KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF COMMUNITY HEALTH

EVALUATION OF INFORMATION, EDUCATION AND COMMUNICATION ON CHILD HEALTH IN AMANSIE EAST DISTRICT, ASHANTI REGION, GHANA

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE HEALTH EDUCATION AND PROMOTION

BY
RICHARD NTI
OCTOBER 2007

DECLARATION

This work has been the result of my own field research except where specific references are made which have been duly acknowledged. Except for this degree, it has not been submitted towards any other degree. I am responsible for views expressed, factual accuracy of the content and any other blemishes that this report might contain.

……

RICHARD NTI
STUDENT

……

DR. EASMON OTUPIRI

ACADEMIC SUPERVISOR

…….....
DR. ANTHONY .K. EDUSEI.

HEAD DEPARTMENT OF COMMUNITY HEALTH

DEDICATION

TO THE MOST HIGH GOD FOR HIS DIRECTION AND GUIDANCE, AND TO THE OF COMMUNITY HEALTH, SCHOOL OF MEDICAL SCIENCES

ACKNOWLEDGEMENTS

I thank the most high God for his guidance and protection, from the commencement to the completion of this study and the entire post graduate programme. I am really grateful to him.

I am also greatly indebted to Mr. Cletus Opoku-Amankwaah, District Public Health Nurse, Amansie East District Health Directorate who brought his superb editing skills together with knowledge of the subject area which has been invaluable, not only that but also supported me with relevant books on the subject. To him I owe immeasurable gratitude.

I wish also to express my gratitude to Ms Leticia Ayeh Diabene, DDHS Amansie East, for her flexible and efficient administrative support. To the staff of RCH in Amansie East who listened, discussed and have had to answer questions on the content of this work I extend my sincere appreciation for their patient and frank comments.

My deepest gratitude goes to Professor (Mrs) E.A ADDY of the Department of Community Health, School of Medical Sciences, KNUST, Kumasi who has taken keen interest in following my progress on this work and the entire post graduate course.

I owe debt of gratitude to Rev Dr. E.N.L Browne, my academic supervisor, who directed, supervised and contributed to make the study successful.

The support of the lecturers; Dr A.K Edusei, Dr.Easmon Otupiri, Dr. A.T. Odoi, Mr. K.Addai-Donkor, Mr. L.O. Agyare and staff of the Department of Community Health, KNUST cannot be allowed to go unnoticed.

I also note with gratitude the enthusiastic encouragement from Dr. Joseph Bonney, Deputy Director (Clinical Care) Ghana Health Service, Ashanti Region.

I appreciate Mr Reuben Cofie and Charles Agyemang Sereboo of the Regional Health Directorate, Ghana Health Service who helped me with the analysis of the data and also shared their rich experiences with me.

Thanks also go to my family for putting up with my absence, both mental and physical.

My sincere gratitude goes to my colleagues at the Department of Community Health, School of Medical Science, KNUST who have given encouragement and practical support at key times.

Finally to all other people who contributed in diverse ways to this work and for whom lack of space will not allow me to mention their individual names, please accept my gratitude and may the good Lord shower his blessings on you.

DEFINITION OF TERMS

CHILD HEALTH SERVICES:

Refers to preventive approaches that may reduce the exposure to infection or reduce likelihood of exposure that leads to diseases. These are as follows

- Immunization
- Vitamin A supplementation
- Growth promotion(weighing)
- Breastfeeding

EFFECT:

In this study, effect refers to changes in attitudes and knowledge of mothers on child welfare services.

QUALITY:

Refers to the level of knowledge of staff on IEC, attitude of staff i.e how they relate to mothers, skills of staff i.e. - communication skills

FREQUENCY:

How often are mothers exposed to child welfare services.

REACH:

What number of posters, leaflets and brochures that are found in the communities.

EXCLUSIVE BREASTFEEDING:

The practice of feeding only breast milk (including expressed breast milk) and allows the baby to receive vitamins, minerals or medicine. Water, breast milk substitutes, other liquids and solid foods are excluded. (WHO, 2004)

SKILL:

Refers to staff-mother relationship in terms of communication variables;

- Information giving
- Questioning
- Appearing competent
- Partnership building
- Body movements.

IEC;

Refers to approaches used to reach children and mothers with interventions they need.

LIST OF ABBREVIATIONS AND ACRONYMS

ACSD: Accelerated Child Survival Development

BCG: Bacillus Calmette Guerin

COPE: Client Oriented Provider Efficient Service

CHPS: Community-based Health Planning and Services

CHS: Child Health Service

CWC: Child Welfare Clinic

CWS: Child Welfare Service

DCE: District Chief Executive

DDHS: District Director of Health Services

DHMT: District Health Management Team

DHS: Demography and Health Survey

DPT: Diphtheria- Pertussis- Tetanus

EPI: Expanded Programme on Immunisation

GHS: Ghana Health Service

GPRS: Ghana Poverty Reduction Strategy

HIRD: High-Impact Rapid Delivery

IEC: Information, Education and Communication

IMCI: Integrated Management of Childhood Illnesses

KNUST: Kwame Nkrumah university of Science and Technology

MDG: Millennium Development Goals

MOH: Ministry Of Health

NO: Nutrition Officer

OPV: Oral Poliovirus Vaccine

RCH: Reproductive and Child Health

RED: Reaching Every District

UNFPA: United Nations Population Fund

UNICEF: United Nation's Children's Fund

USAID: United States Agency for International Development

WHO: World Health Organisation

TABLE OF CONTENTS

CHAPTER THREE

CHAPTER FOUR

CHAPTER FIVE

CHAPTER SIX

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

The provision of IEC has been long considered a key component of public health programmes. Within the Ghana Health Service, not only is IEC supposed to inform mothers of the existing services in order to increase the use of those services, but also to educate mothers on the proper use of services to ensure correct and continued usage. The present national and regional situations indicate that coverage indicators of some child health services are still not the best in spite of various planned interventions.

The main purpose of the study was to evaluate IEC on Child health in the Amansie East District in Ashanti Region and to make recommendations. The study was a descriptive one. The sample of the study was drawn using a multi stage sampling. A total of 213 respondents were selected, comprising 202 mothers and 11 RCH staff for the data collection. Existing IEC approaches/strategies, mode of administration of IEC, quality of staff disseminating IEC, reach and frequency of the existing IEC and effects of IEC on mothers were evaluated to find out whether IEC could be part of the reasons for the low coverage as far as child health services are concerned.

The analysis of the findings reveals that 100% of the RCH staff used print materials (posters) as the main mode of administration. Approximately 90% used interpersonal as the main strategy. On the reach of existing IEC, only the district capital and the health centres had few posters on child health. On the frequency, approximately one out of every four mothers questioned in the community was able to recall that nurses visit them monthly. It is also striking to note that approximately 90% of the RCH staff were not able to define IEC, neither were they able to say anything meaningful as far

as IEC is concerned. Mothers' knowledge on various antigens for immunizations and immunization schedule are still very low. 20.8% of mothers were found not to be able to mention any antigen despite their exposure. The study suggests that IEC may be a determinant of low coverage of child health indicators. It is recommended that minimum budget should be provided by the District Health Management Team (DHMT) for the development of the basic formula of IEC. In addition, the DHMT should implement selective reward programme for health staff in communities where caregivers are highly knowledgeable about vaccines and immunization schedules. Also further studies should be conducted to determine the best approach of IEC based on the characteristics of mothers in the district.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Child health is critical to the achievement of the Millennium Development Goals, most obviously the target to reduce the under -5 mortality rate by two-thirds between 1990 and 2015. During the last 10years, although Ghana has achieved a reduction in the child mortality rate the levels still remain high. The utilisations of the various interventions have not led to the desired level. However, ensuring children's health is critical not only for reducing child mortality and morbidity, but also for increasing the likelihood of a healthier adult life.

The primary goal of child health services is to prevent the major causes of death, difficulties, and disease during childhood, accidental injuries, infections, educational problems and behaviour problems (Last, 1986). According to WHO (2006), the child health goal is measured by; under five mortality, infant mortality rate and the proportion of one year-old children immunised against measles. Research has shown that high coverages of effective interventions such as immunisations, exclusive breastfeeding for the first six months, growth promotion, nutrition rehabilitation, insecticide treated net use and Vitamin A supplementation have the potential to reduce child morbidity and mortality (Darmstadt et al. 2005).

One of the foundations of child survival programme is behaviour change. It is through change in behaviour at the household level, that child health programme often has the greatest impact (Flay, 2001). This change is made possible with effective information,

education and communication (IEC) interventions. Information, education and communication (IEC) have been recognised as a powerful and effective means of translating the sometimes arcane and complex messages of social interventions for the benefit of a diverse range of target groups. It is therefore not surprising to note that many projects including child health services employ IEC as a strategy for programme implementation. The use of IEC has been highlighted in recent years and brought into sharp focus in a publication by WHO (2001) entitled ‘’Information, Education and Communication: lessons from the past; perspective for the future’’. The publication took a systematic view of lessons learned from numerous IEC projects over the last 25 years. Among the lessons learnt was that IEC works; it creates awareness, increases knowledge, changes attitudes and moves people to change or continue their behaviour or to adopt an innovation. Currently, existing child health services, provided by Ghana Health Service include vitamin A supplementation, immunization against vaccine preventable diseases, distribution of retreatment kits for bed nets, weighing of children, distribution of child health record card and the registration of children less than one year. Special IEC interventions have been developed by various stakeholders such as UNICEF, WHO, UNFPA and USAID to increase the uptake of these services, examples of such interventions are IMCI, Child Health Promotion week, High Impact Rapid Delivery and Reaching Every District (RED) approach in routine immunization. In spite of all that, coverages for the various antigens for child health are still low in the Ashanti region. This study seeks to evaluate IEC on child health services in the Amansie East District, which is one of the districts in Ashanti Region by looking at the existing IEC, quality of staff, reach and frequency, mode of administration and also its effects.

1.2 Problem Statement

Child health is one of the important indicators for describing mortality conditions, health progress and overall social and economic well being of a country. The 2001 World Bank Report although indicates that mortality of children aged less than five years has improved slightly in sub-Saharan African countries, the levels still remain very high. The utilization of the various planned interventions has not yielded the desired results. However, in theory, reduction of the under five morbidity and mortality is said to be simple and cost effective. High coverage of effective interventions such as immunisations, exclusive breastfeeding for the first six months, growth promotion, nutrition rehabilitation, and insecticide treated net use and Vitamin A supplementation should lead to a reduction (Darmstadt et al, 2005). It is estimated that immunizations prevent three million child deaths a year (World Bank, 2001). This suggests that the knowledge and instruments to reduce child mortality exist but that children continue to die because the interventions are not reaching them. In Ghana, the expanded programme on immunization aims for 95% coverage and complete vaccination schedules for 90% of children under 1 year of age. Although the coverage of all child health services in Ghana has increased especially in the last ten years, EPI targets have not been achieved yet and there are still regional differences. According to immunization coverage evaluation surveys conducted by WHO Ghana office in 2004, regional coverage varies from 13% in Upper East Region to 61% in Greater Accra Region. In addition, the national average visits for the 0-11months age group at CWC was 3.9 in 2003 and in 2004 it was 4.1(GHS, 2004). This is really below the recommended 9 visits by the national RCH unit, which is necessary for children to be fully immunised by their first birthday and receive the full benefits of growth promotion and other essential child health services. Moreover, EPI (Penta-3),

the performance was 72.9% instead of the National target of 90% in 2004. Ashanti Region where this evaluation is being carried out had 66.4%.

The Amansie East District Health Directorate 2004 annual report (GHS, 2005), indicates EPI (Penta-3) was 51.5%. Coverages for the other antigens for a three year period (2004-2006) are listed in the Appendix 4. This 51.5% indicates that there is still a big gap between EPI targets and coverage rates in the study area.

To achieve the coverage targets for child health services, information about reasons for low coverage is very important. Ghana Health Service, since its inception in the year 2000, has been using Information, Education and Communication (IEC) as a tool in support of its clinical and public health activities. Various researches conducted by UNICEF and WHO, in applying IEC interventions in support of public health programmes have revealed that, IEC works and achieves results. It is therefore expected that coverage indicators of child health services under effective and efficient IEC, should improve drastically with consequent achievement of child health goal. This is measured by under five mortality, the infant mortality and the proportion of one year-old immunised against measles. This study therefore looks at evaluation of IEC in Amansie East to find out whether it could be part of the reasons of the low coverage of the various antigens.

