

SQUEAC REPORT

DISTRICTS BADIN and MIRPURKHAS - SINDH, PAKISTAN

MARCH 2013



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ACRONYMS

CBVs	Community Based Volunteers
CMAM	Community based Management of Acute Malnutrition
EPI	Extended Program on Immunization
GAM	Global Acute Malnutrition
HEB	High Energy Biscuits
IYCF	Infant and Young Child Feeding
LHVs	Lady Health Visitors
LHWs	Lady Health Workers
MAM	Moderate Acute Malnutrition
MUAC	Mid Upper Arm Circumference
OTP	Out Patient Therapeutic Program
PLW	Pregnant and Lactating Women
PPHI	Peoples Primary Health Care Initiative
RHC	Rural Health Centre
RUSF	Ready to Use Supplementary Food
RUTF	Ready-to- use Therapeutic Food
SAM	Severe Acute Malnutrition
SFP	Supplementary Feeding Program
SQUEAC	Semi Quantitative Evaluation of Access and Coverage
UC	Union Council
WHO	World Health Organisation

EXECUTIVE SUMMARY

According to the National Nutrition Survey (NNS), malnutrition rates are very high in Sindh and were aggravated by the floods in 2010 and 2011. These rates are critically higher as compared to other parts of the country. Save the Children's work has identified that the rates of acute malnutrition since the floods are critically high and have almost doubled. Acute malnutrition in Pakistan prior to the 2010 floods was more than 13% for Global Acute Malnutrition (GAM) and 3% for Severe Acute Malnutrition (SAM).

Since 2011, Save the Children has been implementing Community-based Management of Acute Malnutrition (CMAM) programs in 25 union councils in Badin, Mirpurkhas and Sanghar in Sindh.

To assess the access and coverage, Save the Children has conducted a Semi Quantitative Evaluation of Access and Coverage (SQUEAC) in 5 Union Councils of districts Badin and Mirpurkhas. Since May 2012, a total of 1,650 new admissions have been made to the OTP whereas 1,186 children have been cured in the surveyed area. Save the Children used multi-pronged approach to gather quantitative and qualitative information. Depending upon the hypothesis and wide area survey as Save the Children is operating in this area since 2011. The estimated point coverage after the final analyses is **41.5% (35.8% - 47.4%)** that is below minimum level set in SPHERE standards for rural areas of 50%.

The investigation managed to identify some barriers and boosters, which could be addressed for better access and coverage of the CMAM program. The key barriers were the community perception of not recognizing malnutrition as a disease and its impact on the growth of a child. Secondly, the population lacks knowledge about the community based Management of Acute Malnutrition and thirdly, the shortage of supplies affects the continuity of treatment in the program.

The barriers and recommendations to overcome their impact are under as;

Barriers	Recommendations
Long distance to OTP sites	Establishing new sites
Community volunteers are not active	Working with community and religious leaders to motivate the community to be involved in the programme
Busy care givers	Reducing the distance to OTP sites through establishing new sites and reducing time commitment by working to reduce length of stay in the programme
Lack of transport to OTP sites	
Low community mobilization	Involvement of different tribes and influential leaders, government officials and religious leaders in the programme
Knowledge of the OTP programme	
Stock outs of programme supplies	Securing a buffer supply of programme supplies and improved stock management through establishing minimum stock levels and improved stock reporting
High length of stay in the OTP	Further community follow up and investigation into the long length of stay
Confusion over admission criteria of CMAM by the community	Discussion of admission criteria during community mobilization sessions

It's been learned that active case findings and referral by community volunteers and lady health workers to the therapeutic sites lead to increased knowledge of the programme and increased admissions. Moreover the efficient service available at the satellite clinics, good behaviour of the staff and sensitisation of the targeted communities about the problem and its prevention also contributed to the success of the program. These positive aspects of the programme will be continued and scaled up where possible the next phase of implementation.

1. INTRODUCTION

1.1 CONTEXT

Malnutrition among mothers and children is a major issue in Pakistan. The National Nutrition Survey¹ report reveals that the increasing rate of chronic and acute malnutrition in the country is primarily due to poverty, high illiteracy among mothers and the lack of food security. Health experts attributed it to the inherent problems in infant feeding practices and access to the “right” food. Increasing malnutrition is a big challenge in reaching the Millennium Development Goals and will constrain country’s economic growth. Pakistan, being vulnerable to disasters and climate change, a fragile security situation and economic down turn in the country has affected the purchasing power and household level food insecurity for vast numbers of people. Floods in 2010, 2011 and 2012 made the situation worse.

The economy of the country depends upon agriculture, which emphasizes the narrow range of income sources. Poor households generally own small land holdings (1-2 acres) from which the harvest is solely kept for household consumption. Rearing animals and renting the land for shared cropping are other sources of income for poor households. However, stagnant water or land erosion caused by floods had a severe impact on agricultural lands. High dependency on agriculture and the loss of livelihoods means a lack of food diversity has resulted in higher levels of malnutrition, especially among vulnerable groups.

Similarly; Sindh, being an agrarian economy, most agricultural activities and the related labour opportunities could not be resumed due to floods. With the loss of productive assets from the flooding, many families have less money to pay for food. The impact on children and women has been particularly serious. Poor conditions and food insecurity present risk of deteriorating health.

Save the Children found that children in flood-hit areas have been affected by the disaster and suffer from anxiety, depression and phobias. The research showed that 87% of children were stressed and aggressive, 75% could not express themselves properly and 70% felt insecure. Fear of people, water, open places and darkness was significant [Save the Children 2011 Psychological Assessment Report Psychosocial Problems and Needs of Children in Flood Affected Areas in Pakistan].

¹<http://pakresponse.info/LinkClick.aspx?fileticket=BY8AFPcHZQo%3D&tabid>

1.2 Save the Children Program

According to the National Nutrition Survey (NNS) 2011, the Global Acute Malnutrition (GAM) rate was higher than the WHO standard emergency threshold level; 17.6% compared to 15%. This high GAM rate is further aggravated by the rain flood 2011 in Southern Sindh. Save the Children along with the other intervention, started its nutrition interventions in District Badin and Mirpurkhas in October, 2011. Since then Save the Children nutrition program has been addressing the malnutrition in the respective districts through its Community based Management of Acute Malnutrition (CMAM) & IYCF program. Through this CMAM program Save the Children is providing the treatment of acute malnutrition to children 0 to 59 months of age and PLWs. The CMAM program has four components;

- 1- Community Outreach: children under 5 and PLWs are screened in the community as well as at the facility level by male and female community mobilizers, LHWs and Community Volunteers for active case findings. These cases are then referred to the OTP and SFP site respectively for treatment. Nutrition education to promote awareness is also provided to pregnant and lactating women (PLWs) in the community and at the facility level.
- 2- Out Patient Therapeutic Program (OTP) for the treatment of severely acute malnourished children. The admission criteria in the OTP is; a child with MUAC less than 11.5 cm or bilateral pitting oedema of grade + or ++ with no medical complications. Ready to use therapeutic food (RUTF) is provided for the treatment. After meeting the discharge criteria of 15% weight gain with MUAC greater than 11.5 cm with no oedema the child is discharged as cured and transferred to SFP program.
- 3- Targeted Supplementary Feeding Program (TSFP) for the treatment of children with moderate acute malnutrition. Children are admitted to TSTP with MUAC 11.5 – 12.4 cm and no oedema or children who have been discharged cured from the OTP. The children are discharge after 15% of weight gain with more than 12.5 cm of MUAC and at least spent 2 months in the program.
- 4- Stabilization Centre: Severely acute malnourished children with medical complication are referred to the Stabilization Centre to stabilize their medical complications. Most of the children will be referred to the OTP for follow up treatment when their medical complications have been resolved.

