

Factors affecting detection and referral of malnourished
children to Primary Health Care (PHC) level in
Kanchele community of Kalomo District, Zambia.

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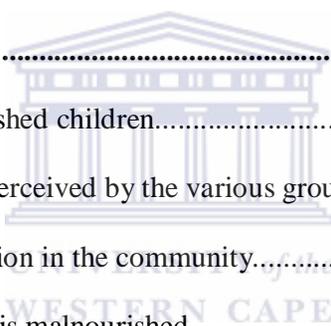


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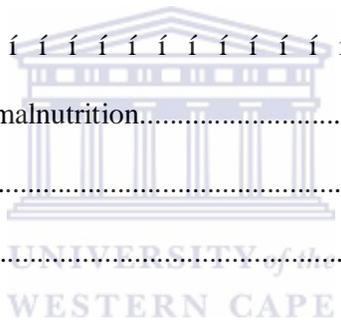
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ACRONYMS

PHC	Primary Health Care
UNICEF	United Nations Children's Fund
CHW	Community Health Workers
RHC	Rural Health Centre
ZDHS	Zambia Demographic and Health Survey
WHO	World Health Organization
MUAC	Mid Upper Arm Circumference
CFAARM	Consortium of Food Agriculture Aids Resiliency and Markets
UTH	University Teaching Hospital
SAM	Severe Acute Malnutrition
RUTF	Ready to Use Therapeutic Food
NFNC	National Food and Nutrition Commission
CSO	Central Statistics Office
FGD	Focus Group Discussion

Keywords:

1. Malnutrition
2. Under five Children
3. Referral System
4. Detection
5. Rural Health Centre
6. Community Health Workers
7. Primary Health Care
8. Mothers
9. Community members
10. Referral



Abstract

Background:

Malnutrition in children under the age of 5 years is a global public Health problem. The UNICEF report states that 10.9 million children under five die in developing countries each year due to malnutrition. According to the Zambia Demographic and Health Survey of 2008 malnutrition is one of the main childhood illnesses in Zambia with almost 50% of the under five children being stunted. The referral system in Zambia is organized in a way that starts at the Primary Health Care (PHC) level within the community and managed by the Community Health Workers (CHW). At this level, Community Health Workers screen and identify children that have childhood illnesses which require treatment and they refer them to the Rural Health Centre (RHC). When the problem cannot be handled at the RHC level the child is referred to the district hospital or provincial hospital level within a particular province. However, most children with malnutrition arrive late at the hospital for treatment. Some of them die soon after admission. It was not clear what prevent the mothers from bringing these children early to the hospital for treatment.

Methods: The main aim of the study was to explore factors that are associated with detection and referral of malnourished children from Primary Health Care (PHC) at community level to the Health centres in Kalomo district.

The study was conducted in Kanchele community of Kalomo in Southern Province of Zambia. Kanchele is a rural community with most basic services such as health facilities not being easily accessed. The study focused on two PHCs which had the highest prevalence of malnutrition.

All participants were asked to sign a consent form after the purpose of study had been explained to them. They were informed that all information would be treated with confidentiality and that participation was voluntary and that they had the right to chose not to

participate in the study. Furthermore each participant was asked if they agreed to maintain the confidentiality of the information discussed by participants and researchers during the focus group session.

The study was qualitative in nature and focus group discussions were conducted with mothers or caregivers of children under five years, community members who have lived in the community for more than one year and community health workers who have also worked in the community for more than one year.

Focus group discussions were used to collect data from mothers and community members. While in-depth interviews were used to collect data from CHWs and nutrition group leaders working at the PHC and community leaders. The data collected from the focus group discussions was analysed using thematic approach.

Barriers or hindrances to rehabilitating a malnourished child mentioned by the respondents included lack of knowledge on malnutrition, failure to link malnutrition to poor feeding and bad health seeking habits, poor response to referral as a result of a system which is not supported with adequate resource such as transport, a system that does not support parents with food in-case of the child being hospitalised, the current hospital system only provides food to the patient. The failure by health staff to see that malnutrition is a key childhood disease. Data from this study will be used to develop interventions to improve the management of malnourished children

Conclusion: The study shows that mothers and community members are misinformed about the causes and treatment of malnutrition. It also clearly showed that traditional healers and grandparents played an important role in the diagnosis and treatment of malnourished children in this community. Interventions to improve identification and referral of these malnourished children needs to taken into consideration.

DECLARATION

I declare that the work done in this research is my own work. This has not been submitted before for any degree or examination to any University and all the sources I have used or quoted have been indicated and acknowledged as complete reference.

Helen Khunga

2012

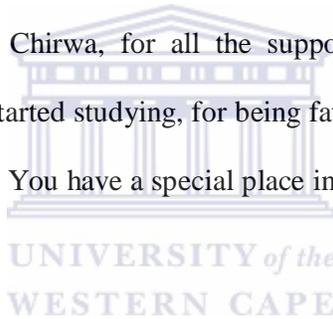
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DEDICATION

To my children, Chigomezyo, Mbawemi and Chizya Chirwa. For all the time that I had been busy with my school and my office work, this meant my time being with you all was so limited and at times I forgot to sign your home work or to have time out with you. To Chigomezyo thank you for all the encouragement you gave me to carry on and finish my studies and for standing in for me in the kitchen and attending to your siblings. For being there for me I dedicate this work to you. I urge you all to continue working hard so that you can get educated to be employers of labour and I pray that you get inspired by the example I have shown. Remember that school is about determination and has no age restrictions.

To my dear husband Hastings Chirwa, for all the support and encouragement that you rendered to me from the time I started studying, for being father and mother to the children while I studied I say thank you. You have a special place in my heart, I dedicate this work to you.



ACKNOWLEDGEMENT

Although all the information and views contained herein are my own and as such I am solely responsible in case of any inaccuracies, be it of omission or commission, I am indebted to the following for their input towards the completion of this work. First it is my supervisor Professor Thandi Puoane for her comments on my drafts. Her guidance clarified my thinking and invaluable encouraged me to complete this thesis.

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I am also grateful to Chipo Mwela and Mary Simasiku who encouraged me to study public health and gave me guidance when I needed it. I would also like to thank the Kanchele community members who participated in the focus group discussions, it is upon these perceptions that I have based my results for this mini thesis and that is what makes the work original and special thanks to Ms Bessy Miti the nurse in-charge at Kanchele RHC for helping in organising the community. I would also like to acknowledge my former three supervisors namely Wayne Nightingale and Kathleen Obrien from Care International and Oscar Maroto from Catholic Relief Services for being understanding and supportive during the time I was studying. The support from all the acknowledged made me fulfil my research interests and I hope the work contained herein will in one way or the other contribute to the better performance of both the community members as well as the community health workers.

Finally I would like to thank all the research assistants that helped in data collection during my fieldwork. To you all I say -Thank you very much

Chapter 1.0 Introduction

1.1 Background Information

Malnutrition in children under the age of 5 years is a global public Health problem.

According to the World Health Organization about six million children are dying of hunger every year (WHO, 2002). One out of four children roughly 146 million in developing countries is underweight (UNICEF, 2007). The UNICEF report (2007), states that 10.9 million children under five in developing countries die each year due to malnutrition.

There are various types of malnutrition and these are kwashiorkor, marasmus and marasmic kwashiorkor. Kwashiorkor a syndrome caused by multiple deficiencies (protein, energy and micronutrients), characterized by retarded growth, changes in the skin and hair pigment, edema and pathological changes in the liver including fatty infiltration, necrosis and fibrosis Dorland medical dictionary (2007). The other form of malnutrition is marasmus which is a progressive wasting of the body, occurring chiefly in young children and associated with insufficient intake or mal-absorption of food. A child with marasmus looks emaciated and the body weight may be reduced to less 80% of the average weight that corresponds to the height. Lastly is the combination of kwashiorkor and marasmus and known as marasmic-kwashiorkor and the Dorland's medical dictionary(2007) defines it as a condition in which there is deficiency of both calories and protein, with severe tissue wasting, loss of subcutaneous fat and usually dehydration.

Malnutrition in all its forms increases the risk of diseases and early death. Severe Acute malnutrition, for example, plays a major role in half of all under-five deaths each year in developing countries (WHO, 2000). According to the Zambia Demographic and Health Survey (2008), Malnutrition is one of the main childhood illnesses in Zambia with almost 50% of the under five children being stunted. The referral system in Zambia is organized in a way that starts at the Primary Health Care (PHC) level within the community and managed

by the CHW. At this level, Community Health Workers (CHWs) screen and identify children that have childhood illnesses which require treatment and they refer them to the Rural Health Centre (RHC). The CHWs also do active case finding at household level using the Mid Upper Arm Circumference (MUAC) tape to identify children who are under weight for age. When the problem cannot be handled at the RHC level the child is referred to the district hospital or provincial hospital level within a particular province.

The current referral process does not have a structured system and leaves out community participation and it has no feedback to the community.

PHC → RHC → District Hospital → Provincial hospital → National UTH

From the flow above, the community is not included in the flow chart. While the referral backwards is on paper by not practical and it end at district level.

Referral in this thesis is defined as a process in which the treating health worker at a lower level of the health service, who has inadequate skills by virtue of his qualification seeks the assistance of a better equipped and/or specially trained person, with better resources at a higher level, to guide him in managing or to take over the management of a particular episode of a clinical condition in a beneficiary (Morrow, 2003).

For successful referral, there must be first and foremost geographical access to referral care facilities. Provided referral services are accessible, referral staff must be trained to provide quality care, services must be affordable and essential drugs, supplies, and equipment must be available. (Kalter et al, 1997) The most complex aspect of referral care is often the child's caretaker's acceptance of and compliance with a referral recommendation (Font et al. 2002).