1.3 Rationale for the Study

The provision of information, education and communication (IEC), has for long been considered a key component of public health programmes within the Ghana Health Service. Within child health, it has two major programmatic objectives; to inform mothers of the existence of child health services in order to increase the use of those services; and to educate mothers on the proper use of services to ensure correct and

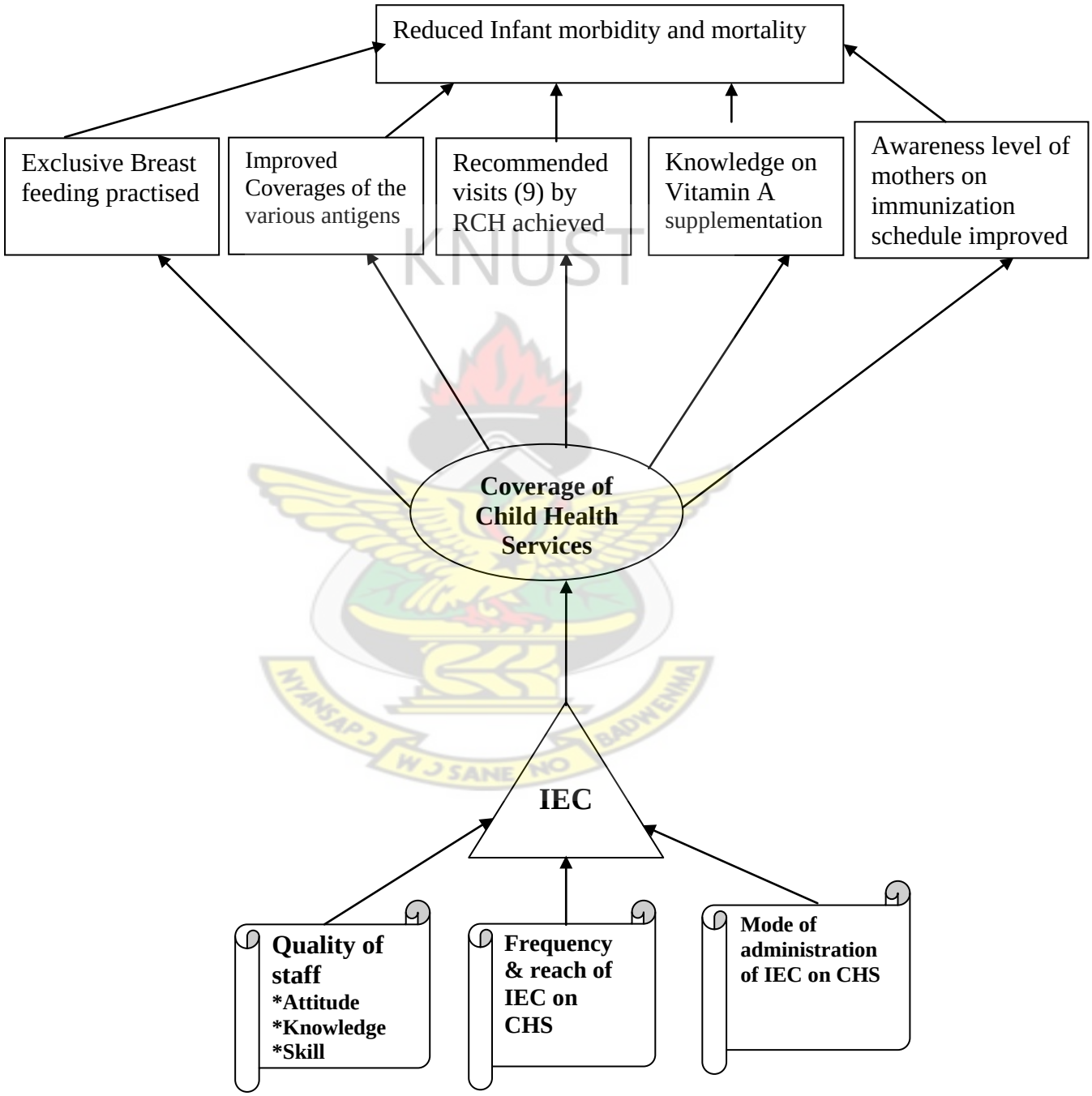
continued usage. Although much work has been done to evaluate the effectiveness of such specific IEC activities as producing materials, counselling, and using promotional techniques, very little has been done to measure or evaluate IEC on child health services especially, when it comes to specific messages that are given to mothers.

As the country strives to reach the targets of the Ghana Poverty Reduction Strategy (GPRS) in the short term as well as the Millennium Development Goals (MDGs) in the long term, it is imperative that indicators for child health are improved. Six of the MDGs are directly relevant to children and match the goals set out in 'A world Fit for Children' (United Nations, 2002). Goals 4, 5, and 6 set out to reduce child mortality, improve maternal health and combat HIV/AIDS, malaria and other diseases respectively. Understanding the role IEC plays in child health is critical to the Ghana Health Service. What IEC approaches/interventions exist? What is the mode of administration? What is the reach and frequency of the existing IEC? Calibre/quality of people in charge of IEC and effects of IEC? are all important questions to be asked?

Ghana has made a modest progress as far as child health goal is concerned. The 2001 World Bank Report also indicates that mortality of children aged less than five years has improved slightly in sub-Saharan African countries. These improvements have been made possible as results of the various interventions such as integrated management of childhood illness (IMCI) and the child health promotion week, which is used to increase the uptake of essential services needed for optimal growth and development of children aged 0-5years. Progress in these improvements has been very slow with great variation between regions and within districts. The findings of the

study will then be used to analyse and help improve the quality of IEC services as well as identify problem areas and take corrective action.

4.1 Figure 1 Conceptual Framework



Source: Nti, 2007.

1.5 Research Questions

- What type of IEC exists for child health?
- What medium is being used for the IEC?
- What is the reach and frequency of the existing IEC?
- What is the quality of staff disseminating the IEC?
- What is the effect of existing IEC on child welfare services?

1.6 Main Objective

The main objective of the study is to evaluate information, education and communication (IEC) on Child Health in the Amansie East District.

1.7 Specific Objectives.

- To determine the existing IEC on child health.
- To determine the mode of administration of IEC.
- To determine the reach and frequency of existing IEC.
- To determine the quality of staff disseminating IEC.
- To determine the effect of existing IEC on child health.
- To make recommendations for improving the existing IEC

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction.

Child health services are targeted at children below the age of five years. The package of services aims at promoting healthy growth and development through growth promotion, immunization against childhood diseases, vitamin A supplementation, treatment of minor ailments, referral and group and individual counselling of caregivers (GHS,2005)

The primary goal of child health services is to prevent the major causes of death, difficulties and diseases during childhood, accidental injuries, and infections, educational and behavioural problems (Last, 1986). Clift (2001) defines information, education and communication as public health approach aiming at changing or reinforcing health related behaviours in a target audience concerning a specific problem and within a pre-defined period of time, through communication methods and principles. National Aids Control Organisation, Ministry of Health and Family Welfare in India sees IEC as a process that informs, motivates and helps people to adopt and maintain healthy practices and life skills. It aims at empowering individuals and enabling them to make correct decisions about safe behaviour practices. Sherman (1999) sees IEC as an umbrella term for three distinct, but interrelated disciplines: Information, education and communication. He describes them as follows; Information as such practices as public relations, news media and information dissemination, education as formal and non- formal educational systems and communication as the mass media, entertainment, social marketing, and advocacy and so on. The distinction is merely made to demonstrate the interdisciplinary nature of

IEC and the number of different skill areas in which an IEC manager must attain familiarity.

2.2 Existing Information, Education and Communication Approaches/Interventions

A number of simple, proven and cost – effective health interventions exist to prevent the loss of life among infants and children. The Government of Ghana recently adopted the High- Impact Rapid Delivery (HIRD) approach as a national strategy to reduce child mortality (GHS, 2006). The approach bundles core health and nutrition interventions and delivers many of them in the heart of communities where families tend to lack access to healthcare facilities and lack even the most basic knowledge on how to manage common childhood disease. The Accelerated Child Survival Development (ACSD)/HIRD package includes routine immunization, vitamin A supplementation, exclusive breastfeeding and complementary feeding, use of insecticide treated bed nets, treatment of diarrhoea, malaria and pneumonia and prevention of mother –to-child transmission of HIV (PMTCT).

The Ghana Health Service has also initiated Community-based Health Planning and Services (CHPS) as a complementary strategy to the HIRD approach. CHPS promotes the idea that communities can be active participants in the provision of their own healthcare. The programme delivers primary care closer to communities, mainly through CHPS compounds, community-built units, housing at least one community nurse. At CHPS centres community health nurses are supposed to promote the use of ITNs, Vitamin A supplementation, immunization and also to educate caregivers to complete all immunisation for children aged 0-12months. Results from Nkwanta District in the Volta Region provide evidence that CHPS had an impact on safe-

motherhood practices. The odds of having received antenatal care were more than five times greater in Service zones where CHPS was implemented compared with rates in '' Not Yet CHPS'' communities. Again a replication of the Navorongo CHPS approach was also associated with changes in indicators of infant and child care. For example, the odds of being fully immunized were 2.4 times greater among children living in community-based health planning and services areas compared with the odds for children in ''Not Yet CHPS'' areas (Awoonor-Williams et al. 2004)

The community IMCI approach is also one of the key strategies for improving child health and reducing mortality in children less than five years of age. It was developed by WHO and UNICEF. Ghana Health Service adopted the community IMCI with support from WHO. The objective was to improve the knowledge and practices of families and communities in order to improve nutritional status and health of their children. Schellenberg et al. (2004) in assessing the effectiveness of facility-based IMCI in Tanzania noted that mortality in IMCI districts was 13% lower than in the comparison district. By this, IMCI appeared to have impact on mortality. The child health promotion week is also another approach. It was instituted in 2004 to improve efficiency in service delivery, quality of care and above all coverage of children under 5 years. It was also to afford both the caregiver and service provider a unique window to ensure the uptake of selected child health services in an integrated manner. Minimum package of services include immunization, growth promotion, re-treatment of bed nets and vitamin A supplementation among others.

2.3 Mode of Administration of IEC

Every individual mode of IEC has its own merits, drawbacks as well as their own sphere of effectiveness. A specific mode of communication is more useful in a specific setting on a specific group than others.

A good strategy of IEC always employs a multichannel, mutually reinforcing approach appropriate to the audience and prevailing conditions. Laverack (2001) proposed a simple formula for effective IEC in Vietnam. The formula comprises a combination of three key elements; mass medium such as radio, television, and commune broadcast or mass campaigns, face to face communication by family member, friend, peer, health professional or member of a mass organisation, a print material such as leaflets and brochures. For effectiveness, a combination of at least one of each of the three key elements, and can be supported when available by at least opportunistic IEC activity such as a health day or competition. Shimp (2004), concluded in a study that communication interventions that included advocacy with leaders, community involvement with service delivery and child tracking, and media partnerships at various levels were responsible for dropout reduction and immunization coverage. In India, UNICEF's social mobilisation network contributed to the increase from 30.48 million to 33.96 million children vaccinated in hard to reach districts between November 2002 and February 2003. A review of vaccination records in a slum in Mumbai showed that while coverage rates for DPT vaccines were 78 percent in communities where primary school students made home visits to encourage mothers to bring their children to mobile vaccination units, rates were 67 percent in communities that lacked substantial participation (UNICEF, 2003).

In Bangladesh in the 1990s, self-help organisations were mobilized to update the list of children, announce the dates of EPI sessions, motivate mothers to attend EPI

sessions, and liaise with government workers. Improvements in the EPI coverage were greater in the intervention area than in the comparison area. In the intervention area, BCG vaccine coverage increased from 55.8 percent to 74.4 percent, the coverage of DPT1, DPT2, and DPT3 improved 65 percent to 79.7 percent, 52.1 percent to 63.2 percent, and 44.8 percent to 47.9 percent, respectively. The measles vaccine coverage also increased from 43.4 percent to 59.2 percent. For the same period in the comparison area, the coverage of EPI decreased for all vaccines (Hanifi & Rasheed, 2000).

In 2003-2004, a National Hand washing campaign utilizing mass media and community events took place in Ghana. The study group for the campaign was women with children under five. The unifying message across all communication channels was that hands were not ‘’truly’’ clean unless washed with soap. Evaluation of the campaign indicated that, campaign reached 82% of the study population. Sixty –two percent of women knew the campaign song, 44% were exposed to one channel and 36% to two or more. Overall, TV and radio had greater reach and impact on reported hand washing than community events, while exposure to both a mass media channel and an event yielded the greatest effect, resulting in a 30% increase in reported hand washing with soap after visiting the toilet or cleaning a child’s bottom (Scott, 2007). This is an indication that communication programmes utilizing variety of complementary channels always achieve results.