Most of the time these OTP/SFP sites are established at the government health facilities i.e. BHU, RHC, Tehsil or District Hospital but if these facilities were not available then these sites and specially satellite sites are established at community places. To ensure maximum coverage in the targeted areas Save the Children established 7 static OTP sites at Mirpurkhas and 34 satellite OTP sites in Badin. Save the Children adapted satellite sites to cover the gap due to non-availability of appropriate static sites for the treatment. In order to reach the vulnerable children, Save the Children identified community-based volunteers and trained them on measuring mid upper arm circumference (MUAC), making referrals and conducting awareness-raising sessions in the community. Now they are actively involved in early case finding, default tracing and follow up of both admitted cases and absent cases.

2. OBJECTIVES

The objectives for the SQUEAC survey were;

- To determine baseline coverage for OTP in district Badin and Mirpurkhas.
- To identify boosters and barriers to OTP coverage in both districts
- To measure the performance of the program in delivering CMAM services.
- To develop feasible recommendations to improve the coverage and outcome of OTP

3. METHODOLOGY

SQUEAC is an approach for evaluating Coverage of nutrition programs through the collection of qualitative and quantitative data. The qualitative data is collected through informal group discussions and interviews with program staff, Community Based Volunteers, carers of the beneficiaries, community members and influential leaders. While the quantitative data is collected from routine monitoring of program activities, case studies of the children admitted in the program are regularly monitored till their discharge and small village surveys. The information was collected simultaneously using triangulation by source, method and sampling to redundancy. There were three stages used in the SQUEAC methodology;

Stage 1: Identification of potential areas of high and low coverage using routine program data; in this stage, triangulation of data was done by various sources and methods as highlighted below

Sources of data: Quantitative routine program data and qualitative information obtained from care takers, facility in-charges, CMAM focal persons, FCHVs, key community figures, program staff and community members.

Methods: informal group discussions, in depth interviews, key informant interviews, simple structured interviews, observation and the semi-structured interviews.

Stage 2: Hypotheses generated and tested using small study and small surveys. Please note that in this survey the small scale survey was not conducted.

Stage 3: Building prior. Wide area survey conducted to estimate overall coverage. The SQUEAC investigation is described below;

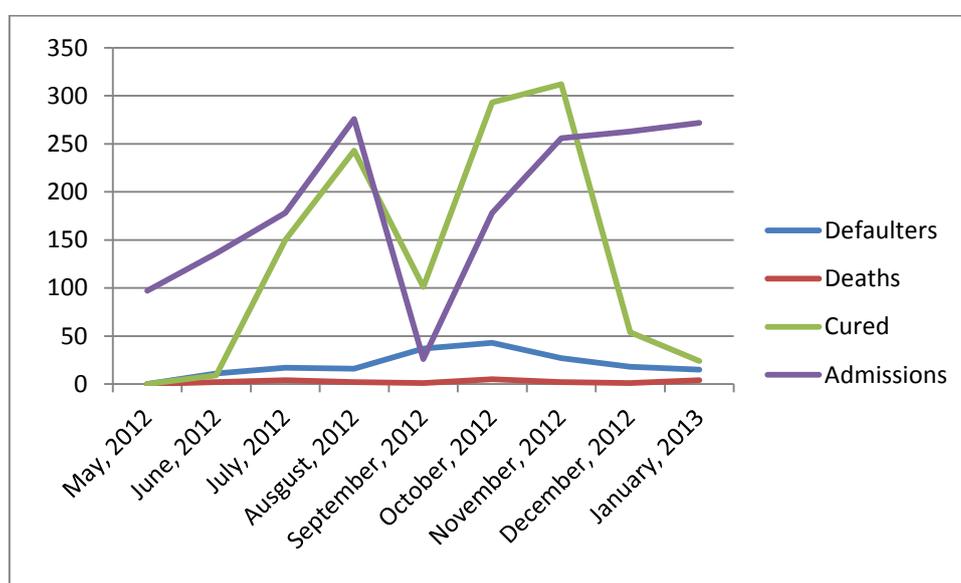
3.1 STAGE 1

The main objectives of stage one are: to identify differences in coverage within the project area and the main reasons for this, based on routine programme data and qualitative data.

3.1.1 Quantitative Data

The quantitative data was collected from 5 OTP in the program. The programme database and programme beneficiary cards and registers were used in the quantitative routine programme data for analysis for the period of 9 months.

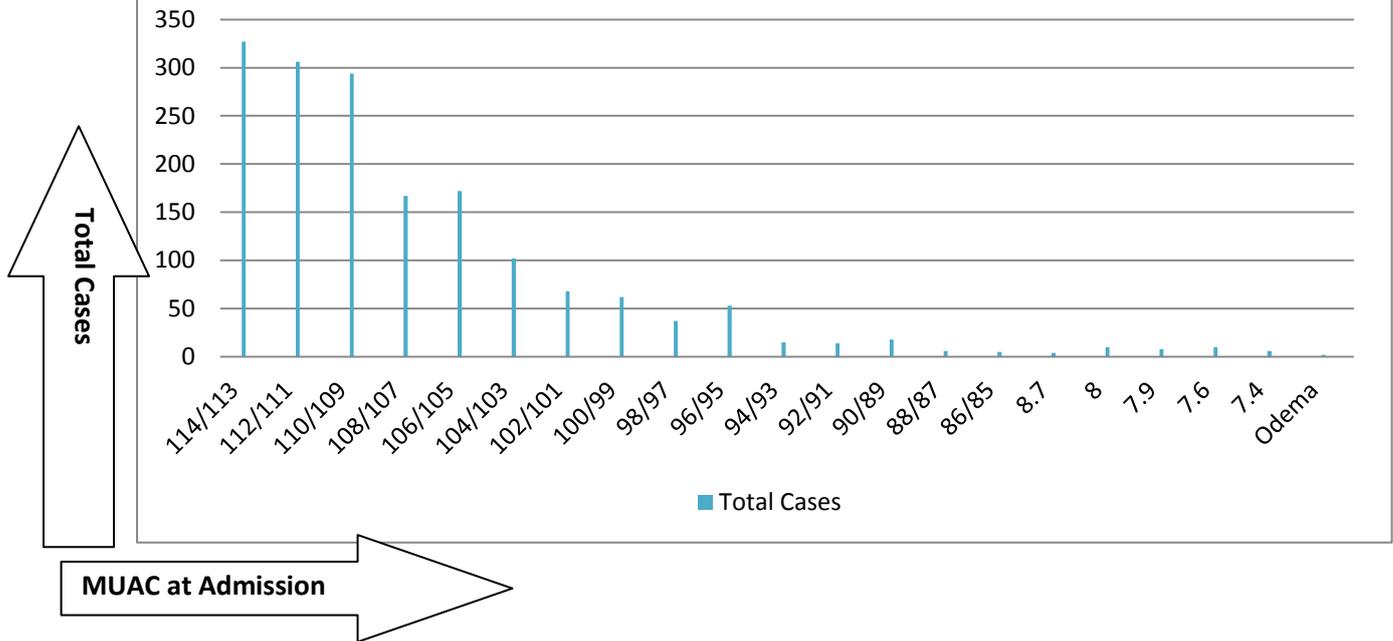
- a- Exit trends from the programme
- b- MUAC at the time of admission
- c- Length of stay in the program
- d- Visits before defaulting



i- MUAC at the time of admission

MUAC at the time of admission data was collected from the OTP cards of selected CMAM sites for survey, which shows that mostly malnourished children were admitted with a MUAC close to the admission criteria. The median MUAC at admission was 11.0 to 10.9 cm. 188 out of 1682 children were admitted with a MUAC of less than 11.0 -10.9 cm indicating that the programme is admitting children in the early stages of malnutrition.