1.2 Problem Statement

In most of the communities that I had worked in as a health professional, it had been said that although a large percent of children were malnourished, there was late detection and referral by the Community Health Workers (CHW). According to Consortium of Food Agriculture

Aids Resiliency and Markets (CFAARM) of 2009, the nutrition assessment for identifying positive deviance activities revealed that in Kalomo- Kanchele community out of 919 under five children that were screened 64 (7%) were severely malnourished, 138 (15%) were moderately malnourished, 92 (10%) were mildly malnourished and 625 (68%) were normal. The CFAARM Semiannual report of 2010 revealed that in Kanchele 350 children were found to be malnourished by CHWs during the monthly growth monitoring outreach using weight for age and 49 children were found to be severely malnourished and they were referred to the PHC but only 20 adhered to the instruction, the remaining 29 opted not to go to the PHC. The 301 children who were malnourished were enrolled to the positive deviance hearth sessions for feeding. The late detection of malnourished children who should have been identified early and lack of adherence to referral instructions by mothers resulted in children being brought to the health centre when it was too late to save the life of the children. There are several factors that may have lead to this including limited knowledge by the CHWs and mothers about causes, signs and symptoms, and consequences of malnutrition in children. This research collected data on the factors affecting detection and referral of malnourished children to Primary Health Care (PHC) level. It is hoped that this research will reveal the causes of late referrals of malnourished children and the results will be shared with MOH officials at both district and national level including the CHWs and the community traditional leaders.

Chapter 2.0: Literature Review

This chapter brings out what has been done before on the research problem by reviewing various literature and this helps to focus and articulate the knowledge gap on the research topic. In this case the chapter brings out information on the burden associated with malnutrition and explores how big the problem is and which parts of the world are affected. It further considers the causes of malnutrition and what documented evidence is available on the causes of malnutrition. In this research the UNICEF causal diagram has been used to better understand the causes of malnutrition. Management of malnutrition in the facility and at home is another component that was of importance to review as it formed part of the research question. The Chapter also reviewed literature on referral system and what the role of CHW in referral, the review drew literature both outside Zambia and within Zambia although very little has been done in Zambia on the research topic. The chapter does also consider the beliefs and attitudes of the communities on the causes of malnutrition. The chapter finally considers literature on the knowledge of CHWs on malnutrition.

2.1 The burden associated with malnutrition

Malnutrition in children under the age of 5 years is a global public Health problem. According to the World Health Organization (2002), about six million children are dying of hunger every year. One out of four children roughly 146 million in developing countries is underweight (UNICEF, 2007). According to the UNICEF report (2006) more than 70 of the world's underweight children (aged five or less) live in just 10 countries, with more than 50 percent located in South Asia alone. According to the World vision website the countries are Myanmar, Nepal, Guatemala, Angola, Ethiopia, Malawi, Zambia, Democratic Republic of Congo, India and Sudan. Nearly 12 million children under the age of five (over 4 million of them in Sub-Saharan Africa alone) die annually (UNICEF, 2007).

According to the Zambia Demographic and Health Survey (2008), Malnutrition is one of the

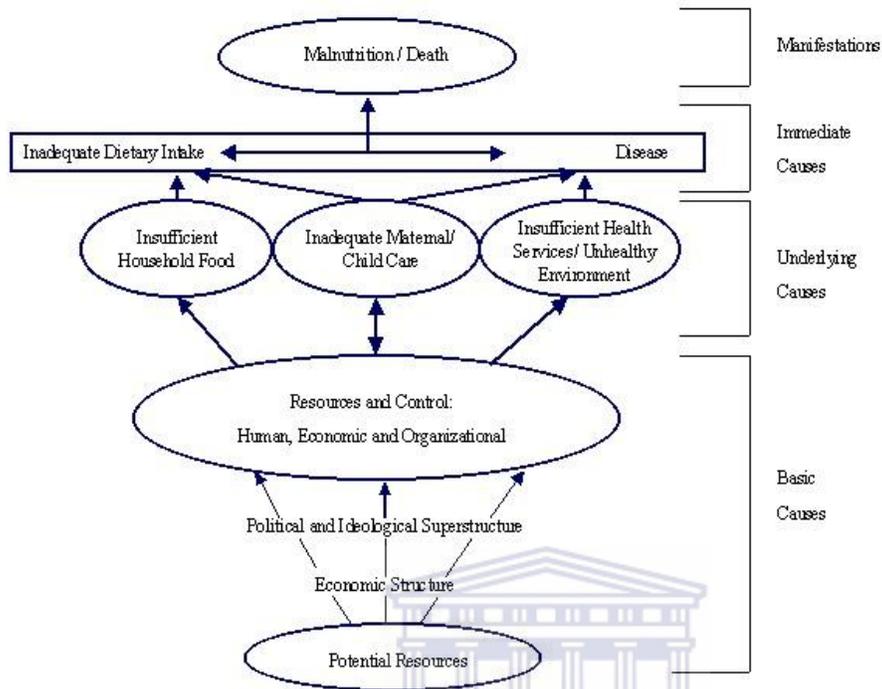
main childhood illnesses in Zambia with almost 50% of the under five children being stunted. In 2008 UNICEF stated that malnutrition in Zambia is so prevalent that University Teaching Hospital(UTH) in Lusaka óthe capitalø largest public hospital has a dedicated unit for infants and children called the Pediatric malnutrition ward AO7(Ward AO7).

There are various types of malnutrition and these are kwashiorkor, marasmus, and marasmic kwashiorkor. According to the Wikipedia on line dictionary, kwashiorkor is an acute form of malnutrition caused by multiple deficiencies due to poor dietary intake characterized by edema, irritability, anorexia, ulcerating dermatose and an enlarged liver with fatty infiltrates. The other form of malnutrition is marasmus which is a form of severe protein energy malnutrition characterized by energy deficiency. A child with marasmus looks emaciated and the body weight may be reduced to less 80% of the average weight for age. Lastly is the combination of kwashiorkor and marasmus and known as marasmic-kwashiorkor and the Dorlandø medical dictionary(2007) defines it as a condition in which there is deficiency of both calories and protein, with severe tissue wasting and loss of subcutaneous fat.

2.1.1 Causes of malnutrition

The UNICEF conceptual framework on malnutrition (figure 1) was used in understanding the causes of malnutrition. The framework shows that causes of malnutrition are multisectoral, embracing food, health and caring practices. They are also classified as immediate, underlying, and basic.

Figure 1: UNICEF Conceptual Framework.



Source: UNICEF 1997

As depicted in the framework, at the immediate level both inadequate food intake and diseases affect the child nutritional status. In addition, food insecurity at the household level and at the community level is a critical factor in the development of malnutrition.

Health care includes access to curative and preventive health services, as well as a hygienic and sanitary environment and access to water. Caring practices of mothers/caregivers including breastfeeding and complementary feeding, home health practices, hygienic practices, psychosocial care, and food preparation, among others are also very important in the prevention or causation of malnutrition in children (UNICEF, 1990).

Immediate causes include diseases such as diarrhoea and other infections, which interfere with the child's appetite or absorption of food leading to under nutrition. The child may become undernourished due to inadequate dietary intake and an unbalanced diet (UNICEF, 1990).

2.1.2 Management of malnutrition in the facility and at home

According to the Valid International (2006) training manual, outpatient care is provided to the majority of children with Severe Acute Malnutrition (SAM), those without medical complications and who have appetite. In outpatient, the child would be provided with Ready to Use Therapeutic Food (RUTF) equivalent to about 200 kilocalories per kilogram of bodyweight per day (kcal/kg bodyweight/day) to last until the next health visit (usually weekly). The child returns to the health facility or outreach point for follow-up of the health and nutrition progress and replenishing RUTF supplies until full recovery (Valid International, 2006).

Children 6-59 months admitted into inpatient care for stabilisation will be referred to outpatient care as soon as the medical complication is resolving, the appetite has returned and/or the oedema is reducing. Exceptionally, children will complete the full treatment in inpatient care; because, e.g., child cannot eat RUTF, RUTF is not available, social reason (WHO, 2002).

According to NFNC (2006), "The majority of malnourished children in Zambia either never shows up at the clinic, and consequently dies at home, or shows up when it is already too late. This has resulted in high mortality rates in the malnutrition wards with Livingstone hospital reporting a rate of forty percent deaths within the first forty-eight hours after admission".

2.2 The referral system

Several studies on referral issues have identified patient trust and perception of quality as some of the most important factors that influence a successful referral. (Grace et al, 1986). Poor communication at both ends of a referral (referring and receiving ends) has been proven to influence the decision to refer the patient from the community. Grace and Armstrong (2002) advise the following: "To gain full compliance and maximize the effect of any course of action or treatment the patient should be aware of the reasoning behind that action and

should have taken part in arriving at that decision.ö Although this advice is clearly directed towards clinical settings (referral between different health facilities), nonetheless it is still applicable to any community setting. Referral compliance is a complex process that includes acceptance by the caretaker or decision taker of the need for referral (Cervantes et al, 2003).

öAccording to the World Health Organization, referral still remains a big challenge even in many countries. In countries like Zambia, there are but few studies on community referral for malnourished children. WHO's Integrated Management of Childhood Illness' (IMCI) program mentions referral rates for children that range from 3 to 27%.ö (Bossyns et al, 2006). This implies that a lot of children do not get to be referred for further management. In some cases it is as low as 3% of children being referred for treatment and the highest referrals is only 27% meaning most children are treated from home or go unattended. In an African context optimal referral rates ranging between 5 and 8% have been recommended by WHO. Bossyns et al (2006), in analyzing these figures stated that they were based on field observations most often in urban areas. This means that there are limited documented systems for referrals at community level and this makes it difficult for communities to know when and how to conduct referrals.