A number of studies allow comparisons of elements in communication campaigns. In Zimbabwe, Kim et al’s (2001) pre and post analyses found that in a communication campaign to encourage youth to ‘’say no’’ to sex, launch events, leaflets and dramas had greater reach than components of the campaign that relied on newsletters, radio programmes, peer educators and a hot line. Agha’s cross- sectional study (2002)

found that peer educators and providers had less coverage but stronger impacts on individual's intention to use the female condom than the mass media. Benefo and Takyi's cross sectional research (2003) also showed that mass media effects on AIDS related knowledge and behaviour in Ghana were larger than those of interpersonally based communicative channels. Manafa et al (2006) conducted pre and post intervention survey on the knowledge, attitude, belief and practices of people in Lagos State (Nigeria), about HIV/AIDS and found that mass campaigns using multiple channels can be effective. This shows that each medium has a role to play. International initiatives using IEC have focused on combination of approaches to derive maximum benefit from IEC.

2.4 Reach and Frequency

It is common knowledge in public health that one of the reasons why many communication programmes fail is because they do not reach their audiences with sufficient frequency. An evaluation study done by the Health Information and Research Unit of the Republic of Maldives in 2002 on the use of IEC concluded that people who saw leaflets under evaluation, report better knowledge than those who have not seen any leaflets. Recent social marketing research has demonstrated that repeated programme exposure is needed to achieve substantial changes in health behaviours (Agha et al, 2001)

A study conducted in Zambia in 2007, on reach and impact of social marketing and reproductive health communication campaigns revealed that those who had highest levels of exposure were roughly 30% more likely than those with the lowest levels of exposure to have tried condoms.

In Voronezh, higher exposure to media messages correlated with higher coverage rates for child health services (Porter et al. 2000). It is also noted by Zimicki et al (1994) that good access to a well- developed media system also contributed to positive changes in knowledge and increased participation in services. He did state that access to communication interventions, increased the percentage of fully vaccinated children from 54 percent to 65 percent. Similar increases were observed in the percentage of children ages 2-8 months with at least four vaccines and the percentage of children ages 9-11 months who had all vaccinations.

Stephenson and Tsui, (2002) in their study on reproductive health concluded that a woman's previous exposure to health care services was a strong predictor of her susceptibility to make her use available reproductive services. The authors further reported that in a study which was conducted in rural Mexico, Potter and his colleagues showed that contact with health professionals during pregnancy leads to an increased likelihood of postnatal service use.

A substantial number of children worldwide do not complete immunization schedules because neither health services nor conventional communication mechanisms regularly reach communities. In some communities, low immunization rates are associated with families living a long distance from health services, having little access or exposure to large- scale or local media (Waisbord and Larson, 2005).

2.5 Quality of Staff.

As the main point of contact between clients and the health care system, health professionals play a major role in identifying and meeting clients' health care needs. How well they respond to clients' needs depends on individual practitioners' technical and interpersonal skills. If health professionals' services and behaviour do not meet clients' standards, clients may seek care elsewhere or go without care altogether. Asuquo et al, (2000), in assessing how the attitude of hospital staff influence the utilization of health facility for obstetric care at the teaching hospital, Calabar, Nigeria, found out that negative attitudes of hospital staff towards patients stood as a barrier to the utilization of available obstetric care.

Waisbord and Larson (2005), noted that the quality of the interaction between health workers and caregivers is decisive to ensure completion of the vaccination schedule, not only that but also high dropout rates and caregivers' negative attitude about immunization services are due to poor or inadequate information sharing by health providers, the failure of health providers to communicate correct information about vaccine effects and schedules, to check whether caregivers know and understand information, and to give them opportunities to ask questions partially account for incomplete vaccination of young children. Dr. Ending Achadi of Mother Care-Indonesia made a presentation at the international conference held in Atlanta GA, May 2001, on forging effective strategies to combat iron deficiency. In his submission, he noted that different studies showed that consumer knowledge about anaemia was low, however, when consumers were informed, the compliance rate for taking iron tablets increased. Unfortunately, consumer ignorance is caused partly by health provider's limitations, including lack of knowledge about anaemia and iron tablets and insufficient communication and counselling skills. He further stated that

improving health provider's knowledge and communication skills has been effective in improving program content and counselling.

Several barriers may limit providers' ability to provide quality care. Knowledge gaps, including both community 'myths' and insufficient knowledge and skills among providers, represent one type of barrier (Best 2002). Quality of services also comprises client- provider interaction. If the relation between the provider and the client is poor then it will affect the quality of the services and the subsequent use of the services as well.

Webster et al (2001) conducted a study to examine satisfaction with health care providers and to compare differences in service use in the first four weeks after birth between depressed and non-depressed women who attended bookings in Royal women's hospital. The results indicated that 16% of the women were dissatisfied with health service provider and that could have contributed to women not utilizing the services. This suggests that for some women to use health services they must be satisfied with quality of the services and the service providers as well. It is therefore apparent that interpersonal relations between providers and clients can also influence client's perceived quality and utilization of service. In Lebanon, nearly all women based their choice of provider on their previous experience and rated physicians by the extent of being 'close' to one's heart (Kabakian-Khasholian et al, 2000). In Uganda, rural women had negative feeling towards providers of maternity care at government health facilities, and expressed doubts about the efficacy of specific therapies. Health workers were said to be rude, poorly trained and unwilling to dispense prescribed drugs. They were also perceived as deliberately avoiding maternity patients, and abandoning them in critical conditions, as well as expecting to be bribed, giving false information, and lacking ethics. Consequently, most mothers

said they only went to the hospital or health centre as a last resort in the event of emergency (Kyomuhendo, 2003). Hall et al (1988) reviewed 41 studies which employed observation of physician-patient interaction in order to explore the relationships between communication variables and patient satisfaction, recall and understanding, and compliance with instructions. They clustered the communication variables identified in the studies they reviewed into information giving, questioning, and appearing competent, partnership building, social conversation, body movements, positive talks, negative talk and total communication. The analysis showed that satisfaction was consistently related to information giving, appearing competent, partnership building(i.e. making the patient feel a participant in the consultation) immediacy in body movement(i.e. more eye contact, open posture, standing or sitting closer to and turning towards the patient), more positive talk, than negative talk, and more overall communication. Compliance with instruction was associated with more information giving, fewer questions, and more positive talk than negative talk. Recall and understanding was also related to these variables with the addition of more partnership building. Good communication skills are therefore necessary to ensure that good quality services are provided and that service users are satisfied. It is through communication that trust and rapport are established between the provider and user of a service.

2.6 Effects of IEC

In January 1997 the WHO's Department of Reproductive Health and Research commissioned a retrospective study of experience in IEC as it had been applied to public health initiatives globally. The purpose of the study was to examine lessons learned from two decades of experience in applying IEC interventions in support of

public health in order to improve the integration of reproductive health service. The lessons were that IEC works. It creates awareness, increases knowledge, changes attitude and moves people to change or continue their behaviour. This is supported by UNICEF's Accelerated Child Survival and Development(ACSD) approach in Ghana. Since 2001 UNICEF's health programmes in Ghana have worked closely with the Ministry of Health in the Upper East Region to reduce high levels of child mortality using ACSD approach. After 18months of implementation- January 2002 to July 2003- the Ghana health Service has been able to increase the number of children sleeping under impregnated bed nets from 4.6 per cent to 21 per cent, the use of oral dehydration therapy to treat diarrhoea from 35 per cent to 65 per cent, full vaccination of children between 12 and 23 months from 67 per cent to 77 per cent. The ACSD approach has proven to be extremely successful in reducing high child mortality rates in the Upper East Region (from 155 of 1000 live births to 79 of 1000 live births) and districts where it has been implemented by raising coverage levels of child survival intervention.(Ghana Statistical Service et al, 2004)

Flay et al. (2001) describe the relationship between exposure to interventions and behaviour change as a series of steps: (1) exposure will lead to awareness, but only when message is heeded; (2) awareness will lead to changes in knowledge, but only when the message is comprehended; (3) changes in knowledge will lead to changes in beliefs, but only if the arguments or conclusions of the message are accepted; and (4) changes in beliefs might lead to changes in attitudes, intentions, and ultimately, behaviour. If the audience is to move through this process successfully, communication must be effective.

In the model, health beliefs conceptualise the decision to seek health care as a rational balance between perceived susceptibility, barriers and benefits. Health beliefs also

refer to attitudes such as values and knowledge that influence a mother's treatment seeking behaviour for her child. Studies have shown that knowledge gaps underlie low compliance with vaccination schedules and that caregivers are less likely to complete immunization schedules if they are poorly informed about the need for immunization, logistics (time, date, and place of vaccination), and the appropriate series of vaccines to be followed(Harmanci et al. 2003).

According to Echevarria & Frisbie (2001), the education a woman receives about pregnancy, labour and delivery, and caring for the newborn baby is very important especially for the first time mothers. In addition a woman positive previous experience with healthcare professionals can also create confidence in and acquaintance with health care service so that they may be more likely to use maternal health services.

Chakraborty et al (2002), also noted that with adequate counselling and education during antenatal visits, mothers may become aware of possible postnatal complications and sources of quality of health services for treatment of these complications. Atkinson and Cheyne (1994) examined inadequate demand for services among urban poor populations. They found out that poor uptake of immunization in urban areas is associated with mother's unawareness about repeat visits to achieve complete immunization rather than overall vaccine aware-ness.

Agrawal et al (1994) conducted a study in Pakistan on factors influencing utilization of postnatal services. The study revealed that 26.2% of the mothers who knew about the postnatal services, 25% utilised them. Only one of those who were not aware about postnatal services used them. An intervention in Ethiopia found that ''reminder/prompt'' materials reduced dropout rates compared to the control group (Berhane & Pickering 1993). Community health providers followed 6-week-old to 23

–months-old children who visited vaccination centers to determine whether reminder stickers applied to the inside of their home front door would reduce immunization dropout rates. The health workers gave a circular sticker with a picture of a child receiving a vaccination and an appointment date to one group of mothers. The immunization dropout rate of children whose mothers received a reminder sticker was 55 percent lower than that of the control group (7.3 percent vs. 13.3 percent)

CHAPTER THREE

3.0 METHODOLOGY

3.1 Profile of Study Area

The Amansie East District is among the 21 administrative districts in the Ashanti Region of Ghana. Bekwai serves as the administrative capital and some of the main settlements are Kokofu, Essumeja, Anwiankwanta, Dominase, Poano, Ofoase Kokoben, Senfi and Huntado. Politically and administratively, the district is divided into 2 constituencies; namely Bekwai Central and Bosome Freho. The two constituencies have a total of 38 electoral areas. There is one Town Council and 11 Area Councils and 162 Unit Committees. There are paramouncies in the district namely, Bekwai, Essumeja, Kokofu, Denyase, Amoafu, Adankraja and Asamang.

3.2 Location

The District is located in the southern part of the Ashanti region and shares boundaries with the Amansie West and Central districts to the West, Bosomtwe-Atwima-Kwanwoma district to the north, Adansi South and Adansi North to the south and Asante Akim South district and Birim North in the Eastern region to the East. The district lies within latitude 6° 00N and 6° 30N and longitudes 1°00W and 1°35W. It covers a total land area of about 1266km and has 420 communities (Department of Planning KNUST, 1996).

3.3 Geographical Pattern

The Topography is relatively flat with occasional undulating uplands, which rise around 240metres to 300metres found around Lake Bosomtwe. The area is drained by the Oda River and its tributaries including Banko, Donkron and Anum portraying a dentritic pattern. Another important water body is lake Bosomtwe, which is the only natural lake in the country and also provides the only inland drainage system in the country. It offers a great potential for tourism.

3.4 Climate

The climate of the district is the semi-equatorial type. It is characterised by double maxima rainfall. The first major rainfall season starts from March and ends in July. The second rainfall starts from September and ends in November. The main annual rainfall is between 1600mm-1800mm. it has a fairly high and uniform temperature ranging between 20°C in August and 32°C The temperature regime and rainfall pattern enhance the cultivation of many food crops.

3.5 Vegetation

The District lies within the moist-semi-deciduous forest zone. Some of the tree species are Odum, Wawa, Edinam and Mahogany. The parts of the forest have been reserved. The forest reserves include the Bosomtwe Range Forest Reserve, the Essumeja Forest and the Fun Forest Reserve. Outside the forest reserves, human activities particularly farming and timber extraction have reduced the primary forest to secondary forests. Chrolonena ordorata, popularly called ‘’Acheampong’’ shrub seems to be the predominant vegetative cover in many parts of the district.

3.6 Geology

The district has three geological formations. These are the Birimian, Tarkwain and granite rocks, which are rich in mineral deposits. The minerals found in the district include:

- Gold at Yapesa, Koniyaw and Behenase.
- Clay deposits at Boagyaa-Besease
- Sand and Gravel deposits at Patasi, Sanfo-Aduam, Dominase and Esiase.