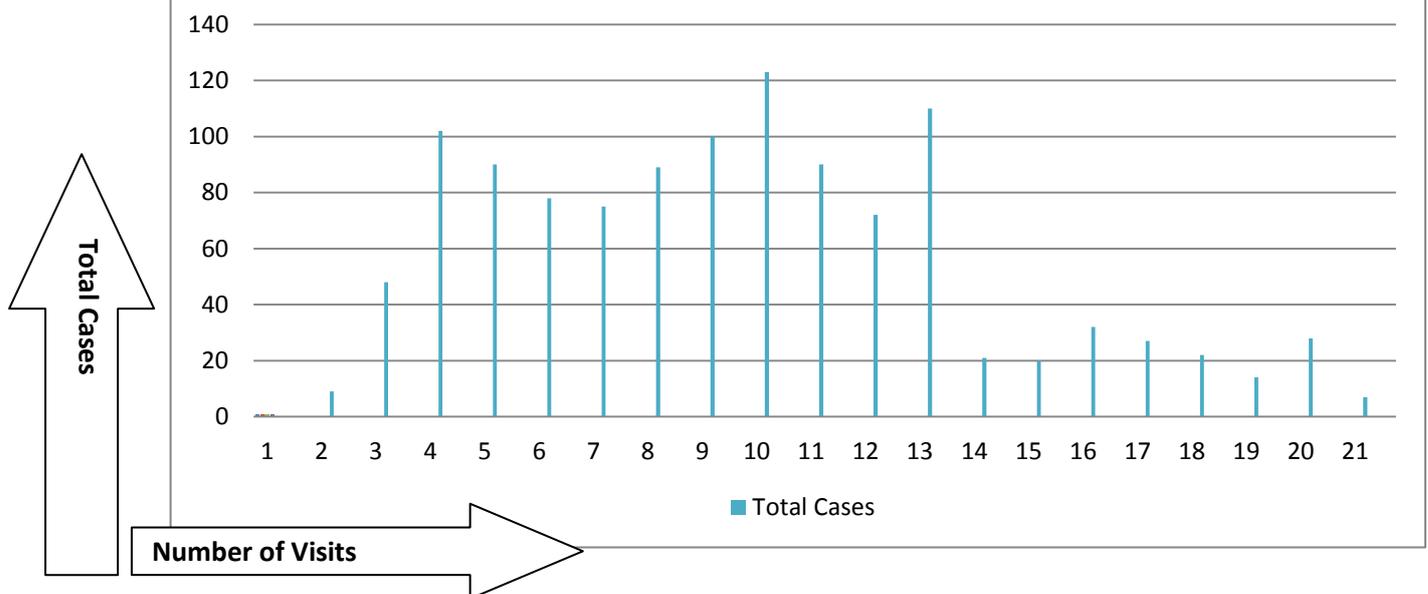
MUAC ON ADMISSION



ii- Length of stay:

Most of the SAM cases had a long length of stay in the programme. The median length of stay was 10 weeks and above the maximum length of stay (8 weeks). There were some cases that stay beyond 16 weeks, those retained in OTP due to absentees from the program. The reasons for absentees was the busy schedule of the carers as well as well as long distance from the OTP sites because of no resources of transportation.

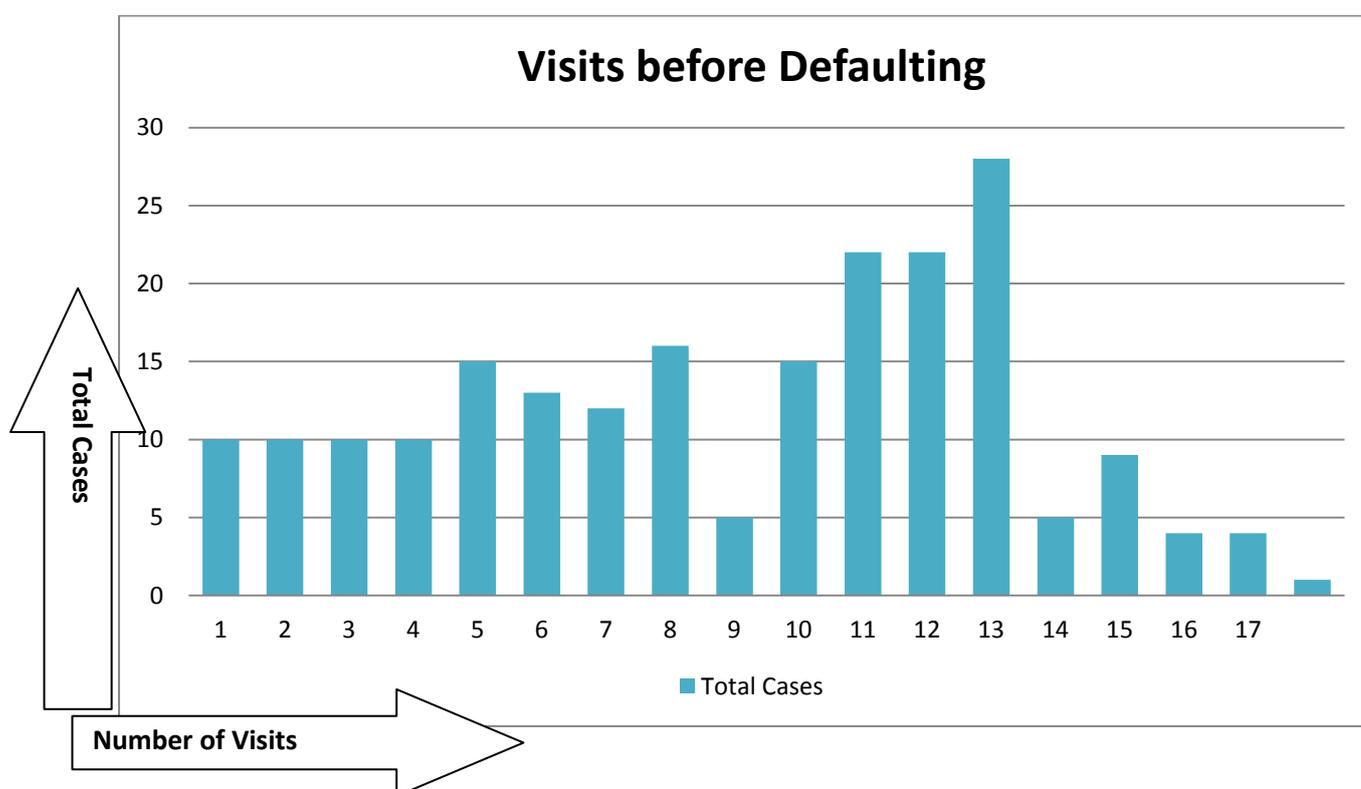
Length of Stay



Defaulters

iii- Visits before defaulting:

The visits before defaulting were counted from the OTP cards of defaulted beneficiaries of selected CMAM sites. For this purpose all the enrolment cards of the facilities included in the assessment were checked for default and the data was recorded. The median for visits before defaulting was noted as 8th visit. It is important to mention here that some of the nomadic children were admitted from the community were shifted from the area where OTP site was established, while in static site at RHC Jhudo, most of the children were coming from other adjacent union councils also connected to the Rural Health Centre. One female carer also mentioned that she had visited hospital for the treatment of her child from a medical doctor who referred him to the OTP site. The flow of beneficiaries and catchment area of this RHC is very high.



3.1.2 Qualitative Data

The in-depth interviews were also conducted at OTP sites of Muhammad Khan Burghari, Bughra Memon, Gharo, Mirwah and Jhudo. The questionnaire was prepared and used during this survey to collect the following information.

The carers were interviewed at the OTP sites. The survey team described the common names used for malnutrition in the community. These terms for malnutrition were “Kangi”, “Abro” “Kamzori” and *sokapan* depending upon the community’s perception about the malnutrition. In both districts (Badin & Mirpurkhas) non-Muslim communities were using the word “Baraan”. All these words used by different communities described the condition where the child is recently ill or malnourished.

Community members both men and women were interviewed at CMAM sites to get their perception about the nutrition program. They revealed that before program they did not have any information about malnutrition except that it is a disease. Since the execution of program and massive awareness raised upon the issue, many malnourished cases are treated and willing to continue the program.

According to the information provided by the carers that community mobilizers of Save the Children, CBVs, medical doctors in health facility, LHVs, LHWs from National Program, School Teachers and Influential leaders were helpful in identifying SAM cases from the community.

The purpose of the interview from the carers was to know about the children already admitted in the program. Most of the carers mentioned that their children were referred by CBVs and Community Mobilizers of Save the Children. Some of the carers said that they have come to know from an awareness sessions held by CBVs in the respective village. Most of the cases were also referred by the medical doctors of the health facility, EPI technician, LHVs and neighbours whose child was already admitted in the program. Moreover they said that some of the malnourished children are still in the community and we are ready to help for referring these cases to the OTP sites. In order to get the exact information of the villages, which are far away from the sites, carers were interviewed and according to them they are living near to the satellite sites but for static sites it was revealed that it took them 30 to 40 minutes to reach to these sites. The villages, away from static sites, they mostly use local transport, motorbikes, rickshaws and donkey carts to reach to the sites.

Information regarding barriers and boosters were collected from the semi structure as well as in-depth interviews while questions were developed for these barriers and boosters during discussion with survey participants.

Barrier	Description
Distance to OTP sites	The distance between the site and the household was long
No community volunteer	In some areas there were no community mobilizers
Busy routine of carers	Some of the carers were involved in farming
Lack of transport	The site were far away from the community and they have no resources for transportation
Cultural issues	Some of the community members don't allow her females to OTP site.
Low mobilizations	In some areas surveyed there were no information's about the program due to low mobilization.
No knowledge of the program to the beneficiaries	In some areas the beneficiaries were not aware about the program.
High length of stay	Most of the cases were found to be staying long in the program due to absentees.
Food sharing among the children	One of the reasons behind high length of stay was sharing of food among the siblings.
Late follow ups	Most of the children's were followed on different dates due to high distance and busy routine of the carers.

Confusion over criteria to beneficiaries	The carers have confusion over admissions criteria as they were demanding ration for normal children.
General food distribution in the community	During emergency food distribution was done in which plumpy doze was provided to children under five which also leads to misunderstanding of the targeted program among the beneficiaries.

i- Semi structured interviews with program staff at OTP Sites:

A questionnaire was developed for semi structured interviews covering the information about;

- Distance of the site
- Cost of travel to the respective site
- Definition of malnutrition
- Perception of the community about the program
- Flow of patients to OTP sites and
- Challenges faced by the program staff regarding implementation.

The record of the beneficiaries was reviewed followed by interviews with program staff.

ii- Distance/ transportation issue

The information collected during the interviews with program staff was regarding access of the beneficiaries to the OTP sites. It revealed that most of the beneficiaries are coming from different villages of the union councils, those are not that far from the OTP sites. In district Badin, satellite sites are being operated at each union council in order to provide access to beneficiaries living in very remote villages. These sites are mostly established in communal locations provided by the respective communities. In district Mirpurkhas services are being provided at health facilities where beneficiaries are coming from far flung areas around 5-8 km away. They mostly use local transport, rickshaw, motorbikes and donkey carts to reach to the health facility and it takes them on average; 30-40 minutes to reach to the health facility.

iii- Flow of Beneficiaries to OTP sites

According to the program staff, the average caseload of beneficiaries on these sites is 30 to 50 beneficiaries; including follow-up cases with average of 50 persons per site. By establishing the satellite sites, Save the Children was able to provide services to people living in remote villages of targeted UCs. In routine setup of the OTP, Supplementary Feeding Program (SFP) for (SAM U5, MAM U5 and Moderate Acute Malnutrition Pregnant & Lactating Women) and IYCF services were delivered at the same site. In the interviews responders identified a gap period due to breakup of the SFP supplies in start of the January 2013 including lack of knowledge of caregivers that decreased the flow of beneficiaries.

iv- Key definition of malnutrition and perception of the program

As per understanding of program staff; malnutrition is considered as weakness and children need to take medical treatment in case of medical complications. However community does not consider malnutrition as a problem. Save the Children took the services of community

based volunteers to raise the awareness on the types of malnutrition and their impact on the growth of the child as well as they are identifying and referring SAM cases to OTP sites. Moreover, the organisation maintains a strong coordination with Basic Health Units who refer the cases to these OTP sites.

v- Referrals and default tracing

It is reported that dedicated community mobilizers are doing door-to-door visits, identifying malnourished children and women and referring them to the facilities. Moreover, community volunteers trained on MUAC and referrals are an additional source for the program. Save the Children developed a default tracing mechanism to trace the default cases in static facility that enables community mobilizers to ensure appropriate access and re-admission of the defaulters to program. The data reveals that OTP covers a huge catchment area and distant villages therefore some patients could not continue the treatment.

vi- Management of community expectation regarding CMAM

The staff reported that in the initial days after the flood response of Save the Children in 2011, there were different food items provided by the food aid program of Save the Children and from some other organizations. The plumpy doze was also provided by the program for malnourished children and it was not targeted distribution, therefore when Save the Children launched the nutrition program in the targeted areas, they were confused and expecting the similar assistance provided. Thus, community response was very low at the initial stage of the CMAM program.

vii- Other sources of referrals

The program staff also stated that children and PLWs are referred to OTP sites by CBVs who belong to the same communities. Moreover, IYCF program led to establish other support groups. Save the Children also involved Lady Health Workers of National Program for referrals, default tracing and awareness-raising in the community regarding CMAM program. They visit every household of the respective union councils. Moreover medical doctors and LHVs at static facilities are also referring malnourished patients to CMAM program. Most significantly many children are coming to CMAM sites as “self-referrals” after seeing their neighbours and already enrolled cases. Since, vigorous efforts by the community based volunteers people are now getting familiar with the program and acquiring services.