In ensuring the adherence to the WHO rates on referral, it would be apparent that one considers if one would like to know whether one is referring too many or too few people. While monitoring referral rates ó the proportion of patients at the first line referred to the RHC or, more appropriate, a population-based referral rate ó is complicated by the fact that there is no such thing as a 'good' and universally valid referral rate (Bossyns et al, 2006).

2.2.2 The role of community health workers in referral

In considering an effective referral system at community level, it is cardinal that the CHWs are motivated and equipped with strategies to help caretakers of children adhere to their

advice and be referred quickly to the health centre (Parlato, 1982). During the Alma Ata conference in 1978, CHWs were identified as one of the cornerstones of comprehensive primary health care. CHWs have the potential to deliver equitable health services to populations living in remote areas and to help fill the unmet demand for regular health services in many countries (Parlato, 1982). Most programs rely on verbal referral, in which the CHW examines the child and then informs parents that they should take the child to a health facility. Steel (2001) in his study stated that, one way CHWs and communities can create visible change is to monitor simple health indicators over time. One of these indicators is the number of children being referred from the PHCs to the RHCs.

In Kitwe, Zambia, CHWs in communities monitor the number of children who gain weight in the past month as an overall indicator of child health for growth monitoring. In many cases the CHWs would refer a child to the clinic using a referral note but, the feedback from the clinic does not come to the CHWs from the Health Centre staff. (Blas et al, 2001).

2.2.3 Beliefs and attitudes about Malnutrition

Many mothers in Africa and Asia however believe that one can wait until children have teeth at one year before feeding them adult food. Others believe that a special traditional porridge with lots of mass but few calories will satisfy children's hunger. Both these beliefs lead to malnutrition (Aboud , 2002).

A number of unusual feedings practices *“greet the newborns at birth”* if they are delivered outside a clinic or hospital. For example, before giving breast milk, Ethiopian newborns might be given a spoonful of soft rancid butter or warm water with sugar to oil the digestive system and sweeten the vocal cords. They consequently do supplementary feeding with various foods which in turn impair the mother's milk flow (Aboud, 2002).

2.2.4 Knowledge of health workers about malnutrition

Participation of community health workers (CHWs) in the provision of primary health care

has been experienced all over the world for several decades, and there is an amount of evidence showing that they can add significantly to the efforts of improving the health of the population, particularly in those settings with the highest shortage of motivated and capable health professionals (WHO, 2010).

CHWs provide a variety of health care services to underserved communities who usually do not have access due to a lack of transport, long distances from health facilities and lack of finances. CHWs focus on key issues affecting these areas, such as child and maternal health as well as the prevention and treatment of diseases such as malaria, diarrhoea, child malnutrition, TB and HIV/AIDs (WHO, 2012).

Aim

To explore factors that are associated with detection and referral of malnourished children from PHCs at community level to the Health centres in Kalomo district.

Objectives

- To explore the perceptions and experiences of mothers/caregivers about causes, symptoms and treatment malnutrition in children
- To explore the perception of community members and their leaders about malnutrition in children
- To explore perceptions of Community Health Workers(CHWs) about causes, symptoms , treatment and dangers of malnutrition in children
- To explore the challenges faced by PHC workers in early detection and referral of malnourished children who are below the age of 2 years

Motivation for Conducting this Study

The study explored the challenges that hinder the malnourished children in the communities from being detected and referred to RHCs by the CHWs. It is hoped that through this study,

the issues that were brought out will be used to raise awareness on the dangers of late or lack of referring malnourished children on time to the RHC.



Chapter 3 -Methodology

In this segment the report explains the methods that were used in collecting the information from the community. It brings out how the study design was done whether qualitative or quantitative and why a particular study design was used. This section then considered the study setting of Kanchele, location of Kanchele and the type of people that live in Kanchele community, the kind of activities they do for their livelihood. It also brings out how the sampling of the study participants was determined and the procedure that was followed. The chapter then brings out how the data was collected in order to answer the various objectives and also how the data was analyzed; the limitations that the team faced during the data collection and analysis process are all covered under this chapter. The section also takes into account the ethical considerations prior and during the data collection.

3.1 Study Design

A descriptive exploratory, qualitative study, which explored the perceptions and experiences of mothers, community members and CHWs on the issues surrounding malnutrition and factors that prevent the mothers and community members from taking children to the health centres after children had been referred by the PHC worker to the RHC. It was also focused on the challenges faced by the PHC workers on detecting and referring malnourished children to the RHC.

Qualitative research has special value for investigating complex and sensitive issues at generating information that is in-depth. This would make it suitable for this study as, being exploratory, it was inductive and allowed for a more flexible investigation of the issue. It also allowed the research team to record the diversity of experiences, views and meanings of people's experiences in relation to the issues under investigation and to assess how these relate to the broader social context (Steiner 2000).

3.2 Study setting

The study was undertaken in Kanchele -Kalomo district, which is a rural district with a total population of approximately 169,503 (CSO, 2000) located about 400kms from the capital city of Lusaka in Zambia. The district is prone to droughts and floods which tend to have a negative impact on the general food security of many households. Kalomo district has 25 health centres with one (1) referral hospital- the Kalomo General hospital. The Health Centres normally only have one staff who is on call for 24hrs a day.

People in Kalomo are predominantly a farming community with the majority of its residents living in the rural areas, with extremely poor road infrastructure. Transport in the rural areas is mainly dependent on ox-carts and bicycles and most of the road networks in the rural parts of Kalomo district are mainly impassable during the rainy season.

CARE International Participatory Rural appraisals (PRAs) conducted in Kalomo (Care International, 1998), suggested that among the top three problems in Kalomo was the limited number of health facilities, diarrhea and lack of food. In addition to the PRAs that were conducted in the area, the District Health Management Team (DHMT) together with the Ministry of Agriculture conducted a combined Vulnerability Assessment following the drought that hit southern province in 2005/6 season. The vulnerability assessment was conducted to find out how the damage to the crops as a result of the drought and how the poor crop performance had in turn affected the lives of the people of Kalomo. Their report revealed that the general perception of most households in the visited areas is that the food security situation contributed to the increase in child malnutrition (ZVAC, 2006).

3.3 Study Population

There were three target populations in the study: (i) Mothers/caregivers of children below the age of five years. (ii) Community members (men and women) with children that have lived in the community for more than one year and (iii) CHWs and nutrition group leaders who had

worked in Kalomo surrounding villages for more than one year.

3.4 Sampling Procedure

The study used purposeful sampling to identify the Health Centre from where most of the children with malnutrition arrived at the referral hospital(Kalomo District Hospital) at a late stage. Mothers/caregivers of under five children were purposely selected from the under fives clinic when they come for routine immunization. The women were invited to participate in the focus group discussions before they were seen by the nurse. The community members were selected by the village headman, who was the custodian of the register of people in the village. The selection was done at what the local people termed as *muswangano* (general meeting called by the village headman).In addition, consideration was made on the basis of members being well known in the community, that have stayed in the community for more than one year and having interest in the welfare of malnourished children or children under five.

The CHWs were chosen from the PHC which recorded the highest number of malnourished children according to the CFAARM nutrition assessment report (2009) namely from Mabele which had 60 moderately malnourished children and Sikweya PHC which had 47 moderately malnourished children. In addition only CHW that had been working with mothers of children under five were included in the FGD. Four CHWs were purposely selected from the 10 CHWs from the two (2) PHCs. In addition, two nutrition group leaders, one from each clinic were invited to participate in the study.

The respondents of the study comprised mothers who had children under five, caregivers(former mothers of under five children such as grandmothers) , community leaders, CHWs and workers from the two PHC.

3.5 Data Collection

In answering the research question the participant's knowledge on malnutrition was

discussed, that was if they knew the signs of a malnourished child, whom they consulted when the child was malnourished and who made decisions on actions to be taken when on the malnourished child, were among the many questions that this report brings out.

In order to adequately address all the objectives of the research the data collection was done in accordance to each objective. A focus group guideline was developed to ensure that all important questions were asked before the beginning of the data collection. After having developed the FGD guide, the researcher asked the district office in Kalomo for permission to collect data in Kanchele. Following the approval and prior to the beginning of data collection, a training of the research assistants was conducted in Kalomo to familiarize the research assistants with the qualitative data collection tools. The training included a practical session on how to collect qualitative FGD information. Following the training, the team conducted a pilot study using the FGD tool and the key informant question guide in one of the communities not selected for the actual study. Among other things covered were the dos and don'ts that were to be observed during the study data collection, behaviour while in the field and dress code during the period of data collection. The data was collected according to each of the outlined objectives. All the FGD were guided by the check list of questions that are in the appendix. Below was how the data was collected for each objective.

Objective 1: To explore the perceptions and experiences of mothers/caregivers about causes, symptoms and treatment malnutrition in children

One focus group discussion with 12 women or caregivers was selected from the two PHCs with highest number of malnourished children. To adequately answer this objective, two FGDs were held. The discussions began with a display of a picture of a child with malnutrition which was put on the wall to guide the focus discussions. The research team then showed the picture to the group by informing them that most of them have had a child that was similar to the one in the picture or they could have seen a child like that in the

community.

Objective 2: To explore the perception of community members and their leaders about malnutrition in children

In order to have a free discussion, there were two focus group discussions: one for community members (grandmothers, women or caregivers with children above five years, mothers without children). Another focus group discussion was held for community leaders (headmen, area councilor, church leaders, section leaders, leaders of women groups).