3.7 Population

The population of the district, according to the 2000 Population and Housing Census is 219,508 with annual growth rate of 3.0% for 2007. This is 6.1 % of the total population of Ashanti region. By Ghana Health Service data, the population is 189,686. The population distribution by sex according to the 2000 Population and Housing Census is;

- Males = 108,292 - 49.3%
- Females = 111,216 – 50.7%

The population of the district grew at the rate of 2.1% between 1970 and 1984. The current rate of population growth is 3.0%. This is about the same as the National Population growth rate of 3.1% and higher than the regional figure of 2.8%.The average household size is estimated at 7.1persons which is higher than the National rural figure of 5.2 persons. This implies that each household has a large number of people to feed, cloth and house. Given the low per capita income of ¢11,172.81 in the district, it is clear that most families are characterised by low standard of living as evidenced by the expenditure pattern where the bulk of the families income goes into food (37.2%), clothing (11.0%) and education (27.5%) (Department of Planning

KNUST, 1996). About 87.1% of the population is in the rural area of the district and the remaining 12.9% in the urban area. The population distribution by economic activities is shown below.

Table 3.7.1 Occupational Distribution of People in Amansie East

Occupation	Male	Female	Total %
Agriculture	34.2	24.0	58.2
Services	7.8	11.9	19.7
Commerce	7.3	6.4	13.7
Industry	3.5	3.2	6.7

Source: Department of Planning-KNUST, 1996

3.8 Health Facilities

On health facilities, the Amansie East District has two government hospitals, three government health centres, seven mission health facilities, three private hospitals/clinics/maternity home and three community initiated clinics. Nine (9) of the above facilities provide reproductive and child health services. There are a number of traditional birth attendants (TBAs) and Community Based Surveillance Volunteers whose activities are effectively monitored by the District Health Management Team (DHMT). There are a number of Medical Officers, Medical Assistants, Nurses/Midwives, Community Health Nurses, Auxiliary Nurses, Health Aides and others who help in the health delivery system.

3.9 Water Supply

The rivers and streams constitute the main sources of domestic water supply in the district. About 30 percent of the communities have access to potable drinking water. These comprise pipe-borne water, boreholes and hand-dug wells. Out of the 30% of the communities that have access to potable water, a significant proportion of the households continue to draw water from the rivers and streams due to inadequacy and unreliability of the available facilities.

3.10 Waste Management

Refuse in the district is mainly disposed of through open dumping. Most of these refuse dumps are not organised. The few organised ones have unpleasant surroundings. This has resulted in large heaps of refuse at the dumping sites of most communities in the district especially Bekwai and Kokofu. In addition to poor refuse disposal, drainage is generally poor in all the communities in the district. This has resulted in excessive erosion leading to exposed foundations of most buildings especially in Bekwai, Essumeja, Dominase and Kokofu.

3.11 Education

The district has 116 Nursery (Kindergarten schools), 195 Primary schools, 94 Junior Secondary schools, 6 Senior Secondary schools and 1 vocational school which is under the Department of Community Development. All these schools are public schools. There are also a total of 33 private schools comprising nursery, primary, JSS, and SSS, vocational and technical schools.

3.12 Disease in the District

The top five (5) diseases in the district for the year 2004 and 2005 included; Malaria, Diarrhoeal diseases, URTI, Skin disease and Accidents. The top five causes of admissions are Malaria, Pregnancy related complications, Diarrhoeal diseases, Pneumonia and Accidents.

The top five causes of deaths are Malaria, Cardiovascular Accident (CVA), Pneumonia, Diarrhoea diseases and HIV/AIDS (GHS, 2005). There are several non-governmental organisations that are also complementing the health service delivery in the district. Prominent among them are; The Children, Community Project Support Services (COPSS), Technoserve, Adventist Relief Agency (ADRA), CEDEP and Network for Health and Relief Services.

3.13 Tourism

The district has several sites of historical, scientific and aesthetic importance, which are potential tourist attraction spots. These areas include;

- The Bosomtwe Range Forest Reserve
- Lake Bosomtwe- the only natural lake and exhibiting the characteristics of an inland drainage system
- The Amponyinamoa fetish at Poano believed to have been delivered by a human head.
- Essumeja Asantemanso- a sacred forest where the Ashanti's are traditionally believed to have emerged from a hole.
- River Banko which provide a classic example of the annular drainage pattern- the only one in the country

- Kyekyewere – the birth place of King Osei Tutu I who is credited as the founder of the Ashanti Kingdom with Kumasi as its capital

3.14 Study Design

The study was a descriptive cross-sectional type. It evaluated the effects, quality of staff, reach and frequency and mode of administration of IEC on child health. The study was a three-month research from July to September 2007.

3.15 Data Collection Techniques and Tools

The study made use of primary and secondary sources of data. An interview guide was used to collect data. Different interview guides were used for RCH staff and the mothers as source of primary data. The study collected information on socio-demographic characteristics (age, sex, marital status, and level of education), quality of staff, existing IEC, mode of administration of IEC, reach and frequency and effects of IEC. To minimize non- response, respondents were assured that the information obtained would be confidential and used only for academic purposes. Questions were designed in such a way to reflect the information in the child health record card. Observation was used to study the attitude and skills of the RCH staff as part of the source of primary data. Review of reporting statistics from 2004-2006 was used as a source of secondary data. Site visits were conducted in the various communities to assess the reach of existing IEC on child health.

3.16 Study Population

The study population included mothers who attend CWC regularly with children 0-11months, that is, those who have visited more than two and has it recorded in the

child health record card as such, and the staff of RCH which is made up of community health nurses, disease control officers and the nutrition technical officers. Mothers with children 0-11 months were chosen for this evaluation. The rationale for studying this group was that, they are the people still receiving services from CWC, i.e. BCG, Penta, Measles and Yellow fever. Interviews with each mother visiting the centres were conducted separately and with complete privacy so that answers were less likely to be affected by hearing the answers of others. Each question was asked in simple language. A total number of 213 participants were interviewed from all the centres comprising 202 mothers and 11 RCH staff.

Table 3.17 Study Variables

Type of Variable	Variable	Operational definition/Indicators	Scale of Measurement	Objective measured
Dependent Variable	Child Health	Activities carried out to improve child health coverage	Ordinal	
Independent Variable	Type of IEC approaches/interventions	Response to interview guide	Nominal	One
Independent Variable	Mode of administration	Response to interview guide	Nominal	Two
Independent Variable	Reach and Frequency	Number of times of outreach activities and the availability of leaflets and posters in the communities.	Ordinal	Three
Independent Variable	Quality of staff	Knowledge, skill and attitude	Nominal	Four
Independent Variable	Effects of IEC	Knowledge of mothers on CWS & coverages	Ordinal	Five

3.18 Sampling

Multi-stage sampling was used. A total of 213 respondents were selected comprising 202 mothers and 11 RCH staff. Amansie East in terms of health administration is divided into five sub-districts with an established leadership. The five sub-districts were used as the first stage of the sampling process. Communities in each sub-district were listed and a simple random method was used to select a community from each sub-district. Again, within each community 40 mothers were selected by a purposive sampling method. It was only at the district capital (Bekwei) that 42 mothers were selected. Mothers were selected from both static and outreach points in each community. Twenty from static and outreach points respectively. Mothers visiting for the first and second time were excluded from the survey. This is because; those mothers might have not been exposed enough to the services to be able to recall messages. Respondents were drawn from the inflow of mothers visiting the CWC for the third time onwards.

3.19 Pre-Testing

The pre-testing of the interview guide was done at the Child Welfare Clinic in Kumasi. The pre-test was carried out on a sample of 20 mothers. Mothers with similar attributes as those of the study location were chosen. This was done to identify any areas of ambiguity in the questionnaire and to have an idea about time required and other practical points before the final study was launched.

3.20 Data Handling

To ensure quality of data, the interview guide was crosschecked to make sure that all questions were answered properly and systematically. Responses were collated at the end of each day.

3.21 Data Analysis

The analysis of the data was done at the end of the data collection. On daily basis responses were collated. Epi info 2005 version 3.3.2 was used for the analysis from which tables and graphs were made. The relationship among background variables and the study variables was tested by linear regression analysis.

3.22 Ethical Consideration

Permission was sought from the various bodies that were involved in the study. This was done by distributing letters to the District Chief Executive (DCE), the District Director of Health Services and opinion leaders in the study communities. Not only did the participants receive explanation on the purpose of the study, but also they were given the option to either participate freely in or withdraw from the study without loosing anything. Above all, respondents were also assured of anonymity and and made to understand that they would not be associated with any publication.

3.23 Limitations

The study is subject to limitations as with most studies of descriptive cross-sectional in nature. The first limitation of the study was the sample size and the restriction of the data to mothers who attend CWC. This was as a result of the time earmarked for such an extensive study. (This was too short considering the nature and size of the district.) This in fact limits the generalizability of results. Secondly, behavioural outcomes were self reported and therefore subject to reporting errors and biases. Finally, for want of time the study was narrowed to CWC and for that matter, the child health record card only. This limits the extent of issues addressed on IEC on child health.

3.24 Assumptions

In order to narrow the boundaries and the scope of this study, the following assumptions were made. First and foremost, universal coverage was assumed to be 99% for all interventions except exclusive breastfeeding among children under 6 months of age for which the target was set at 90%. Secondly, effective coverage of interventions was assumed to lead to reduction in child mortality. Thirdly, information in the child health record card and the approaches used to reach children and mothers with interventions were assumed to be IEC. Again, reach and frequency were assumed to be how many people will see or hear the message and how often would they be exposed to the message or service respectively. Finally, mothers who have visited CWC more than two were assumed to be able to recall immunization schedules and names of the various antigens.

CHAPTER FOUR

4.0 RESULTS

The analysis of the results pertains to the study population of 202 mothers and 11 RCH staff from the five communities selected from the five sub-districts. All tables and graphs referred to in this chapter were computed from the data collected from the field.

4.1 Socio Demographic Characteristics of Respondents

Table 4.1.1 to Socio-Demographic Variables

Variable	Staff		Mothers	
	No (n=11)	%	No (n=202)	%
Age group				
15-19	*	*	25	12.4
20-24	5	45.5	59	29.2
25-29	5	45.5	46	2.8
30-34	1	9.1	36	17.8
35 +	*	*	36	17.8
Marital Status				
Single	10	90.9	181	89.6
Married	1	9.1	21	10.4
Religion				
Christian	9	81.8	182	90.1
Moslem	2	18.2	20	9.9
Education				
Illiterate	0	0	54	26.7
Primary	0	0	37	18.3
JSS/MSLC	0	0	2	1.0
Secondary	0	0	109	54.0
Tertiary	11	100.0	0	0.0
Profession				
CHN	9	81.8	*	*
DCO	1	9.1	*	*
NO	1	9.1	*	*
Teaching	*	*	1	0.5
Dressmaking	*	*	11	5.4
Hairdressing	*	*	20	9.9
Unemployed	*	*	37	18.3
Trading	*	*	42	20.8
Farming	*	*	91	45.1

Source: Field Survey, 2007

** = Not applicable to the specified variable.*

Table 4.1.1 shows that, the study consisted of 11 RCH staff and 202 mothers who were interviewed. The mean age of the staff was 25.18 years and that of mothers 26.9 years. From the table, majority of mothers were between 20 and 24years of age. A good number of the respondents were Christians; 90.1% of mothers and 81.8% of RCH staff while the rest were Moslems.

In addition, 10.4% of mothers were married, while 89.6% were single. Regarding education all the RCH staff have been educated to the tertiary level, not only that but also have the basic training to conduct the RCH activities. In the case of mothers, educational level ranged from illiterate to secondary level. More than half of them 54% have had schooling up to secondary level while 26.7% have had no schooling at all. It is also clear from the table that 81.8% of RCH staff are CHNs with 9.1% DCO and 9.1% NO. The main occupation of mothers as depicted by the table is farming with a percentage of 45.1% followed by trading which is 20.8%.

4.2 Existing IEC Interventions/Approaches.

Existing IEC refers to approaches/interventions used to reach children and mothers with child health services. In probing for the existing interventions, knowledge of RCH staff were assessed on the various interventions they know of, which ones are being used in their catchment area as well as the frequency.

Focussing on various interventions/approaches, out of the 11 RCH staff interviewed, 10 were able to mention child health promotion week. A good number of them had very little knowledge on the other interventions such as IMCI, CHPS and so on. Although, majority of them have had training on IMCI but failed to recognize that, it is one of the existing interventions. On the frequency of celebration of the child health promotion week, respondents said, it is celebrated once a year.

4.3 Mode of Administration of IEC

The variables considered under mode of administration were the medium and strategy for information dissemination on child health.