3.1.3 Method for collection of Qualitative information

i- Visit to the community

In-depth understanding of the community:

In-depth interviews and group discussions were conducted in the communities on various days and sites as describe in below table.

Interviews were conducted in selected villages with groups of females in 4 villages of UC Muhammad Khan Burghari. One female from village *PyaroKhoso* mention that she got the

information about the program in her UC in a CMAM site established in the Autak (visiting place of guest) of her relatives. She defined malnutrition causes weakness in the children and women that could lead to death.

However, three other females from village *Bokisaid* that; they have seen RUTF, MUAC tapes and they have some knowledge about CMAM program. They also explained the causes of malnutrition (diarrhoea, breastfeeding and complementary feeding), which they have heard from community mobilizer in a nutrition awareness session in the community. She further added that the program should be run for longer period for the betterment of our children and women.

One female from village "*Noor Muhammad Khoso*" in UC Muhammad Khan Burghari said that she knows the RUTF and MUAC tapes because a volunteer from the village visited her house for screening, she added that the place where nutrition services are provided is close to us but we have a personal clash with the owner of the communal place where services are being provided. Therefore, the place of the site needs to be changed in the future.

In UC Bughra Memon 7 females, 5 males, 2 volunteers and an influential leader of the community were interviewed. The volunteer from the community mentioned that he came to know about the program when he was involved as a volunteer by Save the Children. The team provided them with basic training for measuring MUAC and knowledge about nutrition through nutrition awareness sessions in the community. He also referred malnourished cases from the community, he further added that he will refer "*kangi*" children when he identified anywhere in the village.

One female from village "*NabiBux Lund*" mention that females are not allowed to go outside from their homes, so my husband use to go to the CMAM sites for the treatment of her child. Beside this an influential leader from the community was interviewed and he said that although some of the peoples in the community knows about malnutrition but he requested that he will be very happy if Save the Children teams could build the capacity of villagers to differentiate between malnourished and well-nourished children, so they will easily identify and refer these type of cases to CMAM sites.

One of the female from village "*Janjho dal*" UC Bughra Memon refused to answer the questions, on further probing it was revealed that the reason behind her refusal was that she visited OTP site which was 2 km away from her house but when she reached there and her child was screened as MAM case but due to shortage of the supplies the team was unable to provide her RUSF.

In UC Gharo village "*Ghamu Nohani*" where 5 females 4 males and 2 LHWs were interviewed, they all recognized malnutrition as a disease. 2 females mentioned that her children were already admitted in the program. The both LHWs were working as volunteers with Save the Children. They further added that causes of malnutrition are seen as lack of sufficient food and care when the females/carers spend most of the time in the field and busy in farming, therefore could not be able to provide sufficient time to feed their children.

One of the males from village “Mango Kolhi” said that his child was admitted to the program although he has no knowledge about the program criteria. He further added that one of the CBV visited his house when he was not present in home but his wife told him about the program because she visited SC CMAM site and he came to know about the program, therefore, he brought his child into the program.

In village *Abdullah Jat* an LHW mentioned that she knew about the program and the location of nutrition site in *Fatehabad* dispensary where one of her colleague is also working as a volunteer with Save the Children. She further explained that RUTF (blue sachet) is given for SAM cases and Achamum (White sachet) for MAM cases. Moreover she said that for one month the program was stopped in this village.²

One male was interviewed from village *Wahid dino Khaskeheli* mentioned that his village is 3km away from OTP site which normally takes more than 1 hour to reach. Most of the peoples in our village are farmers and they are very busy in routine field work due to that we are not able to visit OTP frequently, it would be good if you could establish OTP site in our village because “I have seen many children like my child who are very weak.”

In UC Mirwah 5 females including 2 females who are working with Save the Children as volunteers, 2 males and a doctor were interviewed by the survey team. The doctor recognized malnutrition as a disease. CBVs mention that they are referring children to the OTP sites from coverage areas which are already assigned to them. While a doctor was also interviewed at village *Seri farm* that was practicing his private clinic, he said that RHC Mirwah is more than 4km away from this village and most of the community living here are farmers and they come to the clinic for the general treatment of common ailments. He further added that most of the community doesn’t recognize malnutrition as a disease.

3.1.4 Case Studies

i- Dealing with absent cases

Although Save the Children have static sites in district Mirpurkhas covering more than 200 villages but still the number of defaulters and absent cases was a bit high as compare to the satellite sites those are easy to access by the communities. These absent children were traced through community mobilizers and CBVs; retained in the program to ensure that they did not fall below 11.5 cm before they could be referred to SFP.

ii- Distance and time to travel to OTP sites

Malnourished cases coming from far-flung areas such as UC Ahmad Rajho were given two weeks ration to reduce the rate of absentees and defaulters. They have been encouraged as they walk for more than 2 hours to reach the facility.

As Save the Children have satellite and static OTP sites in both districts, the time was noted from the OTP cards for all the OTP children of selected CMAM sites. The limit of distance assumed in program planning was 3 km, which aims to make the program accessible to the

²One month gap was occurred due to closure of PEFSA III grant due to which

community. The distance to be covered by carers of the beneficiaries would increase as the program expands and more of the beneficiaries would be increases over time. The time to travel by the beneficiaries was assumed in walking time rather than time used in local transport. Most of the carers indicate that they are using local transport because the distance they have covered would have been more than 2 hours walk. In recent months, some of the nomadic children have been admitted were brought on donkey carts to access the OTP site, thus over the course of the program more beneficiaries came from far areas. Hence time to travel to OTP static site is consistent with program catchment area and knowledge about the program increasing over time.

