

Carolyn A Miller Elementary School

***Feeding Program
Report***

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***Buduburam Refugee Settlement,
Ghana***

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1. Introduction

1.1 Introduction

Buduburam Refugee Settlement, located near Accra, hosts about 25,000 registered refugees (UNHCR 2007) and an additional un-registered population estimated to be between 10,000 to 13,000 persons of mainly Liberian origin, many of whom are known to be highly transient. The settlement was established in 1990 to host Liberian Refugee who fled from the civil that erupted in the country in 1990.

Carolyn A Miller Elementary School, located on the Refugee settlement was established in January 2003 to provide educational support to the social vulnerable Refugee children on the settlement to build the human resource capacity of the Refugee community to enhance development in the individuals and the country at large. The School began with a total student's population of 245 children in Nursery and Primary school. The age range of children as at the beginning of the school was 2 to 16 years, the current student's population stands at about **628** with about 25 teachers. The number of students enrolled fluctuates, as students are admitted every day while some quit schooling.

A feeding program commenced in September 2007 for students of the school with the objective of providing one nutritious meal for children in the nursery and primary levels of the school. The feeding program was inspired by the inability of children in the school to do academic work on empty stomachs. A reflection of the statistics recorded by the UNHCR/WFP Self-Reliance and Food Security Assessment of January 2007, which determined that 6% of the population in Buduburam is food insecure and 15% at risk of food insecurity.

The report revealed that food insecurity results from a combination of factors; that a substantial part of refugees have developed income generating activities which do not guarantee adequate food consumption; food assistance is shared with others; 40% of food aid receivers sell food aid to pay for other food items such as rice, vegetables, sugar, etc. and also to pay for water, energy, education and health care; and that food insecure households spend more on water, energy and health care than on food.

To help in this direction The Niapele Project partnered with Vision Awake: Africa For Development to set up the school feeding program.

Staffing/Training

The staff of the Program includes one male administrator, three female cooks and one cook assistant. Before the start of the Program, the recruited personnel underwent medical screening and checkups as mandated by the Ghana Government. This was to ensure that the selected staff was free from contagious and other fatal disease. After all these processes, the staff was taken through one day training on the importance of good nutrition and management of school feeding program.

Some of the topic treated included food safety in the kitchen, hygiene, among other relevant topics, that will aid them provide quality services to the children.

A monitoring and evaluation system was put in place to assess the impact of the feeding program on both the health and academic concerns of the children in Carolyn A Miller School, and to ensure that the purposes of the program on the long and short terms are achieved.

1.3 Objectives of the feeding program

1. Contribute towards the health and academic needs of the children through the provision of nutritious meals.
2. To provide one nutritious meal for all children in the nursery and primary levels of Carolyn A Miller Elementary School
3. To Assess the growth of the children periodically (three months interval)

2. Methodology

Two Nutrition field workers who have participated in three Nutrition Surveys conducted by UNHCR/NCS Nutrition Program were recruited for the periodic anthropometric screening exercises of children in Carolyn A Miller Elementary School.

The first screening exercise was done during the commencement of the School Feeding Program in September 2007. After the establishment of the feeding program there have been two other screening exercises, in November and February, and a last one was conducted in May 2008.

Data collected usually includes the date of birth, Mid Upper Arm Circumference, Height Weight.

2.1 Tools

Anthropometric Data Parameters

The identified specific data parameters collected for the assessment were:

- Age
- Gender
- Weight
- Height

The nutritional indices used are universally recognized standards of measure¹ that define the categories of malnutrition. They include:

- Weight for height to detect acute malnutrition (wasting);
- Body Mass Index for age to detect malnutrition in children 2 to 19 years of age.

Questionnaire

A questionnaire was designed to collect other relevant information on the children in the school. This was aimed at providing in-depth information on the children in the school, specifically on the social aspects.

2.2 Data Analysis

The anthropometric data was analyzed using WHO 2005 anthropometric Calculator. Data base for the children was prepared using Microsoft excel.

2.3 Sampling selection

There was no sampling selection in all three screening exercises. Every child admitted in the school who was present during exercise was screened.

2.4 Indicators and cut off points.

Acute malnutrition rates were calculated using weight for height index values that tell us whether malnutrition is present at the time of investigation. These compared to the WHO reference values using the z-scores as standard deviations from the median of a normal distribution. The internationally accepted standardization of results in z-scores allows an accurate comparison of separate populations and also age groups within the populations.

Body mass index for age which is internationally recognized and recommended by WHO to assess malnutrition in children 2 to 19 years was adopted for the exercise, as well as the use of Mid Upper Arm Circumference for the assessment of nutritional growth.