Table 4.3.1 Distribution of Respondents According to mode of administration Used in IEC

Variable	No (n=11)	%
Main medium used by Health Personnel in IEC		
Print Material	11	100.0
Fixed/Mobile Speakers	3	27.3
Local Information Centre/Gongon	2	18.2
Group Discussions	1	9.1
Main Strategies Used by Health Personnel in IEC		
Interpersonal	10	90.9
Community Talk	2	27.3
Group Discussion	2	27.3
Wheel educn	1	9.09

Source: Field Survey, 2007

Table 4.3.1 shows distribution of respondents according to mode of administration of IEC. During the survey, it was found out that print material (posters), fixed/Mobile

speakers, local information/gongon and group discussions are the main modes of administration.

Of the 11 RCH staff interviewed, all of them said that print materials (posters) are the main media used in their activities. Few of them mentioned the use of the local information centre as well as fixed /mobile speakers as shown in the table above. Focussing on the strategies, majority of the RCH staff (10 out of 11) constituting 90.9% used interpersonal as strategy in their day to day activities.

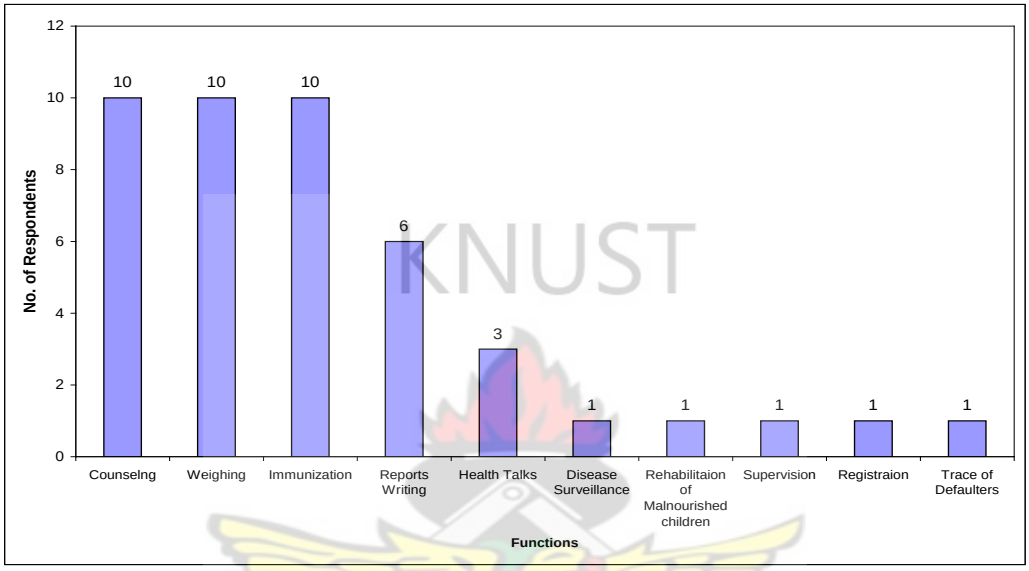
4.4 Reach and Frequency of the Existing IEC.

Reach and frequency is the product of proportion of posters, leaflets and brochures and message or service repetition. A casual walk through the five communities revealed that, with the exception of the district capital and the various health centres, print materials such as posters, leaflets and brochures on child health services were not available in the communities. Mothers in the communities were asked prompted questions on some of the services they receive from CWC. Majority of mothers (75%) were not able to say anything as far as child health services are concerned. Few mothers (15%) were able to talk about the child health record card. 10% were also able to recall that nurses visit them monthly to weigh their children. This indicates that, the whole outreach programme which affords RCH staff the opportunity to send essential services to children under 5 in the community was interpreted as weighing.

4.5 Quality of Staff

The variable under this section included the role of staff at CWC, the knowledge level of staff on issues of IEC, attitude and communication skills of staff.

Figure 2 Role of health personnel in Child Welfare Clinic (involvement).



Source: Field Survey, 2007

Majority of the staff undertake the basic services of the CWC, these are weighing, immunization, counselling and so on as depicted by the figure above. 90.9% of the staff performs weighing, immunization and counselling.

4.5.1 Knowledge Level of Staff on IEC

Knowledge level was assessed by using respondents understanding of the following:

- The term IEC
- Objective of IEC on Child Health
- Whether respondents have had any training on any IEC or IEC intervention
- How respondents upgrade their knowledge on IEC
- How conversant they are with the information in the child health record card.

Majority of the RCH staff (10 out of 11) 90.9% did not know much about IEC. Focussing on objective of IEC, none of them was able to say anything meaningful. On the training a good number of them said they have had training on IMCI. Nearly half of the respondents, 45.5% said they upgrade their knowledge by reading books and journals. 36.6% said through workshops. 27.3% said from senior colleagues. The rest asserted that they use leaflets and radio programmes. Regarding their familiarity of the information in the child health record card, respondents were tested on immunization schedules with regards to the various antigens, not only that but also their ability to plot and interpret the growth chart. They were also asked the procedural steps in weighing a child. Nearly 100% (10 out of 11) of the respondents knew the right antigen and its period of administration. About 18% of the respondents were able to demonstrate the correct steps in weighing as prescribed in theory. A good number of them (72.7%) were able to plot and interpret the growth chart correctly.

4.5.2 Attitude and Communication Skills of Staff

The attitude and communication skills of staff were observed from a distance. In this study, observation was made on how the RCH staff related to mothers and also how they interacted with mothers with regards to communication variables such as information giving, questioning, and appearing competent, partnership building and so on.

All the 11 RCH staff were observed as they carried out their routine services. Communication between the staff and mothers was found to be very poor; mothers were not even talked to, no partnership building. On attitude, RCH staff appeared very rude to mothers. They also demonstrated apathy in the way they discharged their duties.

4.5.3 Effects of IEC on Child Health

The attitude, knowledge and practices of mothers were used as a proxy indicator for the effect of IEC on child health as well as an indicator for the quality of the RCH staff.

Effects were assessed by using mothers;

- Level of knowledge on information in the child health record card.
- Mothers attitude/practices on breast feeding

Table 4.5.3.1(a) Effects of IEC on child health.

Distribution of mothers according to their knowledge on information in the child health record card		
Information	**No (n=202)**	**%**
Frequency of CWC visit		
Weekly	8	3.9
Fortnightly	3	1.5
Monthly	191	95.6
Awareness of Various Vaccinations		
Yes	185	91.6
No	17	8.4
Ability to mention various antigens		
Mentioned none	42	20.8
Mentioned 1	76	47.9
Mentioned 2	65	32.2
Mentioned 3	17	8.4
Mentioned 4	2	0.9
Type of antigens mentioned		
BCG	30	14.9
OPV	64	31.7
Measles	98	48.5
Yellow Fever	28	13.9
Penta	49	24.3

Source: Field Survey, 2007

The study found that 191(95.6%) of the mothers visit monthly and 3(1.5%) visit fortnightly. It was found that 185(91.6%) of the mothers were aware of the various vaccinations and 17(8.4%) were not aware. On ability to mention various antigens, a significant number of mothers 42(20.8%) was found not to be able to mention any. 76(47.9%) was able to mention one antigen. 2(0.9%) mentioned 4. The highest mentioned antigen was measles 98(48.5%) and the least one was yellow fever 28(13.9%). Interestingly the two are supposed to be given at the same time.

Table 4.5.3.1 (b) Effects of IEC on child health

Distribution of mothers according to knowledge on immunization schedule		
Vaccine	**No (n=202)**	**%**
BCG		
At Birth	127	62.9
OPV		
At Birth	8	3.9
6 weeks	2	0.9
10 weeks	1	0.5
14 weeks	2	0.9
Penta		
6 weeks	122	60.4
10 weeks	111	54.9
14 weeks	83	41.0
Measles		
9 months	12	5.9
Yellow Fever		
9 months	6	2.9
Knowledge, Age and Interval of administration and Source of Information on Vitamin A by Mothers		
Knowledge on Vitamin A		
Yes	153	75.7
No	49	24.3
Age of administration(1st dose)		
6 months	28	13.9
Interval of administration		
Every 6 months up to5 years	11	5.4
Benefits of Vitamin A		
Reduces severity of illness	14	6.9
Prevents eye diseases	3	1.5
Makes child healthy and strong	98	48.5
Makes children brilliant	2	0.9
Enhances growth	4	1.9

Source: Field Survey, 2007

Considering knowledge on immunization schedule, majority of mothers 127(62.9%) knew that BCG is given at birth. Very few mothers 8(3.9%) knew that OPV is also given at birth. In the case of measles and yellow fever, it was 5.9% and 2.9% respectively. Knowledge on Penta was quite good. This was due to the fact that, ability to mention or give a schedule for at least one was judged right.

On the knowledge of Vitamin A, around 76% of mothers had heard of it and a small number 13.9% knew the age of 1st dose of Vitamin A. On the interval of administration, it was 5.4%. Hearing of or exposure to the message of vitamin A did not correspond to the knowledge of 1st dose as well as the interval of administration of Vitamin A. The differences between the percentages were so significant.

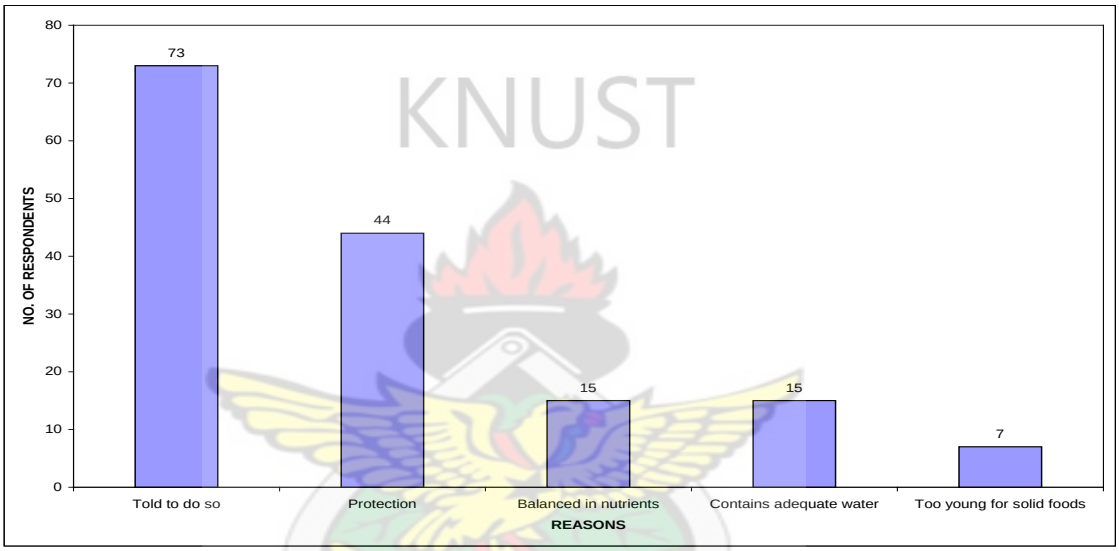
Table 4.5.3.1 (c); Effects of IEC on child health

Mothers' definitions of Exclusive Breastfeeding and whether they practice or not.		
Variable	**No (n=202)**	**%**
Correct Definition		
Yes	185	91.6
No	17	8.4
Practice Exclusive Breastfeeding		
Yes	154	76.2
No	48	23.7

Source: Field Survey, 2007

Table 4:5.4.1(c) shows mothers who were able to define exclusive breastfeeding as well as those who were not. Of the 202 mothers, significantly more mothers 185(91.6%) were able to give correct definition. 154(76.2%) said they practice exclusive breastfeeding. The discrepancy here is that, being able to define exclusive breastfeeding is not a licence to practise it.

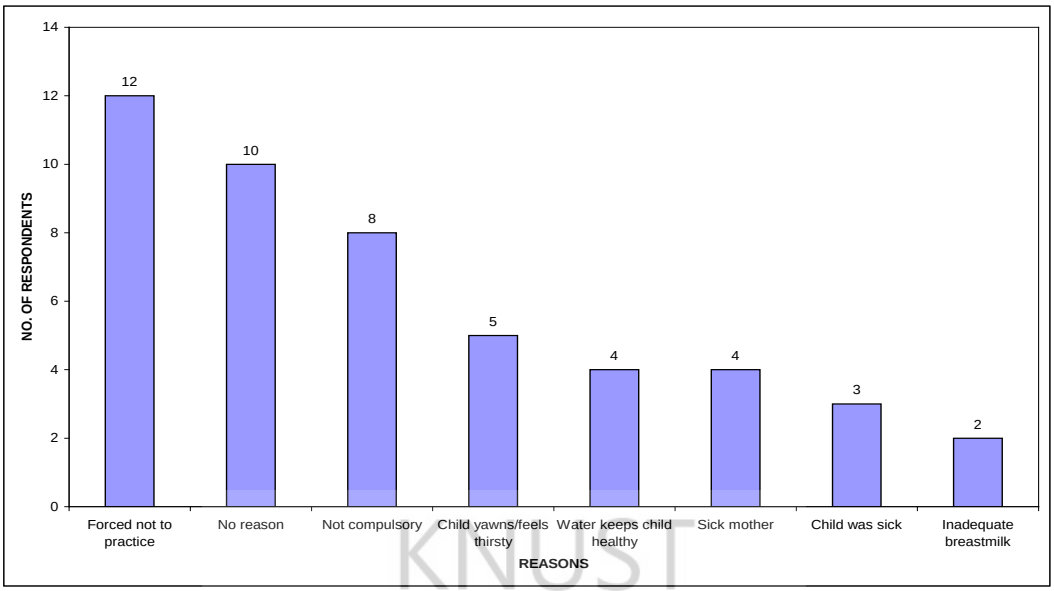
Figure 3 Reasons for practicing Exclusive Breastfeeding



Source: Field Survey, 2007

The figure above depicts the reasons of practising exclusive breastfeeding obtained from interviewing mothers. Out of the number practising exclusive breastfeeding, 73(47.4%) mothers said they practised because they were told to do so and 44(28.6%) mothers said they practised it because it protects their babies, and 7(4.5%) felt that babies less than 6 months of age are too young for solid foods. The reasons above indicate the differences in understanding the fundamental meaning of practising exclusive breastfeeding.