Objective 3: To explore perceptions of CHWs about causes, symptoms, treatment and dangers of malnutrition in children

There was only one focus group discussion of CHWs (12 members) from the two PHCs.

Objective 4: To explore the challenges faced by PHC workers in early detection and referral of malnourished children who are below the age of 2 years.

In-depth interviews were conducted with 4 CHWS and 2 nutrition group leaders.

All discussions and interviews were conducted in the local language Tonga/Tokaleya. The discussions with care givers were recorded on flip charts, while the note taker also wrote the details of the discussions. The discussions and the in-depth interviews were done and notes were taken during the discussion after permission had been sort from the participants. The team had an observer who looked out for the people dominating the discussion for them to give chance to the silent ones and try to get them to talk. The none verbal communication such as nodding of heads, facial expressions and general body language were followed closely to get the reason for non-verbal expression. The focus group discussion lasted for an hour or until no new information emerged. At the beginning of each session, age and gender of participants were collected.

3.6 Analysis

Thematic analysis is the most common form of qualitative research analysis (Guest, 2012).

The discussions and the interviews were transcribed, categorized and grouped into themes. The analysis began by writing everything that was said onto a flip chart so that it was easy to verify facts with the FGD members. However, tape recording was not agreed to by any of the groups. Attentive listening and echoing back what participants said helped to agree and move the discussions forward. The writing on the flip chart was in the local language Tonga/Tokaleya. After each discussions the team took all the flip charts and started checking through the responses and then based on what came out from each group a theme was developed and all similar ideas were transferred to one flip chart. From the themes, sub themes were developed. The grouped themes were from all focus group discussions that was the mothers, the CHWs and the community leaders.

3.6.1 Reliability

Before the data collection exercise, the team conducted a pilot to test the guiding questions for the focus group discussion. This was done to ensure that the guiding points for the focus group discussion were flowing and answering the research questions. The pilot was done also to determine how dependable the research assistants were in terms of asking open ended questions and also in capturing the information from the participants of the focus group discussion. Triangulating the information, that is using more than two methods of data collection with a view to double (or triple) checking results further ensured reliability of data collected.. This was also called "cross examination" (Cheng, 2005).

The report writing began immediately and the researcher was based in Kalomo until when the first draft was done so as to seek for any further clarifications either with the research assistants or the health centre staff/CHWs. At each of the sessions the finding were presented to the participants for verification and confirming that the views represented were true and in accordance to what the people said during the FGD.

3.6.2 Credibility: The researcher documented actions, opinions and biases related to

accounting for outliers such as responses that are totally off the topic of discussion and meant to give a false picture about the topic, appropriateness of data (purposeful sampling), adequacy of the data (saturation) and validation of data and findings by informants. Good ways to establish credibility included prolonged engagement with the subject matter ("sit with the data") and member checking (do informants recognize the study findings to be true to their experiences?)

3.6.3 Dependability: (Auditability). In this study this was demonstrated by a carefully documenting the research process. Furthermore the research explored if "Under similar circumstances might expect to obtain similar findings?" There can be no dependability without credibility.

3.6.4 Conformability: This was sometimes referred to as the audit trail. This was done by recording how decisions were made throughout the study. The researcher objectively discussed the evidence and processes that led to the conclusions.

3.6.5 Transferability: (Fittingness). In this study the researcher provided enough information for deciding if the findings were meaningful to people in similar situations. This was sometimes referred to as "fittingness." The report used the primary data, in this case there are verbatim quotes in the report and as much as is possible all the data has been used in this report.

3.7 Limitations

The main limitation was that the meetings were held when most participants were busy with harvesting and so, getting the women to attend the meetings was not as easy and in most cases they came very late for the FGDs. The other challenge was the poor state of roads which hampered the teams travelling to the communities and at times had to post-pond the meetings as there was no transport going to the communities. At times the team had to spend nights in the cold as there was no transport back to Kalomo. While the mixed Community

members FGDs of men and women made some of the participants not to participate effectively as women dominated the discussions. The uninvited community members were curious about the meeting and occasionally disturbed the FGDs.

3.8 Ethical Considerations

For the research to be ethically acceptable, the team involved the local political leadership by inviting the area councilor of Kanchele to community official *muswangano* (meeting) that was called by the village headmen prior to the beginning of the FGDs in the communities. In Zambia ethical issues in research have no central organ that oversees them and for this research the permission was sort at district level in Kalomo. This was made easy following the letter from the University of the Western Cape that acknowledged that the team was sent from the university. All participants were asked to sign a consent form after the purpose of study had been explained to them. They were informed of confidentiality and that participation was voluntary and that they had a right to chose not to participate in the study. Furthermore each participant had to agree to maintain the confidentiality of the information discussed by participants and researchers during the focus group session.

Chapter 4.0: Findings

This chapter presents the findings from the focus group discussions and from the interviews regarding factors that are associated with detection and late referral of malnourished children from PHCs at community level to the health centres in Kalomo district. For the purpose of analysis, data from the discussions and from the in-depth interviews was grouped based on the themes that emerged. The broad themes were first identified followed by relevant sub themes. The main themes that emerged were perceptions about malnutrition, perceptions on the causes of malnutrition, actions taken when a child is malnourished, and barriers to rehabilitating a malnourished child. The report also presents the challenges that CHWs face in identification and referral of malnourished children and how the CHWs thought these could be best dealt with in order to improve referral. Each of the themes including the subthemes will be discussed in the following paragraphs.

4.1 Perceptions about malnourished children

It was clear from the group discussions that the community members did not think that the child in the picture which was shown at the beginning of discussions had marasmus. CHWs also confused the picture for marasmus with that of the child with kwashiorkor. The following subthemes were identified:

Marasmus was regarded as HIV positive or having AIDS

Both mothers and community members thought that a marasmic child was HIV positive or had AIDS. After showing the women the picture of a child with marasmus one of the mothers mentioned that: *the child is very thin and looks like a child who has HIV and AIDS.*

Another woman said: *the child looks like an old person.* She went on to laugh saying that if that was her child no one would ever see her with the baby because the people would think that she had HIV and AIDS. The same information was raised in the FGD with community leaders who provided mixed answers with some identifying both pictures (marasmus and

kwashiorkor) as having children who were malnourished but, they could not differentiate between the two forms of malnutrition. Others stated that such children had AIDS. One of the community leaders began by saying, *yes we see such children in the community although their parents do not accept that their children are malnourished*. Others confirmed that they saw such children in the community while a few said; most of such children were suffering from HIV and AIDS. Another woman who was visibly upset mentioned that *it was not good to laugh at someone's child as the child and the mother were innocent as the AIDS was brought in by the father*. Another woman added that despite the child being fat the hair looked like the way hair appeared when one had AIDS for a long time.

Malnutrition is a sign that the child had been bewitched

There was a belief among the groups that participated in the focus group discussion that malnourished children had been bewitched. Another mother said that *I would move around with the child because it would not be my fault that the child was sick because that type of sickness is definitely a sign of bewitchment*.

Blaming the mother

Some of the mothers echoed that the child in the picture suffered from diarrhoea and that the mother delayed to take the child to the hospital until the child lost weight and became so thin *and that the mother should have taken the child to the hospital early enough, she should have prevented the child from becoming so thin*.

Limited knowledge of the signs and symptoms of malnutrition

When the picture of a child with kwashiorkor was shown to the groups, some women thought that a malnourished child was fat or swollen. While others stated *that, the child was fat and appeared to be healthy than the picture that was earlier shown (referring to the picture which had a child with marasmus)*.

However the FGDs among of the community leaders revealed the existence of two groups namely the (i) those that knew what malnutrition was and (ii) those that did not believe that malnutrition as present in the community. The group that knew that the children had malnutrition qualified their arguments by stating that, *children who had malnutrition are usually very thin and unhappy and have hair that is yellow.*

On the other hand, the CHWs managed to distinguish between the two forms of malnutrition with some of them mixing the signs of marasmus with those of kwashiorkor, even though they claimed to have been taught by CARE international and ministry Of Health (MOH) some years ago. However, they were able to mention that a child with marasmus appeared very thin, looked like an old man, and that these children frequently cried and wanted more attention from mothers, while others added that the child with kwashiorkor tended to be swollen, the skin easily peeled off, the hair appeared to be reddish and very thin and that the child easily cried when handled.

Promiscuity

Other participants thought that malnutrition in children was a sign of a promiscuous father. One woman said: *this child is suffering from malnutrition according to what health workers from the hospital told us.* She stated that the cause was what was traditionally called *masoto (wasting) which meant that it was a sickness that is brought about as a result of the father sleeping around and coming home to hold a baby without using traditional medicine to cleanse himself other women nodded in agreement with others affirming that yes it was masoto (wasting).*

4.2 Causes of Malnutrition as perceived by the various groups

Poverty

Some women felt that poverty was the cause of malnutrition as only children such as the one which was shown in the picture was found among poor families. For example, one participant

said that: *the parent of such a child would be among the very poor (bachete loko) in their community, a phrase used to refer to people that were so poor that they survived by begging from home to home. The women added to say that the child appeared as if they want food but, the mother cannot afford any food you people from town should be helping the poor in our communities.* This was referring to the study team.

Malnutrition is related to witchcraft

Some mothers stated that for the child to appear like the one in the picture (child with marasmus) it was clear that such a child was bewitched. The women further stated that even if the research team went into the community, they would be told the same information that the children were bewitched as nothing would explain why a child looked like an old person. The women also stated that even the traditional healers could confirm that indeed the children were *bewitched*.