Acute Malnutrition (Wasting)

Quantified using Weight for Height (W/H).

Global Acute Malnutrition:

- W/H z-score < -2 SD \pm oedema.

Severe Acute Malnutrition:

- W/H z-score < -3 SD \pm oedema.
- Any reported case of oedema.

BMI-for-age weight status categories and the corresponding percentiles are shown in the following table.

Weight Status Category	Percentile Range
Underweight	Less than the 5 th percentile
Healthy weight	5 th percentile to less than the 85 th percentile
At risk of overweight	85 th to less than the 95 th percentile
Overweight	Equal to or greater than the 95 th percentile

5. Findings

Three nutritional screening exercises have been conducted after establishment of the school feeding program. Below are the findings of the exercises.

Number of students covered per screening exercise.

Screening Exercise	Date	No. Students covered
1 st	September 07	381
2 nd	November 07	435
3 rd	February 08	447
4 th	May 08	259

Below is the present number of children registered in the school by grade. The school has no reliable information on the population of student. The population of students in the School was deduced from the three nutritional screening exercises. This statistics is not the exact but a reflection of the number of students enrolled.

CLASSES	No. Students
NURSERY/ABC	60
KINDERGARTEN ONE(1)	50
KINDERGARTEN TWO(2)	67
PRIMARY ONE(1)	63
PRIMARY TWO(2)	70
PRIMARY THREE(3)	89
PRIMARY FOUR(4)	80
PRIMARY FIVE(5)	93
PRIMARY SIX(6)	56
TOTAL	628

Anthropometric Results

Results of first assessment

Normal	Mild Malnutrition	Moderate Malnutrition	Total
272	98	11	381
71.4%	25.7%	2.9%	100%

Results of second assessment

Normal	Mild Malnutrition	Moderate Malnutrition	Total
325	95	15	435
74.7%	21.8%	3.4%	100%

Results of third assessment

Normal	Mild Malnutrition	Moderate Malnutrition	Total
301	127	19	447
67.3%	28.4%	4.2%	100%

Results of fourth assessment

Normal	Mild Malnutrition	Moderate Malnutrition	Total
244	6	9	259
94.2%	2.3%	3.5%	100%

6. Discussion and Conclusions

Anthropometrics and children at risk

The rate of underweight among the children increased gradually with a corresponding increasing number of children enrolled in the school, when comparing the current rate of underweight to that at the beginning of the feeding program with reference to the population of students at each period. Nonetheless, there has been a significant improvement in the nutritional status of the children.

Much is required though help the few children who are still underweight to catch up in growth. It should be emphasized that malnutrition has a long negative effect on the academic and health status of children. Especially at this stage when its prolonged effects are not reversible, as such a lot is needed to help this category of children.

Meals

Current meal plan

Day	Meal
Monday	Corn Meal
Tuesday	Gari beans
Wednesday	Corn meal
Thursday	Gari and Beans
Friday	Rice and Beans

Recommendation to improve upon the meal served

Day	Meal	Action
Monday	Corn Meal	Blend with soya flour (1: 4) corn meal or replace with weanimix
Tuesday	Gari beans	Accepted
Wednesday	Corn meal fruits	Blend with soya flour (1: 4) corn meal or replace with weanimix
Thursday	Gari and Beans	Accepted
Friday	Rice and Beans	Rice and greens with half orange

In order to keep costs low while providing nutritious meals, it is important that seasonal fruits should be served. Hence, oranges will be served on days that the greens (green leafy vegetable) will be served to aid in the absorption of iron.

Hygiene in the kitchen

Considering the conditions on a refugee camp, I commend the staff of the program for keeping the kitchen safe and clean. Since the start of the feeding program, there has not been incidence of diarrhea or cholera among the students. This is a probable confirmation that healthy meal in clean and hygienic environments are prepared for the children.

Overall Conclusion

The introduction of the school feeding program has led to the increase in student population. The three assessments have all recorded increase in the students' population as well an improvement in the nutritional status of the children. More can be done in the direction of providing medical and food assistance to the children who could be chronically ill or vulnerable to food insecurity. An investigation system should be put in place identify the very vulnerable persons for assistance if such phenomenon will be promoted.

7. Recommendations

The staff of the kitchen will require further training on food calculations; among other relevant topics to aid them render quality service to the program.

The meal Plan will require a slight adjustment to meet certain nutritional needs of the children. Green leafy vegetables and fruits should be incorporated into the meal plan to accomplish the micronutrients requirements. In this regards also the Corm meal provided should be blended with Soya beans flour or substituted it with weanimix which is relatively richer in micronutrients and is less expensive.

The kitchen will require scale to help in measuring of the food items