malnutrition is not mentioned-* What do you think causes malnutrition?

### OUTREACH

2. How did you first hear about the service? a. Who told you?
  - b. Have you heard about it from any other source since?
  - c. Who is telling people about it in your settlement?
3. What did you hear about it?
  4. What made you come?

### TIME

5. How long has your child been attending the clinic?
6. How long do you think is the treatment for?

### EXPLANATION FROM NURSE

7. What did the clinic staff tell you about your child's condition?
8. What were you told about the treatment?
9. What do the staff call the treatment? a. What do you call the treatment?
- b. What are some of the negative things being said about this treatment/programme in the community

### OTHER CASES/CASE REFERRAL

10. Do you know of other children who have the same problem but are not attending the clinic? a. If yes, why not?
11. Have you told anyone else to bring their child to the clinic? a. Why/why not?
  - b. If I wanted to find children with the same problem in your community i. what would be what be a better question to ask
  - ii. what questions should I avoid asking
  - iii. who do you think would be best to identify such children your settlement
12. Is there any stigma associated with malnutrition in your settlement?

### DISTANCE

13. How far is it from your home to the clinic? a. How do you get here? Walk/transport?
  - b. How long does it take?
  - c. Determine the farthest distance travelled
14. Do you have any other reason to come to this clinic/this place? e.g. how far is their market

### STANDARD OF SERVICE

15. What do you think of the service? a. What are the strengths/good things?
- b. What are the weaknesses?
- c. What could be improved?

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



16. How long do you usually wait before the nurse sees you?
17. How much time do you spend with the nurse? a. How does the staff treat you?  
b. Have you ever been scolded? Why?
18. How do you normally give RUTF to the children? a. Can you explain what the OTP staff tells on how you should give the RUTF to the child?  
b. How many times and sachets in a day  
c. Have there been any shortages the OTP site on any week? (Probe for the exact dates)  
d. Have you ever not received the full amount / or received something else instead?

## ABSENCE/DEFAULTING

19. How easy is it for you to come every week? a. What makes it difficult for you to come/what stops you from coming sometimes?
20. Do you think husbands of mothers whose children are malnourished would stop/have stopped them from taking the child to the OTP site?
21. Do you know of any children who have stopped coming? a. Why is that?  
b. How can we encourage these children to return and continue the treatment?

## PERCEPTION OF CMAM/FEEDBACK

22. What are people saying about the service in your settlement?
23. Have you any messages you want us to give to the people running the service?
- 24.

# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



# **COVERAGE** ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE



# COVERAGE ASSESSMENT

» SEMI-QUANTITATIVE EVALUATION OF ACCESS & COVERAGE