Malnutrition is related to promiscuity

Promiscuity was mentioned again under the discussion of perceived causes of malnutrition in children. One woman who had been quiet for some time said, *when a father or mother slept with another person outside marriage (chigololo) and had not used any traditional medicine after the sexual act and instead returned to the matrimonial house and held or touched the child, the child become sick and that the disease manifested by causing the body of the child to swell in some parts and thin out in some parts. This was what they referred to as masoto.*

Poor feeding practices

It was clear that the majority of the women had mixed ideas about the causes of malnutrition in the community.

Some women felt that children who suffer from diarrhoea for some time end up looking thin like old people and that was why in the first picture (marasmus) the child was very thin. They believed that diarrhoea occurred as a result of eating food that was contaminated. Another

woman said, shyly *if the mother did not feed the child a balanced diet, that child would also lose weight.* Other, women murmured in disagreement, she quickly stated that she got this information from the hospital people. One of the men thought that the child had a lot of diarrhea and the mother delayed to take the child to the clinic.

Another woman said, *those that talked about balanced diet don't know what they are saying, because how many children had a balanced diet in our villages? None and they don't look like these children in the pictures. . A child will appear thin if they have AIDS.* If a child has AIDS; they lose weight and appear very sick. One caregiver mentioned that if the family had no food, then the family will have no food to feed the child and so the child will be very thin and sick.

The community leaders suggested that the problem in the community was due to the fact that younger women wanted to live like the people in the towns, who did not cook traditional foods like porridge with groundnuts.

Women nowadays are lazy to cook but prefer to give children snacks such as sweets like people who lives in the cities. The bought food is not good for the children compared to our traditional.

On the other hand the CHWs raised the fact that malnutrition in children was due to the fact that most mothers did not feed the children frequently and that most of the children were fed left over *which may not have been properly preserved leading to diarrhoea*

Resistance by younger mothers to accept advice from elderly women

Older women felt that, young mothers nowadays did not take time to listen and follow what the elderly women told them. They normally thought that the elderly people were very backward. They tended to ignore advice on how to keep the home and take care of children. There was also a general feeling among older women that mothers did not follow instructions given by health worker. When they were told to feed children 5 times a day, they thought it

was too much and instead give the children left over foods and paid more attention to household activities than to feeding children.

Inadequate funding by Ministry of Health (MOH)

The CHWs also attributed the failure by the MOH to fund activities at community level so that the CHWs would create awareness on malnutrition and as a result of the MOH not funding community level activities most mothers or guardians were not aware of the dangers of malnutrition. The CHWs also stated that the failure by MOH to conduct trainings for CHWs was an issue that caused them not to cover the whole of Kanchele with information on malnutrition.

4.3 Perceptions about malnutrition in the community

Bewitchment

The parents normally thought that the child had been bewitched and they sought help from the traditional healers-*õnganga*” with the hope of being told the name of the person bewitching their child and to also get traditional medicine for the child to be healed and to prevent the witches from attacking the child again. Some women mentioned that when the children become malnourished the parents often thought that there were people that were jealous of their child who was born looking very healthy and fat and so they bewitched the child. Another, woman said, the parents would suspect that the mother stepped on medicine used by a woman who had an abortion and then breastfed her baby. This meant that the medicine she had stepped on went into the baby through the breast milk.

Promiscuity

Women also raised the fact that in some homes when the child become thin women often accused their husbands of being unfaithful and in many cases they ended up divorcing. They also mentioned that the community members often think that the father of the child was sleeping around and had brought *masoto* (*wasting*) to the child.

Poor feeding by the mother/unbalanced diet

The focus group discussion with community leaders raised issues that the mother of the sick child did not know how to feed the child or was a lazy woman who failed to cook for the child. Another caregiver said *when the community members see a child like the one in the picture they would think that the family was very poor and lacked food in the house and normally had no food even in the grain barn*. The community leaders raised several issues including that- when a child was malnourished the people outside that family always thought that the woman did not know how to take care of the family especially the children.

Some thought that malnutrition only occurs in poor families who do not afford to buy good food like oranges for the child. Others thought that malnutrition occurred to children whose mothers breastfed them when they were pregnant and so the child either began to swell or waste away due to the bad air brought about by the new child in the mother's womb.

4.4 Actions taken when a child is malnourished

Women said that there were several actions that were taken when parents discovered that the child was malnourished. These included *taking the child to traditional healer ōngangaö*. In some extreme cases the parents would decide to shift to a different locality as they would think that the air where they were living was not good for the child. Some parents would take the child to the health centre especially if the child had diarrhoea. Another woman said that *the mother of the child would feed the child with various types of foods normally given to sick people such as oranges, banana eggs and rice*.

Another mother said that *some parents would keep the child in doors for fear of being laughed at by neighbours, while others would be buying medicine such as panadol from tutemba-(make shift stores) and give the child, while others would asked for medicine from those that were sick and had some pain killers and gave their child. When they saw that the child was not improving they would normally take the child to the health centre for treatment*.

4.5 Hindrances to rehabilitating a malnourished child

There were several reasons raised that were thought to prevent successful rehabilitation of malnourished children. These include:

Belief in traditional healing

The community of Kanchele with whom the FGD were done had a strong belief that the child's sickness (malnutrition) was caused by promiscuity of the father. They believed that if a malnourished child was to be healed they had to take the child to a traditional healer. This strong belief in traditional healing stopped the children from being treated or rehabilitated early.

The cost associated with treatment

Traditional healers were said to be cheaper and tended to accept in kind payment while the health centre did not accept in kind payment and so it was difficult to pay the health centre user fees at the time when government used to charge people who went to the health centres. They went on to say that despite the current free medical services introduced by the government, there were no drugs at the hospitals and so going there was a waste of time and effort. The child would instead be tattooed and the child and the mother would stay at the traditional healer's hoping that the child would be healed.

The other reason was that people in the rural areas had seasonal income and as such it was not easy to raise money for transport money and money to buy food for the parents that accompanied the sick child to the health centre.

Distance for health facilities

Women felt that the health workers stayed very far away from the community and that PHC were few. This therefore made it difficult for the mother to take the child to the PHC.

Another challenge was that most families had no means of transport to the clinic or transport

was not easy to find and also the state of some roads become impassable especially in the rain season, while some areas had very bad roads that even the vehicles would not manage to reach to those places.

Responsibility of other children

Mothers also said that it was also difficult for parents to take one child to the clinic as most families had more than one young child and so they found it easier to take the child to the traditional healer who was located within the village and was easy to access. Thus having many children made it difficult for the mother to take the malnourished child to the PHC as the other children would not have someone to look after them.

Stigma associated with a malnourished child

Women also mentioned that some parents felt embarrassed to carry a sick child especially that such type of a child were said to be sick because their parents were unfaithful in their marriages. While some parents delayed because they were influenced by the grandparents who normally did not advise them to take the child to the health centre.

Fear of hospital admission

The CHWs began by stating that most parents didn't like the idea of the child being sent to health centre because they had problems with how to look after the other children. In most cases the women feared that once they were sent to the health centre they would eventually be sent to the hospital which was in town and most of them had never been to town on their own and so both the father and the mother would have to go to the hospital with the malnourished child.

Services of CHWs as a last resort

Often when the parents saw that there was no improvement on the child, they would take the child to the community health worker or just demand to be given anti malaria drugs or oral rehydration salts-this was mentioned by the leaders from the community.

Community health workers on the other hand mentioned that the mother was advised to give the child more food frequently. One of the CHWs also mentioned that they advised the mothers to take the child to the health centre even though most of the parents ignored such type of advice.

4.6 Decision making concerning a malnourished child

The decisions about the sick child were made by the father of the child unless the mother or the caregiver was not married then the mother would make the decisions. The father also consulted his parents who were the grandparents to the malnourished child to assess the possible cause of the illness and they also consulted the parents so that they could give instructions about what needed to be done about the child's illness. The mother or the woman could have the idea of taking the child to the hospital but, she had no right to make a decision over the child apart from the father of the child who was the head of the household. If the woman was told to take the sick child to the health centre she was also asked to know how she would handle the other children as it was the woman's responsibility to take care of the children.

The community in general had no say on what the parents had decided to do with their children, if anything most of the community members usually mocked and pointed accusing fingers at the parents as being responsible over the child's illness.

In as much as the CHWs would know that the child was malnourished, and advised the parents to take the child to the hospital for further management, they had no control over the final decision that the parents took over the child. Whether the parents managed to go to the health centre or not, the CHWs were not part of the decision.

4.7 Role of CHWs in the treatment of malnourished children

Community health workers felt that parents do not always take their advice. One of the CHWs stated that, *some of us try to talk to the parents of the malnourished child on how to*

better feed the child, but, this is not always easy as the parents soon or later start pointing at you (CHW) as the one bewitching the child. It would be much easier if it was the people from the health centre that told the parents about the child's condition maybe they would easily follow what the health centre staff said to the parents. One of the community leaders said that as leaders at times we try to get the parents to take the child to see the CHW, however, some parents feel the CHW can't tell them anything different than what they know as they also live within the community. They would instead want to hear and believe what someone from outside the village would tell them.

It was also repeatedly raised that most parents preferred taking the child to the traditional healer and when they do not see any improvement that when they would ask if the CHW would help them get the child to the health centre. There were some parents that would take the child to the health centre but very few would take the child to the health centre. Some parents would try to feed the child frequent meals but, normally the food would be very light plain porridge as there is a general belief that a sick child can't swallow hard or thick foods.