Figure 4 Reasons for not Practicing Exclusive Breastfeeding



Source: Field Survey, 2007

The fig above depicts some reasons by mothers not practising exclusive breastfeeding. Significant 12(25%) among the reasons is that, they were forced not to practice. 10(18.2%) believed that breastfeeding is not compulsory. 2(4.5%) felt that, milk in the breast is inadequate. Which defeats the fundamental principle that, the more one breastfeed, the more milk the person generates. The various reasons given show the general lack of understanding among mothers not practising exclusive breastfeeding.

CHAPTER FIVE

5.0 DISCUSSION

This chapter discusses the findings of the study that was aimed at identifying the existing IEC, mode of administration of the existing IEC, reach and Frequency. The study also aimed at the determination of the quality of staff disseminating the IEC and the effects of the existing IEC. Some attempt was also made to find the association of some background variables and the awareness and utilisation of child health services. A sample of 213 was used to generate the information for the study. The participants included in the study are residents of Amansie East District. The findings are discussed following the order of the research questions of the study in Chapter one.

5.1 Existing IEC Approaches/Interventions

IEC is an important activating force in public health programmes dealing with human behaviour. Behaviour change related to health and family welfare calls for well designed health communication programmes. Within Child health, IEC plays two major roles, that is to inform mothers of the existence of child health services in order to increase the use of those services; and to educate mothers on the proper use of services to ensure correct and continued usage. Ensuring that, the right approaches exist cannot be overstated. Health professionals have the responsibility to ensure that child health services are made to reach children in order to achieve the EPI target 95% coverage and complete vaccination schedules for 90% of children under 1 year of age (GHS, 2005)

Findings from the study revealed that some of the nationally recommended approaches such as IMCI, HIRD and Child Health Promotion exist at the district. However, most of the staff (90.9%) knew of the existence of child health promotion

week which is celebrated yearly to improve the uptake of selected child health services in an integrated manner.

An improvement in child survival is one of the United Nations Millennium Development Goals that is achievable with programmes such as CHPS, ACSD and so on(Population Council, 2007). CHPS is a national programme in Ghana that assigns trained nurses to live in rural villages and become members of these communities. CHPS nurses provide basic curative and preventive health services, including free door- to- door child health visits. It is therefore obvious that approaches like CHPS, HIRD be taken seriously to complement the activities of child health promotion.

5.2 Mode of Administration

Every individual mode of IEC has its own merits, drawbacks as well as their own sphere of effectiveness. A specific mode of communication is more useful in a specific setting on a specific group than others and therefore a good strategy of IEC must always employ a multichannel, mutually reinforcing medium appropriate to the audience and prevailing conditions.

The data collected in this study had shown that print materials are the main mode of administration of IEC in the district despite the fact that, numerous modes can be considered for informing target audience. They include print materials for mothers in the clinic or community, group information sessions in the clinic or community, videos for waiting rooms, posters for the community or clinic, street theatre, and radio or TV. The determination of the best mode comes from knowing the characteristics of the population to be reached as well as knowing the best ways to inform them. Of the 11 respondents, all of them (100%) admitted that print materials (posters) are the main media used. These findings were not consistent with the literature findings. As far as

communication interventions are concerned, to increase message exposure and enhance retention a combination of channels must be selected or used. The study of Laverack (2001) in Vietnam proposed a simple formula for effective IEC. The formula comprises a combination of three key approaches and an opportunistic IEC. These are mass medium such as radio and television, face to face communication either by a family member, peer or health professional and a print material such as leaflets and brochures and opportunistic IEC such as quiz, health days and so on. Scott (2007) reported on a national hand washing campaign that took place in Ghana between 2003 and 2004. Evaluation of the campaign indicated that where exposure to the campaign message made use of mass media channel and community event, the campaign yielded effect resulting in a 30% increase in reported hand washing with soap after visiting the toilet or cleaning a child's bottom. In addition, a study carried out in Zimbabwe by Kim et al (2001) to encourage youth to 'say no' to sex, launch events, leaflets and dramas had greater reach than components of the campaign that relied on newsletters, radio programmes, peer educators and a hot line. Conversely, Benefo and Takyi's cross sectional research (2003) also showed that mass media effects on AIDS related knowledge and behaviour in Ghana were larger than those of interpersonally based communicative channels. The above mentioned researches are indicative of the fact that communication programmes utilizing a variety of complementary channels always achieve results.

On the strategies, 10 (90.9%) of the staff ostensibly use interpersonal communication as a strategy in child health service. Although a very high percentage (90.9%) used interpersonal communication as strategy, coverage of services (see appendix 4) seemed not to be influenced significantly by the strategy. This finding did not agree with the success reported by several studies using interpersonal communication, even

though it is limited in terms of reach. Agha's cross- sectional study (2002) demonstrated that peer educators and providers had less coverage but stronger impacts on an individual's intention to use the female condom than the mass media. A review of vaccinations records in a slum in Mumbai showed that while coverage rates for DPT vaccines were 78 percent in communities where primary school students made home visits to encourage mothers to bring their children to mobile vaccination units, rates were 67 percent in communities that lacked substantial participation (UNICEF, 2003). The reason for the lack of significant impact using interpersonal communication may be due to type of training they have had and their understanding of interpersonal communication. Probably this explains why coverage indicators are low in Amansie East.

5.3 Reach and Frequency

Reach of IEC is defined as the proportion of posters, leaflets and brochures on the various services that are found in the communities. Whereas frequency is also defined as how often mothers are exposed to child welfare services.

Communication should be targeted to move caretakers (mothers) from inertia i.e. fear of vaccine and no fear of disease to action i.e. no fear of vaccine and fear of disease. This can be achieved when target audience are reached and exposed adequately to a particular communication message. The findings of this study from the five sampled communities revealed that with the exception of the health centres, print materials such as posters, leaflets and brochures were not available in the communities. However, in principle these materials should have a large reach, since they are giving free of charge, not only that but also it is less expensive as compared to the other channels of communication. Agha et al (2001) showed that repeated programme

exposure is needed to achieve substantial changes in health behaviour. Zimicki et al (1994) also showed how access to communication interventions, increased the percentage of fully vaccinated children from 54 percent to 65 percent. Evaluation study conducted by the Health Information and Research Unit of Republic of Maldives in 2002 as found in the literature concluded that people who saw leaflets under evaluation reported better knowledge than those who have not seen any leaflets. It is therefore not surprising that 75% of mothers who were questioned in the community on child health services were not able to say anything meaningful. Therefore policies regarding adequate distribution of leaflets within the various communities should be considered. Waisbord and Larson (2005) argued that a substantial number of children worldwide do not complete immunisation schedules because neither health services nor conventional communication mechanisms regularly reach communities. They argued further that in some communities low immunization rates are associated with families having little access or exposure to large scale or local media. Similarly this study found that mothers' limited access to child health services affected their ability to recall services on child health.

5.4 Quality of Staff

The role of health professionals in carrying out IEC within the health system cannot be overstated. It is therefore imperative that knowledge levels, skills (especially communication skills) and attitude of workers should be considered in service delivery at all levels. This is so, because poor quality would be expected to negatively affect caregiver's willingness to visit a health facility. However, when the demand for the services is high quality may not be a crucial factor influencing utilisation of services.

Asuquo et al (2000) in assessing how the attitude of hospital staff influences the utilisation of health facility for obstetric care at the teaching hospital, Calabar, Nigeria found out that negative attitudes of hospital staff toward patients stood as a barrier to the utilization of available obstetric care. Webster et al (2001) conducted a study to examine satisfaction with health care providers and to compare differences in service use in the first four weeks after birth between depressed and non-depressed women who attended bookings in Royal women's hospital. The results indicated that 16% of the women were dissatisfied with health service provider, this probably contributed to their not utilizing the services. This suggests that for some women to use health services they must be satisfied with quality of the services and the service providers as well.

Waisbod and Larson 2005 also reported in their study that, the quality of the interaction between health workers and caregivers is decisive to ensure completion of the vaccination schedule. They further noted that, high dropout rates and caregivers' negative attitude about immunization services are due to poor or inadequate information sharing by health providers, the failure of health providers to communicate correct information about vaccine effects and schedules, to check whether caregivers know and understand information, and to give them opportunities to ask questions partially account for incomplete vaccination of young children. This study confirms such findings in that 11(100%) staff observed demonstrated apathy in their relationship, information sharing and even questioning toward mothers.

All the 11(100%) RCH staff observed were poor in their communication skills i.e mothers were not even talked to, no partnership building (making mothers feel part in the health care of their children). However, Hall et al (1988) reviewed 41 studies which employed observation of physician-patient interaction in order to explore the

relationships between communication variables and patient satisfaction, recall and understanding, and compliance with instructions. The analysis showed that compliance with instruction was associated with more positive talk than negative talk. Again on attitude, the staff appeared rude to mothers, there was no immediacy in body movement (more eye contact, open posture and so on). There was some sort of apathy on the part of staff in their duties. Mothers were not even assisted to put their children on the weighing pan or hanged in the case of a hanging scale. Meanwhile in theory, CWC staff are supposed to provide these services together with mothers. The reason for such an untoward attitude by the staff was not explored by this study.

On knowledge, the results of the study revealed that 90.9% (10 out of 11) of the RCH Staff did not know much about IEC. 100% (11) were not able to define IEC even though, all of them have had training on IMCI as one of the key interventions for child health services.

In addition 18% was able to demonstrate the correct steps in weighing as prescribed in theory. In the case of plotting and correct interpretation of the growth chart, 72.7% had it right. The above findings suggest limited knowledge of RCH staff in the area of information, education and communication. However, knowledge on immunisation schedule was very high, 90.9% were able to mention the right antigen and the period of administration. This can be attributed to the fact that, those services are routine and therefore have become part and parcel of them.

On upgrading knowledge on IEC, according to the results 45.5% used books and journals, 36.6% said through workshops, 9% from the child health record card and 27.3% from senior colleagues. The rest asserted that they use leaflets and radio programmes. In fact there are no published data on a specific source of effectively upgrading knowledge on IEC, and also at present, most health workers are in a

situation where they are expected to be knowledgeable without much training in new knowledge and skills. It is therefore necessary that health workers make conscious effort to update their knowledge in such a way to make them function efficiently and effectively. Dr. Ending Achadi of Mother Care- Indonesia in 2001 also acknowledged that consumer ignorance on services is partly caused by health providers' limitation, including lack of knowledge and insufficient communication and counselling skills. In fact Dr. Achadi's acknowledgement has been demonstrated by the findings of this study. According to Echevarria & Frisbie (2001), the education a woman receives about pregnancy, labour and delivery, and caring for newborn baby is very important especially for the first time mothers. In addition, a woman's positive experience with healthcare professionals can also create confidence in and acquaintance with health care service so that they may be more likely to use maternal health services.

Chakrabortey et al (2002) also noted that with adequate counselling and education during visits, mothers may become aware of possible postnatal complications and sources of quality of health services for treatment of these complications. On the contrary, it is worth noticing that, majority of the RCH staff (75%) although undertake counselling, weighing and immunization services at CWC, it is evident from the findings that mothers knowledge on the services are still low. 20.8% of mothers were not able to mention any of the antigens. This definitely calls for more effort on the part of staff to discharge their duties creditably.

5.5 Effects of IEC on Mothers

The attitude, knowledge and practices of mothers were used as a proxy indicator for the effects of IEC and as an indicator for the quality of staff.