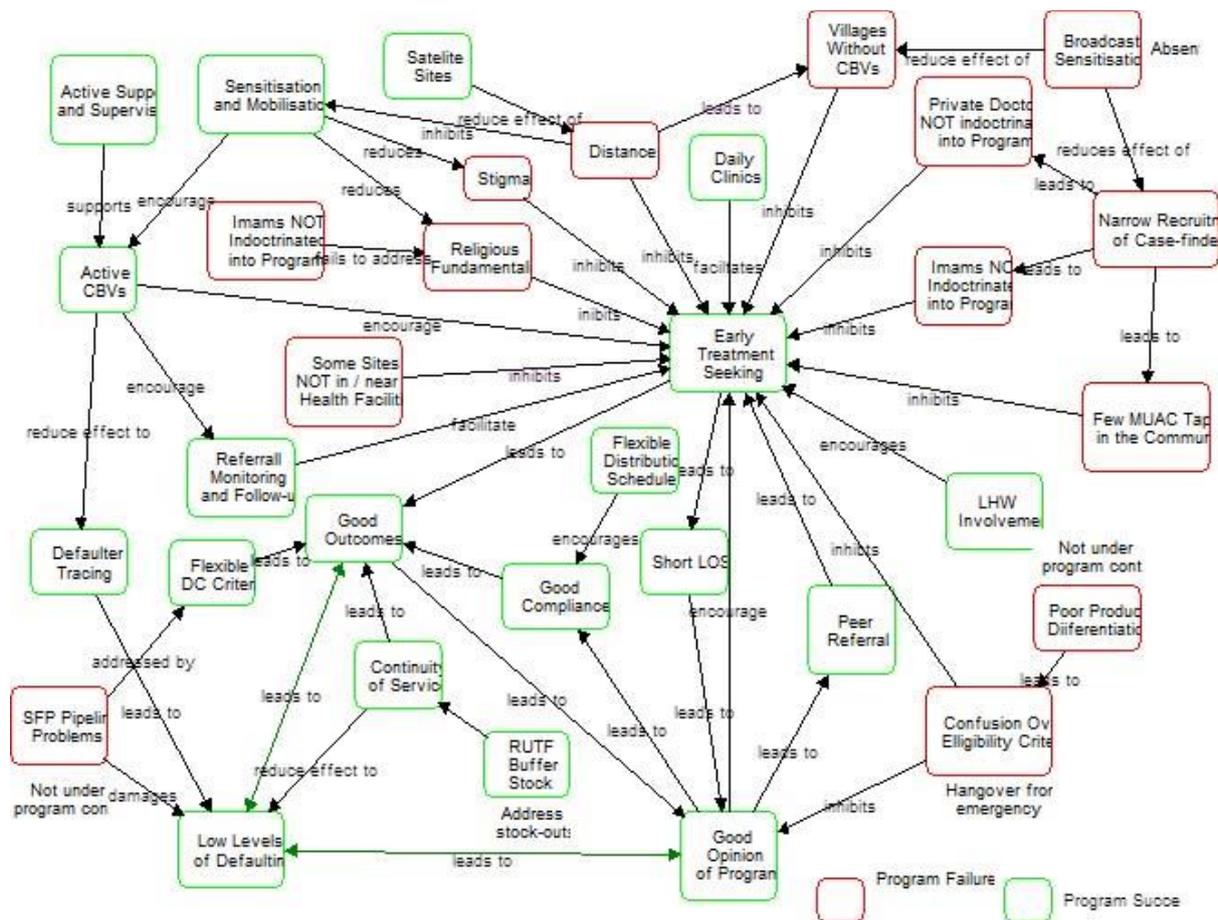
iii- Satellite sites at communal places

Since 2011, Save the Children is implementing CMAM through satellite sites in district Badin. A part from other factors; the approach of satellite centres was adapted as People Primary Health Initiatives (PPHI) mostly managing the Basic Health Units and are reluctant to provide the space for nutrition services in the BHUs. Moreover mobilization activities were evident in these satellite sites where communities were participating as volunteers and provided places to start the activities immediately in their area. In village PyaroKhoso, the OTP site was very close to the mosque and they were mostly visiting this place on Friday. The Imam of the mosque suggested to change the day for this site as mostly the carers are females and it is not good to stay for long time in front of mosque, afterward the schedule of the OTP was change to Tuesday. Moreover an influential leader from the Khoso community who donated a site for nutrition activities mentioned that before this site, most of the people used to go to another village which was 4 km away. This satellite site brings the services close to their community consequently many malnourished children are admitted to the program.

iv- Concept Map of Badin and Mirpurkhas nutrition program

All the information collected from the qualitative and quantitative information was summarized in the concept map. The purpose of the concept map is to interlink the barriers and boosters of the program to know about the positive and negative outcomes of the program which affecting early treatment seeking behavior. The survey team believes that they had exhausted collecting all the necessary information through semi structure interviews, in-depth interviews and case studies which are used to develop this concept map.

Concept map summarizing boosters and barriers to program access and coverage



3.2 Stage 3

i- Developing likelihood and posterior:

To confirm the prior information active and adaptive case finding was done in the communities using the following steps for sampling methods.

Step-1 list of villages were collected with estimated population for all the areas where OTP sites were established in May, 2012. From that population 14% of children under five were calculated with prevalence for SAM (6.6%) which gives us the number of SAM children that could be obtained from each village. 3 SAM cases were expected to be found in each village.

Step-2 systematic sampling at every 6th village was used to select from the existing list of villages for wider surveys of selected UCs where CMAM program operated. A total of 119 villages were selected for visits.

In this stage, qualitative data gathered above was analyzed, validated and then used to develop formal hypothesis. This was tested using quantitative techniques. Additionally, one in-depth question was developed to understand better potential factors affecting the coverage.

ii- Wider area survey

a- :Developing Prior

Weighted Boosters and Barriers

Boosters and Barriers were valued according to the weight they contribute to coverage. Each group provided weight with score ranging between 0 and 4; to each barriers and boosters on the basis of their importance for coverage. Average of those weights was calculated which are shown in the table below. Thereafter, the boosters were added to the minimum coverage (0%) while the barriers were deducted from the maximum coverage (100%), and then the mean value of the two calculated.

Booster	Value		Barriers
Uninterrupted / regular supplies	4	4	Long distance to OTP sites
Referrals from the community (Caregivers of patients in neighborhood, Village leaders, Teachers, LHWs	4	4	Community volunteers are not active
Timely treatment seeking Mobilization activities Referrals by mobilizers	3	4	Busy care givers
Knowledge and acceptance of the programme Involvement of community member Communal places for CMAM	3	4	Lack of transport to OTP sites
Mobile site	3	4	Low community mobilization
Behaviour of program staff	4	2	Knowledge of the OTP programme
Good quality of CMAM services	4	3	Stock outs of programme supplies
Visibility of the program Banners & brochures IEC materials	1	3	High length of stay in the OTP
Sensitization session Awareness raising sessions	1	2	Confusion over admission criteria of CMAM by the community
Effective referrals from other nutrition services (SFP and IYCF)	1		
Total	28	30	
Booster values ADDED to minimum coverage (0%)	28	70	Barrier value SUBTRACTED from maximum coverage (100%)
MEAN	49		

2. Un-weighted Boosters and Barriers- Mere counting of the boosters and barriers then getting the mean of booster values added to minimum coverage and barrier values subtracted from the maximum coverage.

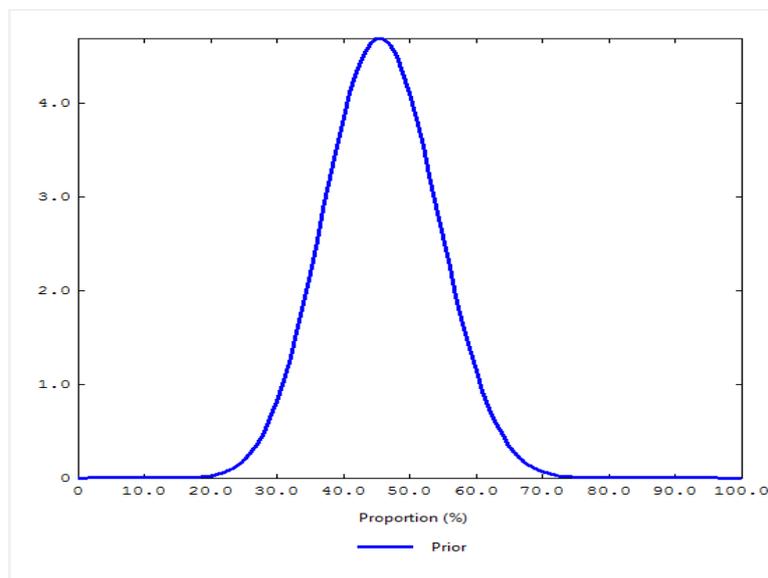
$$\frac{(11+0.0\%) + (100\%-9)}{2} = 51.0\%$$