4.8 Community referral system

CHWs and nutrition group members mentioned that they used the MUAC tape to check the nutritional status of the child. In most cases the CHWs would advise the parents to take the child to the health centre when the child was moderately malnourished or when the child appeared to be dehydrated. Most of these children were found in the community during the outreach days when they asked the people in the community to bring the children to a particular point in the village. In some cases the CHWs were tipped of children that were hidden in homes and they would involve the village headman to help get the child out of the

house. In such cases the CHW was later accused to be the witch especially when the child died from malnutrition

In most severe cases the CHWs referred the child to the health centre when the child was hardly eating. At times it was due to severe diarrhea. In many cases they come with very high fever which was difficult to control because of the many tattoos on the child's body. At times it was the severe anemia that caused the CHWs to refer the child to the clinic.

Upon concluding that the child would not be treated at PHC, the CHWs would write or tell the mother to the child to go to the health centre. The CHWs would however, not get any feedback as to whether the parents went to the health centre or if they went to the health centre what treatment they were given.

4.9 Challenges in identifying malnourished children

The main problem that CHWs faced in identifying children with malnutrition was that most mothers did not bring the children for the under five clinic for growth monitoring and promotion, especially if the child had finished receiving the immunization. Most mothers because of household chores and field work which they do, they usually did not see the need to take a child to be weighed every month.

One of the CHWs said that, *if we go out door to door some women hide their children while those that may bring the children out do not like the children being put on the height board.*

The other challenge was the few tools available to assess children with malnutrition. The weighing scales were few for example at Mabele PHC there was only one weighing scale and one weighing bag.

The other challenge was that mothers did not want to use the same weighing bag that was used by other children because they believed that a child would be sick as most children had

traditional medicine for protection and that if the other child had no medicine then they would be sick and so they would opt to use their own wrappers (*chitenge*) meaning for each child the CHW would have to reset the scale and that delayed the process and at times led to error in reading the scale. Other mothers believed that the weighing bags are dirty. The MOH was not enrolling more CHWs and so the burden of active case finding was not easy as they were few CHWs. The distance between the villages was also very far apart and they were not provided with transport for outreach and as a result they ended up covering only those that were within walking distance. The erratic supply of CHW kits also made the community not believe in what they doing as even simple diseases like diarrhea, they would not provide any treatment within the community and so the people thought they were just the same as anybody in the village or community as they always referred them to the RHC and many people did not go there. In addition the lack of community based rehabilitation feeding programs by the MOH makes mothers not to believe that malnutrition can be treated at community level.

4.10 Problems encountered in referring malnourished children

The main problem was that most of these women do not go to the hospital for treatment as they claim that they do not have any money for transport. While most of the children that are referred had the challenge of who would take care of other children when the mother took one child to the health centre. This made most of the mothers not follow the referral instructions.

The other challenge that interfered with referral was that there was a belief that most children who went to the health centre did not return to the villages and usually died. Because of such concerns most of the mothers opted to stay away from the health centres and instead took the children to the traditional healers. Therefore the failure by communities to support the mother with a malnourished child take care of the malnourished child hampered the referral process.

The failure to have a feedback system from the community to the health centre and from the health centre to the community defeated the whole process of referral. The lack of the system made the community health workers not to be trusted by the community and in turn made the people not to follow the recommendations made by the CHW. The lack of feedback system made it difficult for the CHW to make follow up on these children when they returned from the health centre back to the village.

Another challenge was the lack of food for the mothers who had malnourished children at the health centre. Most of the mothers had no money for up keep while at the health centre. This discouraged the parents from taking the children to the health centre as they had to find extra resources to feed while at the health centre.

The other factor that was raised was that when parents were sent to the health centre as a result of malnutrition they did not receive the urgent treatment as it was considered a disease not worth of referral as the nursing staff blamed the mothers of being lazy to feed their children. In most cases the mothers were referred to what the parents referred to as *nothing* as they were sent back with no medicine or food for the child.

4.11 Overcoming challenges associated with referral

Suggestions to overcome the above challenges included ensuring that there was sensitization on the dangers of malnutrition and how to prevent malnutrition. The participants also felt that establishing community based malnutrition rehabilitation centres would help to combat the malnutrition at community level.

The community also felt that the number of community health workers was not enough and so they felt that training more community health workers would help in conducting active case finding of children that were faltering in growth as this help in early detection of malnourished children and thus by so doing avoid sending the children to health centre.

Building more PHC in the district would help reduce the catchment area covered by the

CHWs and also solve the transport challenges faced by the CHWs. The building of more PHCs would also reduce detentions at the health centre and also solve the challenges such as transport for the mothers, feeding while at the centre and the challenge of taking care of the other children that remained at home. It was also stated that government needed to work on the bad roads in the district and also provide RHC with transport to take who were unable to come to the health centre due to challenges related to transport. In addition it was also stated that government should also fund the RHC adequately so that the health centre would be in a position to feed both the mother and child while receiving rehabilitation at the centre.

4.12 Challenges faced by PHC workers and nutrition advisors in early detection and referral of malnourished children who are below the age of 2 years

Among the challenges faced by the PHC workers in the identification of malnourished children from the community were the following:

Growth Monitoring and Promotion and follow up

The failure by parents to bring children for growth monitoring meant that the parents of the children missed out on the information that is given to parents when they bring the children for GMP. The fact that most parents were able to hide children that were thin and malnourished made it difficult for the CHWs workers to identify and treat such children for malnutrition. While the long distances of walking by the CHWs when they needed to make follow up was yet another big challenge faced by the CHWs as they were not provided with bicycles.

Lack of anthropometric equipment

The lack of anthropometry equipment at the PHC made it difficult to screen children for malnutrition. While the damaged anthropometry tools made it even more challenging as the readings would not be correct. This meant that the parents of the children were told or given

wrong information about their children's malnutrition status.

Lack of feedback from RHC

One of the PHC workers noted that, *the referral process was not adhered to as it was one sided as the CHWs never got feedback from the RHC following CHWs referring the child to the RHC. This meant that the CHWs were not able to follow up the child to ensure that the parents were following the instructions given at the RHC.*

Decision making about taking the children to the Rural Health Centre

The decisions about referring the child to the health centre were entirely controlled by the grandparents to the child from the father's side. In as much as CHWs staff would recommend that the child be referred for further management, the whole decision as to whether the child would be taken to the hospital or not totally depended on the grandparents. The PHC staff said, *What I have observed is that children from single mothers easily accept to go to the health facility although they are usually faced with challenges of transport to the hospital. While the homes where both parents were alive tended to take longer in making the decision on whether the child should be taken to the hospital or not. In other words the challenge we face is the non adherence of the parents to take the child to the hospital.*

Absence of food supplements for the malnourished child at the RHC and food insecurity

At times health staff felt that they were referring the children to nothing as in many cases the parents of the children were sent back only with instructions on how to feed the children. In addition most of these families that have malnourished children came from homes that did not have enough food in their homes.

Lack of sensitization

The absence of engaging mothers/guardians on the importance of adhering to referral and the failure by the community leadership to engage the traditional leaders and educating them on the importance of them knowing the signs and symptoms of malnutrition created an obstacle

on getting the children to the health centre. This was compounded by the lack of involvement of grandparents who strongly believed in the traditional healers. They claim to say that they if they did not use the traditional medicines on their children, they would not have had any alive children.



Chapter 5-Discussion

This chapter discusses the findings in relation to the findings of other studies. The study explored the community perceptions about malnutrition, its causes and actions taken when a child was malnourished and why the PHC was their last resort for the treatment of the child.

5.1 Limited knowledge on malnutrition/training

This study identified lack of adequate knowledge on malnutrition among community members. For example, one mother said-there is no such thing as malnutrition and instead referred to a child with malnutrition as suffering from HIV and AIDs. One of the community Health workers could not state the difference between the two forms of malnutrition, with others stating that such children like the one in the picture (marasmic child) had AIDS and not malnutrition.

The perceptions are correct in their own sense in that a person or a child with severe marasmus does appear to have the same symptoms as the child with full blown AIDS such as being very thin, thinning of hair, oedema in some cases, loss of appetite, While a person with AIDS can also be malnourished if not properly fed although the person with malnutrition may not have AIDS and developed the condition due to other factors such as poor feeding or long term illness.

This confirms the findings of Matoti-Mvalo and Puoane (2011), who although the study was undertaken among adults also reported similar findings where participants when shown 9 pictures which ranged from thin to large body size and asked to choose a picture that they thought resembles a person with HIV/AIDS, chose a thin picture, whereas the qualitative data of the same study reported that participants preferred to be overweight and risk cardiovascular diseases, rather than being thin and stigmatized as a person with HIV or had AIDS. However CHWs had a better knowledge as they said that the causes of malnutrition were due to poor feeding of the child and they were able to identify the signs and symptoms

of malnutrition.

This level of knowledge on malnutrition is not only limited to the mothers talked to in Kanchele , community health workers also showed some confusion in differentiating between the signs for marasmus and those of kwashiorkor. If the CHWs could not understand the difference it can be assumed that there is need for training if proper management of malnutrition is to be achieved. The mismanagement of malnutrition is stressed by Jackson (2001) who argued that the current widespread problem of mismanagement of severe malnutrition has its origins in poor training and practice of doctors, nurses, and other health professionals. It is unusual for the appropriate case management of severe malnutrition to be included in the training of CHWs.

Despite the limited knowledge among community members, there is hope that with training the knowledge levels can improve according to Christiaensen et al. (2001) who stated that even in communities where formal education is limited; it may be possible to impart nutritional knowledge with specific child malnutrition education programs. The study by Christiaensen et al (2001) further explored the complementary role of nutritional knowledge using mothers' capability to correctly assess their children's nutritional status as a proxy for a community's nutritional knowledge.

In order to identify a need for training among health workers Puoane et al (2001) conducted a study to assess the management of severely malnourished children in two rural district hospitals and to recommend improvements for their care, the results showed that, the combined case fatality rate for the two rural districts for severe malnutrition was 32%. This was attributed to inadequate feeding, poor management of rehydration and infection, lack of resources, and a lack of knowledge and motivation among staff.