Most studies show that knowledge gaps underlie low compliance with vaccination schedules. Caregivers are less likely to complete immunization schedules if they are poorly informed about the need for immunization, logistics (time, date and place of vaccination) and appropriate series of vaccines to be followed. Although knowledge per se is insufficient to create demand, poor knowledge about the need for vaccination and when the next vaccination is due is a good predictor of poor compliance (Harmanci et al 2003).

Results of the study showed that most sampled mothers (95.6%) visits the CWC monthly and 91.6% were aware of the various vaccinations; yet significant number 20.8% was found not to be able to mention any despite their exposure. 47.9% was able to mention one antigen with 4 antigens mentioned by 0.9%. Perhaps this could have been as a result of the passive involvement of mothers when they go for CWC services. With a good percentage (95.6%) visiting every month one would have thought that knowledge level of mothers as far as names of antigens are concerned should have been high or is it that monthly visit is not enough to influence the knowledge of mothers on the various antigens? Logistic regression analysis showed no consistent correlation between awareness of immunization and frequency of visits to CWC (p= 0.6328). The reason for the lack of correlation between awareness of immunisation and frequency of visit to CWC in this study was not well explored. However, the high rate of awareness in this study could possibly be due to the various immunization programmes fighting against low coverage. it is important therefore to

educate mothers about the child health services while they attend the clinic in order to increase their awareness.

Linear regression analysis on effect of educational level on how often mothers visit showed no linear correlation (r=0.00). In fact it was non existent.

Atkinson and Cheyne (1994) in their study; inadequate demand for services among urban poor populations, found out that poor uptake of immunization in urban areas is associated with mothers unawareness about repeat visits to achieve complete immunization rather than overall vaccine awareness. This is not consistent with findings from the study and other factors could contribute to the findings. The interesting aspect of the antigens was with measles and yellow fever. These two antigens in theory are supposed to be giving at the same time yet the results indicate huge variations in percentages in terms of knowledge. This suggests that, much attention should be given to mothers when they go for CWC services. Berhane & Pickering (1993) mounted an intervention in Ethiopia found that ‘’reminder/prompt’ materials improved knowledge and reduced dropout rates compared to the control group.

Immunization is a timely step for prevention of mortality and morbidity due to communicable diseases in the 0-5 year group and therefore having knowledge in the schedule is crucial. Surprisingly few mothers knew the right time or stages of receiving the various vaccines. With the exception of BCG and Penta where mothers responded favourably, they did poorly in all the other antigens. Linear regression analysis showed very weak positive correlation between educational level and the ability to recall a particular antigen (P=0.256) and (r=0.02). It is clear from the p and r values as shown. The p value shows insignificant relationship between the two variables. The r value is near 0, therefore linear regression is weak or non existent. In

the case of Penta, respondents who were able to mention one or more out of the five were judged right for the penta that really was why the showing of the figures of penta was somewhat better.

On vitamin A, 75.5% of the respondents asserted that they have heard it, but only 13.9% knew the age of first dose of Vitamin A and 5.4% knew the interval of administration. On the benefits of Vitamin A, 48.5% think that it makes children healthy and strong and 0.9% thinks it makes children brilliant. The above results did not support the literature findings by Flay (2001) of the relationship between exposure and behaviour change as a series of steps. According to Flay, exposure will lead to awareness when the message is heeded, and awareness will lead to changes in knowledge when the message is comprehended. Again, Bandura (1977), social cognitive theory posits that behaviour is influenced by constant interactions with personal and environmental conditions. With the percentage of regular visits to the CWC as good as 95.6, all things being equal, one would have expected that mothers knowledge would have improved and subsequently led to high coverages.

On breast feeding, 91.6% were able to give correct definition. But 76.2% did say that, they practised exclusive breastfeeding. Several reasons were given for practising exclusive breastfeeding; 47.4% said they were told to do so, 28.6% felt that it is for protection, 4.5% said children less than 6months of age are too young for solid foods. This really shows the general lack of knowledge of mothers on breastfeeding.

CHAPTER SIX

6.0 CONCLUSION

To raise awareness, promote desirable practices, improve knowledge and understanding among the general population about health issues are some of the achievements of information, education and communication.

The main objective of the study was to evaluate IEC on child health in Amansie East District in the Ashanti Region in order that the quality of IEC services could be improved to achieve the desired results. Based on the findings of the study the following conclusions are reached.

6.1 Existing IEC approaches/interventions

The utilisations of the nationally recommended interventions that have been proven effective were partially in existence. Apart from child health promotion week, the other interventions were not being used. However, studies have reported of the impact of those interventions. For example the odds of being fully immunized were 2.4 times greater among children living in Community -based Health Planning and Services(CHPS) areas compared with the odds for children in 'Not Yet CHPS' areas(Awoonor-Williams et al 2004).

6.2 Mode of Administration.

The mode of administration could be a strong reason for under performance of the district as far as coverages of child health services are concerned. This was realised when all RCH staff responded that (100%), print materials are the main media of IEC and 90.9% also asserted that interpersonal communication is used as the main strategy.

One explanation could be that the district might not have the capacity for the other mutually reinforcing media, and that has restricted its mode of administration to print materials and interpersonal communication. However, another study might be required to select the exact medium most appropriate for the target population. Of course, determination of the best approach comes from knowing the characteristics of the population to be reached as well as knowing the best ways to inform these groups.

6.3 Reach and Frequency

To what extent does the child health service goal depend on the reach and frequency of the services? The wide and diverse audience interviewed asserted that, there is little opportunity for mothers who do not go to the health centre or do not come into contact with health personnel to know the issues relating to child health. In theory, effective IEC should have enough reach and sufficient frequency. This was revealed when 75% of mothers in community, having asked prompted questions on some services were not able to say anything. In addition 10% of the mothers in the community also limited the whole outreach programme by RCH staff to weighing. It can therefore be concluded that the existing IEC might not have enough reach and frequency to motivate people to access the available services.

6.4 Quality of Staff

The knowledge level, attitude and skills of staff in IEC were found to be contributing factors of the low coverage of service in the district. Knowledge level of RCH staff on IEC issues was very limited. 90.9% did not know much about IEC. Focussing on definition, 100% of staff could not say anything meaningful. Staff were only familiar

with the information in the child health record card, as nearly 100% knew the right antigen and its period of administration.

On attitude and skills which were observed from a distance, it was clear that there was no immediacy in body movement on the part of staff. Specific behaviours such as rudeness and insensitivity deter caregivers, who feel disparaged and therefore become less motivated to return to health centres to complete the various services or immunization schedules.

6.5 Effects of IEC on Mothers

The knowledge, attitude and practices of mothers is generally not satisfactory regarding immunization schedules, recall of various antigens and interpretation of exclusive breastfeeding. Despite the high rate of awareness (95.6%), a significant number of mothers (20.8%) was found not to able to mention any antigen. On immunisation schedule, it was only OPV which recorded a good percentage (62.9%) all the other antigens recorded very low percentages. For example measles and yellow fever recorded 5.9% and 2.9% respectively even though, they are supposed to be given at the same time. It is obvious that children will not get vaccinated or the various services if caregivers/mothers do not know the value of the services, when children need the various services and where they are administered, hence could affect coverage levels or rates.

6.6 Recommendations

Based on the results of the study, the following recommendations for improving the quality of IEC in the District are made.

6.6.1 Recommendation to District Health Management Team (DHMT)

In order to improve the coverage of child health services, DHMT should locate health services as close as possible to the community where the people live by making sure that all the nationally recommended complementary IEC interventions such as CHPS, IMCI, Child health promotion week and HIRD are in place. This could be done by using Client Oriented Provider Efficient service (COPE) as a critical link between the DHMT and the communities. IEC interventions are critical in the achievement of the Millennium Development Goals and therefore should be made an essential component of the total endeavour in providing health care to the community.

The DHMT has to make a comprehensive plan to overcome informational barriers by increasing the caregivers' understanding of available child health services. This could be done by collaborating with the District Assembly to earmark funding for basic formula for IEC, particularly for routine child health services. The DHMT must also implement selective reward programme for health staff in communities where caregivers are highly knowledgeable about vaccines and immunization schedules.

6.6.2 Recommendation to RCH staff

The RCH staff need to be sensitised more on the value of communication variables and that they should create an environment in which clients are sufficiently informed, confident and encouraged to express their opinion as well. This will help to

strengthen the client- service provider relationship, enhance client's satisfaction and therefore help improve the use of CWC.

The RCH staff as far as possible should not undermine or ridicule caregiver's esteem. They must endeavour to gain understanding of caregivers' background before launching health education programmes to ensure that messages are well understood. They must also ensure that caregivers are exposed to services more than once in a month through wheel education programme.

6.6.3 Recommendation to District Assembly

The District Assembly should budget from the Social Investment Fund (SIF) to support the DHMT to train a focal person for IEC to complement the work of the RCH staff. The Assembly must also provide adequate resources for the provision of the various IEC interventions such as CHPS, IMCI, HIRD and the child health promotion week.

6.6.4 Recommendation to Community Groups

Community groups should also collaborate with the DHMT to ensure that services are provided at convenient hours in a comprehensive non-fragmented manner. They must also educate their peers on the available child health services and the need to use them.

6.6.5 Recommendation to my colleagues in Department of Community Health

Further studies should be conducted to determine the best approach of IEC based on the characteristics of mothers in the district

REFERENCES

Agha, S., and R.V. Rossem. (2002). "The impact of mass communication messages on intentions to use the female condom in Tanzania". *International family planning perspectives* 28(3) : 151-158. Journal of health and population in developing Countries/ URL: http:// www. Jhpdc. unc.edu/

Agha, S., Karlyn, A., Meekers, D.(2001).The Promotion of Condom use in Non-regular Sexual Partnerships in urban Mozambique', *Health Policy Plan* 16,144-51

Agrawal, K., Tandan, J., and Srivastava, P. (1994). An assessment of delivery pattern of maternal and child health services in urban Varanasi. *Indian Journal of Preventive and social medicine*, 1-19. retrieved from www. Cehat .org/ publications / rhr4. html on 17/05/03

Asuquo E.E. J, Etuk S.J, Duke F.(2000). Staff attitude as a barrier to the utilization of University of Calabar Teaching Hospital for Obstetric Care. African Journal of Reproductive Health; 4(2): 69-79

Atkinson, S., Cheyne, J. (1994). 'Immunization in urban areas: issues and strategies'. Bull World Health Organastion p.72 :183-194

Bandura, A. (1977). Social learning Theory. Englewood Cliff, N.J. Prentice Hall.

Benefo, K.D. and B. Takyi (2002). "Mass Media Effects on Aids Knowledge and sexual Behaviour in Afica with special Reference to Ghana. " *International formalution of sociology and social Policy* 22(4/5/6): 77-99.

Berhane, Y., & Pickering, J. (1993). 'Are reminder stickers effective in reducing immunization dropout rates in Addis Ababa, Ethiopia?' *Journal of Tropical Medicine & Hygiene* 96 (3): 139-145.

Chakrabory, N., Ataharul, I., Chowdhury, I & Wasimul, B. (2002). Utilisation of postnatal care in Bangladesh. Evidence from a longitudinal Study. Health and social care in this community, 10(6):492-502.

Clift, E. (2001). 'IEC Interventions for Health: A 20 Year Retrospective on Dichotomies and Directions'. *Journal of Health Communication*, 3, 367-375.

Darmstadt G.L, Bhuttaz. Consens S, et al (2005). Evidenced-based, cost-effective interventions: How many new babies can we save? Lancet, 365:87-88.

Echecvarria, S. and Frisbie, P.W. (2001). Race /ethnic –Specific variation in adequacy of prenatal care utilisation. Social forces, 80(2):633-655.

Flay, B.R., Allred, C.G., & Ordway, N. (2001). Effects of the positive action program on achievement and discipline: Two matched- control comparisons. Preventive Science 2(21, 71-89

Ghana Health Service (2004). Reproductive and Child Health Report'. Public Health Division Accra-Ghana.

Ghana Health Service (2005).'Reproductive and Child Health Report'. Public Health Division-Accra-Ghana.

Hall, J. et al. (1988). 'Meta-Analysis of correlates of Provider Behaviour in Medical Encounters'. Journal of Medical Care, 26, 657-675.

Hanifi, M.A. & Rasheed, S. (2000). 'Community mobilization and EPI coverage' lessons learned from Chakaria Dakha: ICDDR.

Harmanci H; Gurbus Y; Torun SD; Tumerdem N; Erturk T. (2003) 'Reasons for Non-Vaccination during national immunization days': a case study in Istanbul, Turkey, Public Health, 117(1): 54-61.

Kim, W.,A. Kols et al. (2001) Promoting sexual responsibility among young people in Zimbabwe.*International family planning perspectives* 27(1):11-19.

Last, John M., ed(1986).Maxcy Rosenau Public Health and Preventive Medicine, 12th edition. Norwalk,CT: Appleton-Century-Crofts.