The above two prior modes found by two different methods (weighted and un-weighted boosters and barriers) were not very different from each other, thus the mean of the two was obtained and used as the final prior mode.

$$\frac{49.0 + 51.0}{2} = 50.0\%$$

Before using a Bayesian Coverage Estimate Calculator to represent our prior a **histogram prior** was developed (by hand) and the team believed that the coverage could not be below <20% as depicted by findings or higher than 70% since there were substantial barriers to coverage. Using Bayesian Coverage Calculator, the prior was set at 50.0%% with alpha- 17.5 and beta- 17.5 corresponding to our histogram prior with uncertainty of ± about 25% as shown below.

Figure 1: Prior Distribution



3.3 Stage 3

Sampling

The survey team used active as well as adaptive case finding technique to find out all children in the village who are SAM to estimate coverage and confirm the value of prior, for this purpose all the selected 119 villages were screened and MUAC was taken for all SAM cases followed by a semi structure interview for those SAM children who were not in the

program. The adaptive case finding technique was used to find SAM cases from the community. Local terms for malnutrition in the community were used to bring the survey team to children of SAM. The identified cases were categorized as;

- i) SAM cases who are currently enrolled in the program
- ii) SAM cases who are not in the program
- iii) Recovering cases with MUAC above 11.5cm (MAM cases).

The maps were available but the villages were missing with incomplete information regarding all villages for both districts Badin and Mirpurkhas. The information was collected from village list and systematic stratified spatial sampling of villages was done. Every 6th village was selected for screening. A total of 119 villages were screened for active case finding. The sample calculated for each village was 2. To match the strength of the prior the teams were supposed to find approximately 238 children.

Active case finding

Table 1: Active Case Finding Results

Date	SAM cases		Recovering SAM cases in program
	In program	Out program	
12.03	21	32	81
13.03	30	51	149
14.03	26	37	93
15.03	19	22	77
Total	96	142	400

The data was compiled for all 5 UCs. During wide area surveys 238 cases of SAM as well as 400 recovering cases were identified. Out of these 238 SAM cases 96 SAM cases were attending the program and 142 were not in the program. The survey likelihood data was summarized in SQUEAC calculator using numerator and denominator for estimating point coverage. The point coverage estimator was used because of reasonably effective case finding resulting in early case finding and referrals with long length of stay due to absentees and supply shortage. The coverage was calculated as;

The numerator and denominator were obtained from the results of the wide area survey using the above formulae.

The calculation of Point Coverage

Numerator = SAM Cases in the program
= 96

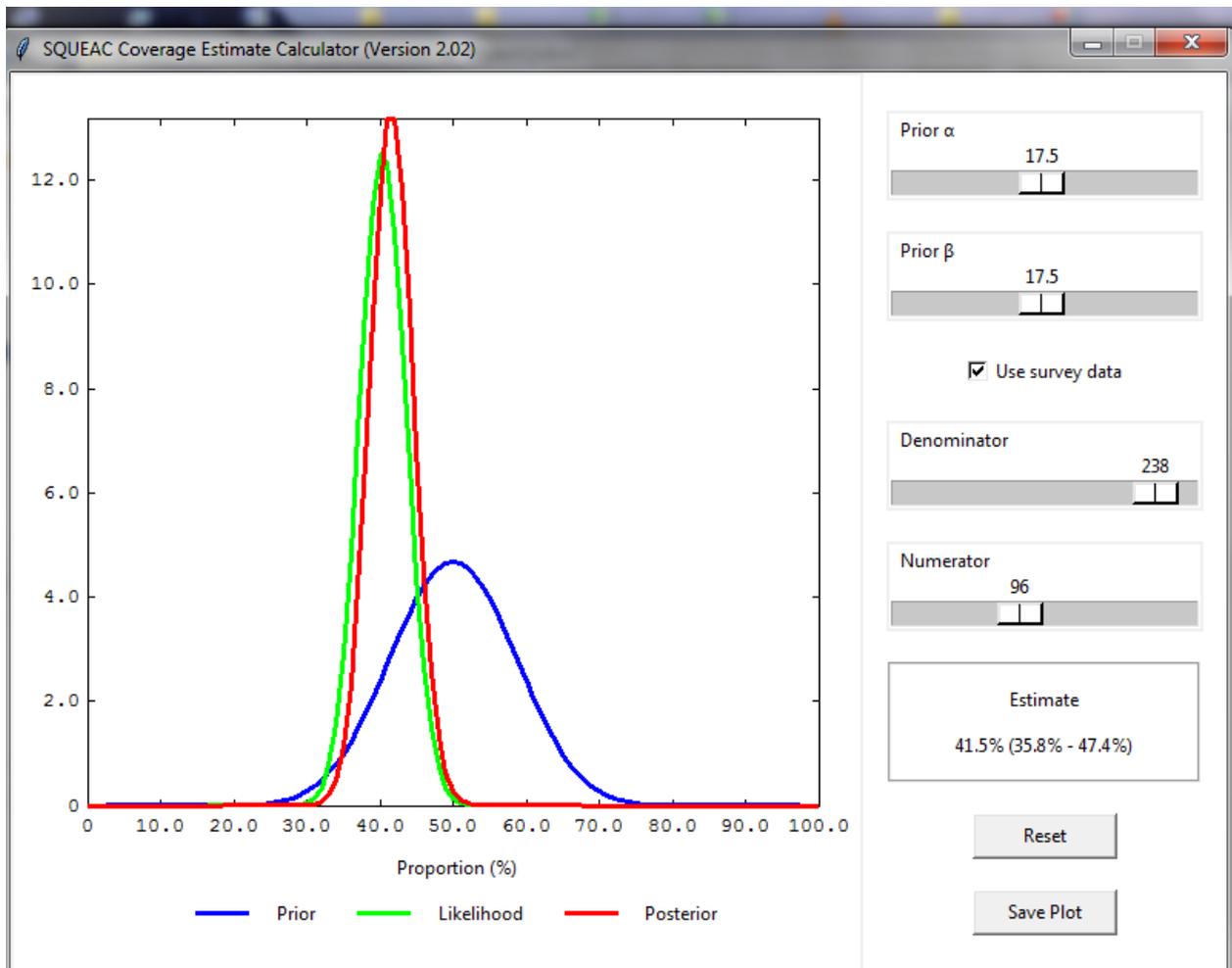
Denominator = SAM Cases
= 238

Checking this against the 50% Sphere standard using simplified LQAS

$$d = \frac{\text{Denominator}}{2} = \frac{12}{2} = 119$$

Point coverage was estimated to be **41.5% (35.8% - 47.4%)**

The data is shown in the BAYES squeac graph in below figure.