While the World Health Organization (2005) that assessed workforce capabilities in countries with a high burden of tuberculosis determined that poorly developed human resources information systems compromised the reliability of data on tuberculosis workforce, and that wide variation in training course duration and staff numbers were poorly correlated with tuberculosis programs' performance. Appropriate (re)training of front-line health workers is a necessary but not sufficient activity for improving health worker performance as well as the quality of tuberculosis control outcomes (Fugeueroa et al, 2005).

In South Africa, training started to improve inpatient management of severe malnutrition and was provided by UWC in collaboration with Provincial Departments of Health in Eastern Cape Province, and extended to KwaZulu Natal and North West Province. Staff at approximately 250 hospitals had been trained in the management of severe malnutrition. The study had concluded that, nurses had begun advocating for raised awareness of the physiological differences that occur in malnutrition and the need to include the WHO Ten Steps of treatment in the nursing curricula and in-service training. (Puoane et al, 2006).

Puoane et al, (2006) conducted a study to assess perceptions and attitudes towards severely malnourished children and their mothers/caregivers. The result showed that, nurses were placing blame on the mothers for not giving adequate care at home; nurses valued malnourished children less than those with other conditions; and nurses felt resentment towards caregivers. After receiving training nurses attitudes towards malnutrition changed and this resulted in the reduction in numbers of children who died during hospital admission.

5.2 Unbalanced diet /poor feeding by the mother

As depicted in the UNICEF conceptual framework, at the immediate level both inadequate food intake and diseases affect the child nutritional status. Even though the mothers could not explain how the poor feeding by the mother resulted in malnutrition, it is assumed that they

had a slight idea that when the child did not eat well they could be thin and weigh less. This notion of poor feeding can be compared with findings of Jen (2010), who cited the World Health Organization (WHO) definition of malnutrition as "the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific functions." The term protein-energy malnutrition (PEM) applies to a group of related disorders that include marasmus, kwashiorkor, and intermediate states of marasmus-kwashiorkor. Jen (2010) in the publication mentioned that low intake of calories or an inability to absorb calories is the key factor in the development of kwashiorkor.

As an example from a study by Bond et al, (2003) which mentioned that some women said, they had to be at the market all day selling, and this left them with insufficient time to make sure that the child was properly fed. In the discussions on the cause of the children's problems, there appeared to be differences between mothers of children recruited or not recruited. The former appeared to be more willing to accept the role of "hunger", "malnutrition", or "kwashi" (kwashiorkor). The latter group preferred to believe that the illnesses were due to too much dust in the townships or too much rain in the past rainy season. These mothers appeared to be offended by the insinuation that their children were ill due to "hunger" and some implied that the nurses attached this pejorative label without examining the children properly.

5.3 Poverty as a cause of malnutrition

Even though poverty was mentioned by the community leaders FGD as being the result of children that were shown in the picture it was not mentioned by all the grouped. In as much as it was not mentioned by all groups poverty does contribute to malnutrition. This is supported by the USDA (2003) which stated that poverty causes malnutrition, but malnutrition also contributes to poverty through increased morbidity, impaired development in children, and reduced capacity for work and productivity in adults. Staples account for

most expenditure on food for the poorest people, so increases in price might reduce the amount and quality of food consumed, thus increasing the risk of malnutrition and its consequences. With this understanding, the malnutrition in Kanchele may to some extent be attributed to poverty.

A study that was conducted in Ghana on some correlates of childhood poverty further endorses that poverty limits the ability of families to obtain sufficient food and contributes to high levels of malnutrition with long-term adverse effects. Further, poverty is linked to the health status of children through the inability of families to secure adequate health services and engage in health promoting behaviors.

5.4 Witchcraft as a cause of malnutrition

Among the issues that were cited for causing malnutrition was witchcraft as the parents of a malnourished child suspected that the child was bewitched when they showed signs of malnutrition and they sort to seek solutions from the traditional healer, despite the children not being healed after taking them to the traditional healer, the traditional healer remained the first option. According the WHO report (2002), it was stated that in developing countries, broad use of traditional medicine is often attributable to its accessibility and affordability. This was confirmed by what the Kanchele community members said that traditional healers were easily accessible.

A study by Taylor (2006) revealed that from the nurses interviewed in Taylor's study many of the mothers preferred explanations of witchcraft to the biomedical accounts that they presented. Traditional beliefs are widely held about the causes and cures of illnesses, including belief in traditional medicine and witchcraft. In the same study by Taylor (2006) witchcraft was often perceived as the cause for sickness and death, especially in cases of HIV/AIDS and a key feature in the witchcraft is the possession of body parts or blood.

From the study findings, the community opted to use traditional medicine as the first option instead of taking the child to the PHC. This preference to traditional medicine is not only common in Zambia but it is a belief that cuts across Africa.

Tabi et al (2006) conducted a research to gain understanding of the use of traditional and modern medicine among the people in Ghana, their findings indicated that choices in healthcare modalities by literate Ghanaians included either traditional or modern medicine, or blending of both. Strong influences on these choices were the level of education and related themes, influence of family and friends, and spiritual/religious beliefs. This confirms that use of traditional medicine is believed in even among the literate, no wonder it come out as a priority among the rural community of Kanchele. In their conclusion they stated that such findings indicate that traditional and modern medicines will always be part of Ghanaian healthcare delivery and efforts should be made to integrate traditional practitioners into the national healthcare delivery system (Tabi et al, 2006).

From this study it is clear that traditional belief does play a big role in the understanding and ultimately treatment of malnutrition. From the discussions with the community members, it was clear that witchcraft was the main suspect when it came to issues of malnutrition. The women believed that the children who showed malnutrition signs were actually bewitched or that their parents had extra marital problems. World vision Zambia in a case study conducted by Collins Kaumba (2012), revealed that a mothers baby was rescued from malnutrition and devastating superstition because her husband was taking her to the witch finder where she was accused of engaging in promiscuity which resulted in the child being sick (malnourished). Although there is no written scientific evidence that directly linked promiscuity to childhood malnutrition, it can be implied as when the bread winner had a relationship outside the home, there was a likelihood that they would have divided attention

between the home and the affair thus fail to support the family with the needed support of food

5.5 Diarrhoea as a cause of malnutrition

In as much as the communities did not directly link diarrhoea to malnutrition, they did mention that *a child appeared thin like an old person as a result of diarrhoea*. Despite the communities not linking diarrhoea to malnutrition, literature does link diarrhoea as a cause for malnutrition in children. The WHO (2009) stated that in developing countries, children under three years old experience on average three episodes of diarrhoea every year. Each episode deprives the child of the nutrition necessary for growth. As a result, diarrhoea is a major cause of malnutrition, and malnourished children are more likely to fall ill from diarrhoea.

Brown et al (2003) explained the link between malnutrition and diarrhoea by stating that infection adversely affects nutritional status through reductions in dietary intake and intestinal absorption, increased catabolism and sequestration of nutrients that are required for tissue synthesis and growth. On the other hand, malnutrition can predispose to infection because of its negative impact on the barrier protection afforded by the skin and mucous membranes and by inducing alterations in host immune function. Given the literature and the views from the community, it can be concluded that even though the communities did not understand the link between diarrhoea and malnutrition, diarrhoea does indeed contribute to a child becoming malnourished. The UNICEF conceptual framework also illustrate the link under the immediate causes which include diseases such as diarrhoea and other infections, which interfere with the child's appetite or absorption of food leading to under nutrition. The child may become undernourished due to inadequate dietary intake and an unbalanced diet (UNICEF, 1990).

In addition to the above it was apparent that communities did not understand that diarrhoea was one of the causes of malnutrition. In the UNICEF (1996) report for the Asia region, it was stated that health and nutrition are closely linked in a malnutrition-infection cycle in which diseases contribute to malnutrition, and malnutrition makes an individual more susceptible to disease. Malnutrition is the result of inadequate dietary intake, disease or both. Disease contributes through loss of appetite, mal-absorption of nutrients, and loss of nutrients through diarrhoea or vomiting. If the body's metabolism is altered there is greater the risk is of a child having malnutrition (UNICEF, 1996).

5.6 Stigma as a cause for late treatment of malnutrition

The fact that some mothers stated that they would not move around with a malnourished child showed that there was stigma in the community towards malnourished children. These findings confirm those of Bond et al (2003) who in a study undertaken on understanding HIV and AIDS related Stigma in Urban and Rural Zambia found that there appeared to be stigma associated with having a malnourished child and also with being labeled as having HIV/AIDS. Many mothers denied that their children were malnourished, even though objective measures employed provided evidence to the contrary.

5.7 Challenges with the referral system

In as much as the community did not prioritize the PHC for the treatment of malnourished children, they did at some point get the help from the CHWs who in turn referred them to the health centre. It is for this reason that when discussing about a referral system it does not mean only the forward referrals. Equal importance should be given to the downward referrals as well. If the patients are treated at the first level referral centre they may be referred back to the original primary health care centre with the necessary follow-up advices. DFID on its on line report mentioned that improvements in health education contributed to longer term

development which would imply improved referral system. This would enhance the trust towards the primary care centers by the patients from the catchments areas. Effective referral requires clear communications to assure that the patient receives optimal care at each level of the system. This communication need to be on both directions forward, describing the problem ascend at the lower level facility and backward, information back to the lower level facility describing the findings and the actions to be taken and the follow up needs. From the discussions with the community, it was evident that referral of a malnourished child was not considered as being a priority especially that they believe that the child who was malnourished was *bewitched*. It was also clear that despite the community having community health workers in their midst, their role was really under played as the community felt that that the *CHWs had no certificates* to prove that they had enough knowledge to pass on to the community. To successfully deliver interventions to prevent and treat malnutrition, it is vital that local health workers take a problem-solving approach to malnutrition in their communities. It is therefore the role of CHWS to help communities understand the various health challenges faced by communities. In addition the CHWs should also explain their role in the community referral system and their role as the first stage in the health system structure.