Laverack, G. (2001). 'Effective IEC at Commune, Village and Hamlet Level'. Presentation at the Second IEC National Task Force. Hanoi, Vietnam.

Lawn J, Mc Carthy B, and Ross SR, (2001). 'The Healthy Newborn: A Reference Manual for Program Managers'. CARE, Centres for Disease Control. CCHI and World Health Organisation.

Porter, R. W., Steinglass, R., Kaiser, J., Olkhovsky, P., Rasmuson, M., Dzhatdieva, F., Fishman, B, & Bragina, V. (2000). Role of health communications in Russia's diphtheria immunization programme, *The Journal of Infectious Diseases* 181: 220-7

Schellenberg J, Bryce J, de Savigny D. (2004). Health care for under five in rural Tanzania: effect of Integrated Management of childhood illness on observed quality of care. *Health Policy and Planning* 19:1-10.

Scott, B.,E (2007) ' Marketing Hygiene Behaviours': impact of different communication channels on reported handwashing of women in Ghana, Oxford University Press UK.

Sherman, J. (1999). Some Recommendations for IEC at RACHA 1999-2000 and Beyond.

Stephenson, R. & Tsui, O. A (2002). Contextual influences on reproductive health service use in Uttar Pradest, India. *Studies in family Planning,* 33(4): 309- 321.

UNICEF (2002).'Building a World Fit for Children'. The *United Nations General Assembly Special Session on Children.* Plaza, New York.

UNICEF. (2003) 'A critical leap to polio eradication': Changing behaviour to rid India of a childhood disease. Working paper.

Waisbord, S. & Larson, H. (2005). 'Why Invest in Communication for Immunization'*: Evidence and lessons Learned.* A Joint Publication of the Health Communication Partnership based at Johns Hopkins Bloomberg School of Public Health/Center for Communication Programmes- Baltimore.

Webester J. Prichard, M. A. Linnane, J.W. J, Robert , J. A. and Hinson, J.K. (2001). Postnatal depression with health care providers. Jornal of Quality in clinical Practice.

WHO (2004). Promoting proper feeding for infants and young children Geneva. http://www.who.int/nut/inf.htm . Retrieved October 2004

WHO (2006).'African Regional Health Report 'The Health of the People'. Brazzaville, Republic Of Congo, World Health Organisation- Geneva- Switzerland

World Bank (2001). Immunization at a Glance. Website:http// www.childrenvaccine.org/files/worldBank-immuniz-rev-11-01.pdf.

Zimicki, S., Hornik, R ., Verzoza, C., Hernandez, J., de Guzman, E., Dayrit, M, Fausto, A, Lee, M.b.& Abad, M. (1994). 'Improving vaccination coverage in urban areas through a health communication campaign': *The 1990 Philippines experience*, Bulletin of the World Health Organization 72: 409-422.

APPENDICES

APPENDIX 1

Interview guide for the RCH Staff

Dear Interviewee,

This evaluation is being conducted as part of my Master's Programme at KNUST. The purpose is to explore and gain insight into your opinion about IEC on child welfare services. There is no right or wrong answers. The responses you provide will help improve IEC on child welfare services.

Background Information.

1. Age

a. 15-19 b. 20-24 c. 25-29 d. 30-34 e. 35+

2. Marital Status

a. Not married b. Single c. Married d. Others Specify

3. Religion

a. Christian b. Moslem c. Other specify

4. Educational level

a. None b. Basic/J.S.S/Middle school c. Secondary d. Tertiary

Existing IEC Interventions/Approaches

1. What are some of the IEC interventions do you know of?

a. CHPS b. HIRD/ACSD c. Child Health Promotion Week

d. IMCI e. None

2. Which ones do you use in your catchment area?

a. CHPS b. HIRD/ACSD c. Child Health Promotion Week

d. IMCI e. None

3. How regular/often do you use the interventions?

……..

.....

Mode Of Administration

1. What are your main approaches in providing information?

a. Print materials b. Group information c. video

d. Posters e. Radio f. T.V g. Fixed or mobile loud speakers.

h. Other specify……

2. Which of these strategies do you use in child health services?

a. Interpersonal communication b. Community talks c. Wheel education (P.A. system) d. Other specify……

3. Which of these materials do you have?

a. Posters b. Fliers c. Brochures d. Leaflets e. Reference manual f. Video for education g. Child health record h. Other specify……..

Quality of Staff

1. Which of the following category of staff do you fall within?

a. Disease Control Officer b. Community Health Nurse c. Public Health Nurse d. Other specify.

2. What is your role in child welfare clinic?

……

……

……

3. What do you understand by the term I.E.C?

……

……

……

4. Have you had any other training on IEC after your professional training?

a. Yes b. No

5. If yes, which area……

6. When was the last time you had such training?

a. less than a month b. less than 6 months c. less than a year d. less than 2 years

7. How do you upgrade your knowledge in I.E.C?

a. Internet b. Books/Journal c. Workshops d. Distance learning e. Others

8. What are the procedural steps in plotting the growth chart as found in the child Health Record?

……

……

……

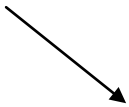
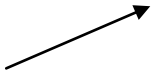
9. What are the procedural steps in weighing a child?

……

……

……

10. What is the interpretation of the lines underneath as found in the Child Health Record Card?

a.  b  c. 

……

……

……

11. When must a child be given the following immunisations?

- BCG ……..
- Poliomyelitis……..
- Measles……
- PENTA……..
- Yellow Fever……

12. How many minutes do you spend with mothers when they come for routine C.W.C visit?

a. 5 minutes b. 10 minutes c. 15 minutes d.Other specify……

13. What skills do you use to get the attention of mothers?

……

……

……

14. What are some of the objectives of IEC (on child health?

……

……

……

APPENDIX 2

INTERVIEW GUIDE FOR THE MOTHERS

Dear Interviewee,

This evaluation is being conducted as part of my Master's Programme at KNUST. The purpose is to explore and gain insight into your opinion about IEC on child welfare services. There is no right or wrong answers. The responses you provide will help improve IEC on child welfare services.

Background Information.

1. Age

a. 15-19 b. 20-24 c. 25-29 d. 30-34 e. 35+

2. Marital Status

a. Not married b. Single c. Married d. Others Specify

3. Religion

a. Christian b. Moslem c. Other specify

4. Educational level

a. Illiterate b. Primary school c. Secondary/J.S.S. d. Tertiary

5. Occupation

a. Farmer b. Artisan c. Trader d. Clerical

Effects of IEC on child health

1. How often do you have to visit the C.W.C with your child under five in a year?

a. Weekly b. Forth nightly c. Monthly d. Quarterly

2. Are you aware of the various types of immunisations given to your child under 1 year?

a. Yes b. No

3. If yes, what are they?

a. BCG b. Poliomyelitis c. Measles d. Yellow fever e.Penta

4. If your child is declared "fully immunised" in his/her first year of life, indicate the types of vaccines he/she should receive at the recommended weeks given in the table below

Recommended Weeks/months	Types of Vaccines
At birth or within the first two weeks	
6 weeks	
10 weeks	
14 weeks	
9 months	

5. Between the 14th week and the 9th month of your child's life when he /she is not receiving any vaccine would you take him/her to the C.W.C

a. Yes b. No

Give reasons to your answer

……

……

……

6. Have you heard of vitamin A?

a. Yes b. No

7. If yes, from where?

a. C.W.C. b. T.V. c. Radio d. Health worker e. Other specifies

8. How does it look like?

a. Red b. Blue c. Green d. Yellow

9. What is the recommended age at which a child should start receiving Vitamin A supplementation?

a. A birth b. Within 1st 2 weeks of life c. At 6 months d. Ant time within the 1st year

10. After receiving the first dose of Vitamin A, what is the recommended interval for the subsequent doses?

a. 6months b. 4months c. 3months d. Don't know

11. What are the benefits of Vit A to your child?

a. reduce severity of illness b. prevents eye disease c. makes child healthy and strong d. other specify

12. A child should be given Vitamin A supplementation at the recommended ages until he/she is;

a. 5 yrs b. 3yrs c. 6yrs d. Don't know

13. What are some of the sources of vitamin A?

a. Fish b. Pawpaw c. Margarine d. Eggs e. Palm oil f. Green leaves g. Mangoes

14. What is exclusive breastfeeding?

……

……

……

15. Do you practise exclusive breastfeeding?

a. Yes b. No

Give reasons to your answers

……

……

……

16. When should breastfeeding start?

a. Within half an hour after birth b. 2hrs after birth c. 3hrs after birth d.

Do not know

17. How many times do you have to breastfeed?

a. 2 times a day b. As often as the child wants c. 4 times a day d.

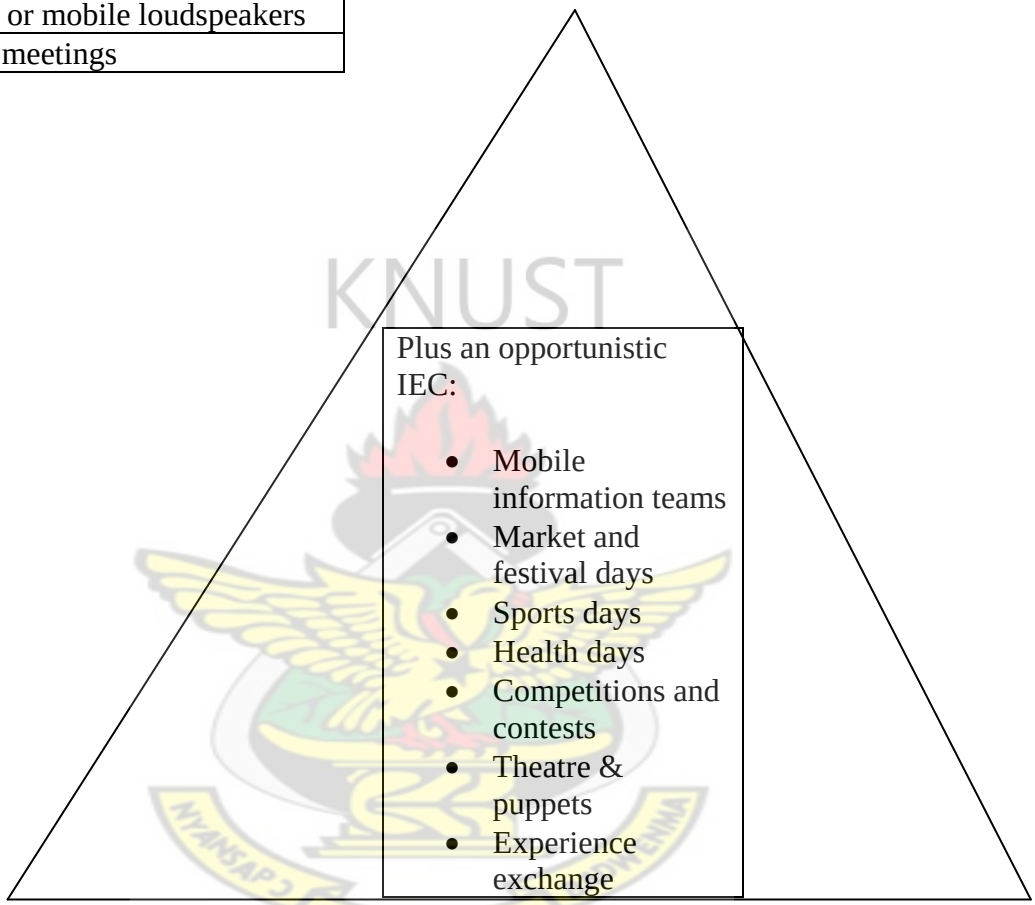
Do not know

APPENDIX 3

The basic Δ formula for the IEC strategic approach

A mass medium

Television
Radio
Fixed or mobile loudspeakers
Mass meetings



A Face to Face	**A print material**
A family member, a friend, neighbour or peer	A leaflet or brochure.
A village or other leader.	A booklet (facts for life).
A health worker.	A flipchart or flashcard.
A teacher.	A participatory game.
A member of a mass organization	A calendar or discussion poster.

The Δ formula = At least: 1 mass medium + 1 print material + 1 face to face + 1 opportunistic IEC.

APPENDIX 4

THREE YEAR TREND OF EPI COVERAGE AT AMANSIE EAST DISTRICT

ANTIGEN	2004	(%)	2005	(%)	2006	(%)
BCG	6370	61.8	5721	75.6	6284	80.3
OPV3	5307	51.5	5179	68.4	4950	63.2
PENTA3	5307	51.5	5108	68.4	4952	63.2
MEASLES	5527	53.6	4591	60.5	5440	69.5
YELLOW FEVER	5243	50.9	4682	61.8	5391	68.9
TT2	3561	34.4	5187	68.5	4663	59.6