In these wide areas surveys children were identified as attending the program and not attending the program. A semi-structured questionnaire was developed for not in program cases to check additional barriers about program beside qualitative and routine program data. The major barriers regarding access and coverage of the program were identified as

- 1- Malnutrition not recognize as disease
- 2- Lack of knowledge about CMAM program
- 3- Rejection from the program due to lack of supplies
- 4- Village not screened.
- 5- Far away from the static sites

From the Bayesian Coverage Estimate Calculator, posterior coverage was established to be **41.5% (35.8% - 47.4%)** as shown below; this estimate is below the SPHERE standard of 50% in rural program areas.

This result should be taken with caution as even though there is an overlap between prior and likelihood, the prior belief was much stronger than the likelihood and therefore the prior has shifted the posterior more strongly towards a higher value of 41.9%.

Further investigation on the reasons why the malnourished children were not enrolled in the program was done during active case finding and the results are as follows;

Table 2: Reasons for SAM cases NOT in the program-

REASONS SAM cases NOT in the program	
Far away from static sites	11
Village not screened	15
Rejection from program due to shortage of supplies	20
Lack of knowledge about CMAM	66
Malnutrition does not recognize as disease	30
Total	142

We can clearly see from the results of the questionnaires that lack of awareness about the program was the main cause for the caretakers not to take their children to the program.

4 RECOMMENDATIONS

Although the coverage of the program is above the SPHERE standards 50% for the rural areas but for more coverage of the area and where some culture and religious factors are affecting the program following are some recommendations for Save the Children CMAM program to improve the coverage in its area of intervention.

Recommendations	Rationale	Evidence	Process	Outcomes
Involvement of the religious leaders in the program	Religious stigma for the Caregivers who had malnourished children.	Caregivers and community interviews	Identification and enlisting of the religious leaders and Informal meetings with them.	Improved acceptability of the program by religious leaders as they referred high number of children.
Involvement of different tribes and influential leaders	Conflict between local tribes and limited access to the children and women.	Influential and community leaders interviews	Meetings with tribal leaders along with the influential of the area	Women and children have better access to program because of improved understanding regarding CMAM program and to

				allow them to come for treatment.
Improve Community Mobilization	Low coverage area	Less community mobilization in remote areas.	Identification of these areas, listing, involvement of community leaders, LHWs, Volunteers.	Better awareness of the community and early case finding.
Enhance involvement of government officials	Lack of interest of government officials, most of the sites are established in community places.	Lack of awareness of the Govt staff on CMAM	Awareness raising workshops and informal meetings with health facilities staff.	Increased awareness of the government staff and officials on CMAM.
Screening of the children in BHUs	Most of the children and women seeks treatment for general ailment	PPHI resistance to provide spaces for CMAM program in BHUs	Advocacy of the PPHI provincial heads to realize the importance of the CMAM program	increased referrals and admission to OTP from BHU
Provision of Ambulatory Services	Poor economic status of the community to carry their children with medical complication to Stabilization Centres.	Poor economic status of the community in the children and low registration rate in Stabilization Centres	Deployment of the ambulatory services at Rural Health Centres, Taluka or District Hospitals for timely transfer of the children to Stabilization Centres.	Cured and discharged rates improved and saved life of the children with medical complications.
Establishing new sites	Long distance from OTP site and lack of transportation	In depth interviews, OTP records and default	Establishing the new sites in uncovered villages	Better access to CMAM services and early case findings in

	services.	tracing mechanism.	situated far away from basic health facilities in community places.	uncovered areas.
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Annexes

Annex-I

Program Staff Questionnaire

CMAM Site: _____

Union Council: _____

Interviewer Name/ Team#: _____

Taluka: _____

Date: ____/____/ 2013

District: _____

Question# 1 How many beneficiaries do you see on daily basis (average flow of admission)?

Question#2 How do beneficiaries reach here?

Question# 3 what is community impression about CMAM program and Malnutrition?

Question# 4 What are the main challenges do you think related to CMAM program?

Question# 5 How do you deal with defaulters?

Question# 6 What are major diseases children suffer from?

Question# 7 Do you get malnourished children referred from other sources?

Question#8 Do you routinely assess malnutrition?

Question#9 Is stock out of SFP and OTP supplies a problem at Health Facility? If yes then how does this affects program services?

Question#10 Do the people from all over community avails CMAM services are there specific member's of the community who don't access CMAM service in this Clinic ?

Guidance Notes: Specifically ask about high class/Sayyed family/nomads/minority ethnic group or any other specific population group if not coming to CMAM site due to stigma or any other reason please explain?

Guidance Notes: Is CMAM sites nearby/ Far/or very far from your home, walk by feet, time to travel to site, if there is an need for transport how much does it cost?

Annex-III

Community Questionnaire

UC: _____ date _____ Team Members _____

Village: _____ Distance from the CMAM Site: _____

Q:1 Have you heard about the CMAM program?

Q;2 Has anyone come to talk to you about the programme?

Q:3 Have you seen Muac tape

Q: 4 Have you seen Plumpy nut

Q:5 Do people go to the programme for seeking treatment

Q:6 What do you think about the program

Annex-IV

SQUEAC Schedule

Save the Children supported SQUEAC survey Feb/March, 2013

	February		March			
ACTIVITY	W3	W4	W1	W2	W3	W4
Preparation for the survey (dealing with DoH-Districts)	XXXXX					
Hiring of Enumerators and logistic Arrangements		X				
Training for SQUEAC survey		X	XX			
Planning for the Fieldwork			X			
Implementation of SQUEAC survey				XXXXXX	XXXXXX	
SQUEAC Report Writing						XXXXX

Sequence of Activities

- 2 days training
- 1 day testing
- 1 day traveling planning
- 5 days qualitative information
- 1 day brain storming
- 1 day planning of quantitative
- 5 days quantitative (1 day brain storming + 4 days fieldwork)
- SQUEAC survey reporting

Annex V

Detail of Data Collection:

Village visited	Dates of visits	Method of data collection
UC M.KhanBurghari: Wali Muhammad Jamali, BachalPathan, Noor Muhammad Khoso, PyaroKhoso, Boki. UC Gharo: SajanLashari, GhulamNabiSamejo, Mango Kolhi,RamzanAbro, Arab Nohani, Abdullah Jat, Wahid dinoKhaskeheli. UC BughraMemon: Haji HajamMallah, Jan Jhodal, Baidmi, NabiBux Lund, JummoMallah.	9 th & 10 th March, 2013	In-depth interviews about program.
UC Mirwah: Hari Ram, Youssef Shah, char Pani, Baghat Goth, UC Jhudo: MunirAbad, Power house, station oil mill, Jalal kaloi, Punhoolabari.	10 th & 11 th March, 2013.	In-depth interviews about program.

Annex-VI

List of participants for SQUEAC assessment

Badin	Mirpurkhas
Asfandiyar (Team Leader)	Rashid Ali
Siddique	Faisal Aziz Khaskheli
Abid Ayub	Naro Mal
Ziaul Qadeer	Choni Lal
Zafrullah Gheranoo	Dileep Wing Sarkar
Dileep Kumar	Sher
Fouzia	Shahid Inam
Nazeera	Ghulam Sughra
Shabana	Samreen Aziz
Madhia	Naheed
Shumaila Anjum	Fozia
Zikrullah	Faiza Aslam
Saira Bano	Razia
Shahnaz Posio	Fasih –un- Nisa Khanam