5.8 Role of grandparents in child care

In the focus group discussions it was apparent that the grandparents of the malnourished child played a great role when it came to the health of the child. According to Hillman (1999), grandparents can pass on to their grandchildren cultural knowledge as well family and community traditions. It is this desire to pass down the cultural knowledge that makes grandparents to be at the centre of decision making on health matters of the grandchildren. This was clear from all FGDs inclusive the CHWs that the grandparents dictated what treatment the child who was malnourished was to receive. In most cases the child was taken

to a traditional healer of a witch doctor, who quickly played the blame game with the parents of the malnourished child and soon accused someone in the village as being behind the child's state of wasting away.

Learning from the study on HIV/AIDS conducted in Uganda by Nyesigomwe (2008) there is a similarity with what the discussions from the Kanchele community brought out, that is the parents to the malnourished child consulted the child's grandparents on what to do when the child was sick (malnourished). This ties in well with Nyesigomwe (2008) who did a three-year pilot project in Uganda entitled the Grandparents Action Support Project (GAS), designed and implemented to strengthen the capacity of grandparents providing care to HIV/AIDS orphans and vulnerable children under the age of eight, and to improve the overall welfare of the families taking care of these children. After only seven months, an interim program evaluation revealed that several effective innovative and pragmatic community-based strategies had been developed and implemented by participants. The Project has had a multiplier effect in participating communities in that non-Project families are copying and learning from GAS Project homes. From this study, the role of grandparents in child care can be taken as good and grandparents should be included and encouraged to participate in child care.

5.9 Community participation

The lack of community participation in the prevention of malnutrition creates an environment where each community member had to only mind their own child. This type of set up limited the flow of information in the community. When people did not interact, it was not easy to share public health matters like that of malnutrition and how it would be handled at community level, how the community would prevent it. The lack of community participation also made the traditional belief systems to be seen as the most important way of treating children who had malnutrition.

6.0 Conclusion and Recommendations

In this chapter the conclusion considers the key findings and how they relate to the objectives, the chapter also brings out recommendations based on what the research team found and reasons why such recommendations were chosen are also given. The recommendations also cover points that were brought out by those that participated in the study. The recommendations hint on the need for awareness creation on malnutrition, the need to train CHWs, building more PHCs, improving the state of the roads, financial assistance for CHWs, the need for, more resources and equipment and states what needs to be done to achieve sustainability and feedback system

6.1 Conclusion

In conclusion, malnutrition and referral from the community to the health centre in Kanchele as a whole is still an issue that needs urgent attention by government, the community members, the local leadership, the politicians and cooperating partners. While the strong belief in traditional healers and the link of malnutrition to witchcraft were found to be issues that if not addressed would make it difficult to treat malnourished children on time. The lack of knowledge on malnutrition was found at all the levels in the Kanchele community as even the CHW were not able to differentiate between the signs of marasmus and that of kwashiorkor. The absence of an effective referral system was also found as one of the areas needing attention if children would be treated early and on time after being referred. It was also found that grandparents though their decisions on where the children would be taken for treatment was not the ideal, it would be important to target them in activities around child care due to the influence they have on their grandchildren's lives.

6.2 Recommendations

6.2.1 Awareness creation about malnutrition

Educating community members on the importance of malnutrition would help improve the

understanding that malnutrition is a disease that needs attention and that it is a problem not only for the family that is affected by for the entire community. Nutrition status also depends on the availability of sufficient knowledge about appropriate diets, taking into account local food habits to prevent problems of undernutrition and of diet-related non communicable diseases (FAO, 2004). The awareness should not target just the women but include the men and even elderly women who give wrong information about the diseases. In addition to this, some members mentioned that it is very important for the community to be encouraged to form groups to learn how to manage malnourished children.

6.2.2 Training community health workers:

It was recommended that the government should increase the number of CHWs in all the villages so that they can easily assess children who are malnourished within the villages where they live. They recommended that the community health workers should be officially trained by the MOH and be given certificates, then they will receive respect from all people in the village. The World Health Assembly in 2006 called for a health workforce which is matched in number, knowledge and skill sets to the needs of the population which contribute to the achievement of health outcomes by utilizing a range of innovative methods, community healthy workers are thought to be part of the answer.(WHO, 2006). These ideas of including health workers in the health system will help get the health services in the hard to reach areas. This cements the recommendations on the need to train more CHWs.

6.2.3 Building PHCs

The community also recommended that the government should find money to build more PHC to reduce the disease between one facility to another. The community felt the diseases discourage most people from seeking health care. The world health report 2008 stated that there is need to put people first by bring health facilities closer to the people. This therefore agrees with the need to build more health facilities closer to the communities.

6.2.4 Improvement of roads

According to the WHO report in Papua New Guinea, many areas are inaccessible by road and this makes it hard to provide health services to the communities. This problem of poor roads does hinder rapid and efficient service delivery of health services as some areas do not have roads and so instead of government bringing health services closer to the people the people have to follow the health services. The community felt that the poor roads contributed to lack of transport to most of the hard to reach areas.

6.2.5 Financial assistance for CHWs

The community health workers that there is need for them to be paid money for all the work that they did and so that they can be motivated to work. According to the UNICEF (2010), community health workers, though they are not compensated, non financial incentives and benefits are important for creating sustainable community health worker programs.

Compensation or remuneration of CHV(W)s continues to be an issue of intense debate in Nepal. The debate intensified in 1988 when the FCHV program was established and volunteers were given Rs 100 per month. Provision of this allowance could not be sustained and was discontinued after the first year, but is still remembered and discussed. The issue became complicated by the fact that there were several types of community-based health workers who were called volunteers and received payment from NGOs, but volunteers with the national health volunteer program did not receive a salary or financial compensation except for a daily allowance during training sessions. (Government of Nepal and Maternal and Neonatal Health 2003) As seen from other countries such as Nepal, the issue of remuneration is of great concern and as such it is agreeing with what the CHWs of Kanchele were recommending. The CHWs recommended that the government should consider paying them a bit of money as they have to walk from village to village educating people. And they stated that the community work they did was at the expense of their own families.

6.2.6 Resources and equipment

Resources required for any activity should be readily available for people to effectively carry out the work. In this study we saw that in some instances weighing bags, Salter scales, MUAC tapes for assessing malnutrition were not readily available for use by the community health workers. The participants recommended that the all tools should be readily available. This is likened to what is happening in Nicaragua where the lack of medical personnel, facilities and availability of supplies combined with the cost of medical care, Nicaragua really is a medical disaster in the making.(Nicaragua, 2011)

6.2.7 Sustainability and feedback system

Finally, it is very important that the community is involved at all stages so that there is a sense of ownership in what was being done. They also stated that CHWs did not get any feedback from the Clinics after referring the children, implying that it was difficult to know what the next steps would be for the child as they was no system for feedback. This makes it difficult to sustain the rehabilitated child once back in the community.

It is hoped that the findings of this study and the above recommendations will be highly utilized so that detecting and referral of malnourished children would be improved not only in Kanchele but anywhere where there are under five children in communities. This would lead to empowerment of individuals and communities if they are given a chance to identify their problems, to decide how to solve the problem and decide which one should be solved first and so forth.

Introduction of a well plan referral care mechanism could contribute to overcome some of the short comings and to minimize the prevailing deficiencies which ultimately leads to provide health care services to the people on an equitable basis, among the benefits of referral are the following; better patient care with quality, satisfaction of the client and service provider, proper access to the services, capacity building of the professional, establishment of

the liaison with the different services providing institution, minimization of the patient load in the secondary and tertiary level hospital, acknowledgement of the service provider by the community, establishment of the client / patient right.



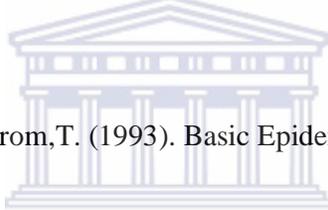
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8.0 Appendix

Focus group Discussion guiding questions

Questions for objective 1

1. What do you see in this child that is different from a normal child?
2. What do you think makes the child in the picture looks like this?
3. When a child looks like this, what do parents and people in the community think?
4. What actions are taken to deal with this child?
5. What do you think can help the child to go back to be normal again?
6. What treatment is often given to malnourished children in the communities?
7. Most of children who are malnourished get to the health centre when they are very sick. Is there anything that you know off that prevents parents from taking children early to the health facility for treatment?
8. How are decisions made about what needs to be done to a malnourished child?

Objective 2 questions

- 1 Have you ever heard or seen a child who is malnourished in your community?
- 2 In your experience what makes the child to be malnourished?
- 3 When a child is malnourished what do parents and people in the community think?
- 4 What actions are taken to deal with a malnourished child?

- 5 Most of children who are malnourished get to the health centre when they are very sick. Is there anything that you know off that prevents parents from taking children early to the health facility for treatment?
- 6 Who make a decision about the type of treatment the child needs to receive?

Objective 3 Questions

1. How do you determine that the child is malnourished or not?
2. What makes you decide to send the child to the hospital for treatment and what is the process that you follow?
3. What are the problems that you face in identifying children with malnutrition from the community?
4. What problems do you face in sending the children that you have identified as having malnutrition to the hospital for treatment?
5. How do you think you can overcome these challenges?

