FACTORS CONTRIBUTING TO LOW IMMUNIZATION COVERAGE IN THE ASANTE AKIM NORTH DISTRICT

BY

DR. GEORGE MENSAH

A DISSERTATION SUBMITTED TO THE SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTER OF PUBLIC HEALTH (MPH) DEGREE.

SEPTEMBER 1998

DECLARATION

I declare that this dissertation has been the result of my own field research except where specific references have been made, and that it has not been submitted towards any degree, nor is it being submitted concurrently in candidature for any other degree.

Resident: .....
Dr. George Mensah

Academic Supervisors: 1. .....
Dr. Dyna Arhin

2 .....
Dr. Gloria Quansah Asare

ACKNOWLEDGEMENT

My deepest gratitude first and foremost goes to Dr. Matilda Pappoe or her invaluable assistance. I am also indebted to my supervisors, Dr. Dyna Arhin and Dr. Gloria Quansah Asare for making time off their busy schedules to provide very useful advice towards the preparation of this dissertation.

Special thanks also go to Dr. Joke de Graaf, the District Director of Health Services, Asante Akim North District, and the entire DHMT especially Mr. Kofi Acquah for making my stay in the district a memorable one. To Dr. G. K. Amofah, I say a big thank you for his pieces of advice on the direction of this dissertation.

I am also thankful to the Sub-district Health Team (SDHT) members and Community Health Nurses (CHNs) in the various subdistricts for having the patience to provide me with all the relevant information I needed.

To the Director, SPH, I say a big thank you for being a father to us all.

To Mr. Abraham Quansah, SPH, I say thank you for typing my manuscript.

Finally, praises be to God for giving me the strength and the wisdom during the preparation of this dissertation.

DEDICATION

The dissertation is dedicated to my wife, Christine and my children, Merlene, Jeff and Bryan.

TABLE OF CONTENTS

ABBREVIATIONS

1.	BCG	Bacillus Celmette Guerin
2.	CHN	Community Health Nurse
3.	CWC	Child Welfare Clinic
4.	DCO	Disease Control Officer
5.	DDHS	District Director of Health Services
6.	DHMT	District Health Management Team
7.	EPI	Expanded Programme on Immunization
8.	FE	Financial Encumberance
9.	FGD	Focus Group Discussion
10.	FT	Field Technician
11.	NGO	Non Governmental Organization
12.	OPV	Oral Polio Vaccine
13.	SDHT	Subdistrict Health Team
14.	TO	Technical Officer
15.	WHO	World Health Organisation
16.	YF	Yellow Fever.

ABSTRACT

This study looked at factors which contribute to low immunization coverage in the Asante Akim North district.

Low immunization coverage in this study was defined as " the inability of the DHMT to achieve set immunization targets".

The objectives of this study were to identify factors contributing to low immunization coverage in the district.

Factors considered were availability of logistics, strategies used, adequacy of health workers, and supervision of junior health workers. Others were access, perception and knowledge of mothers to immunization services.

Data was collected from four disease control officers including the District Disease Control Officer,three officers from three subdistricts, the District Director of Health Services, the head of the subdistrict Health Teams and mothers within the age range 20 and 35years using checklists, structured questionnaires and focus group discussion guides respectively.

The mothers for the focus group discussion were recruited from eight communities. The communities two from each subdistrict, were selected by random sampling.Ten mothers were recruited from each of the eight communities for each focus group discussion using the criteria mentioned earlier. The findings were analysed using EpiInfo software.

The main findings were inadequate cold chain equipment,intermitent

shortage of vaccines, inadequate health staff, poor supervision of health staff and misconceptions of mothers about immunization. Others were poor access especially geographical access of a considerable number of communities especially those in the Afram Plains to immunization services.

Recommendations include extending outreach services to the communities with poor geographical access to the services, improving supervision and updating the cold chain equipment in the district. Others are ensuring availabilty of vaccines at all times, using other health staff to assist in immunization service delivery and organisation of baby shows half yearly in each of the subdistricts to reward deserving deserving mothers and at the same time serve as enticement for non attendant and defaulting mothers.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND INFORMATION

Following the success of the smallpox eradication programme worldwide, the Expanded Programme on Immunization (EPI) was launched in 1974 by the World Health Organisation (WHO). The main objective of the EPI was to reduce the morbidity and mortality, among infants and children, associated with the six vaccine preventable diseases namely whooping cough, diphtheria, tetanus, tuberculosis, measles and poliomyelitis.

Also to address the health problems particularly of developing countries, effectively an International Conference on Primary Health Care (PHC) was held in September 1978, in Alma Ata in the then Soviet Union. At this conference, PHC was declared as the strategy for many of the health related problems especially in developing countries. The conference defined PHC as

> *"essential health care based on practical scientifically sound, socially acceptable methods and technology made universally available to individuals and families in the community, through their full participation and at a cost that the community can afford to maintain at every stage of their development in the spirit of self reliance and self determination."*

Eight specific elements were identified as essential for PHC and these are:

1. Promotion of nutrition;

3. Provision of basic sanitation;
4. Maternal and child care including family planning;
5. Immunization against the major infectious diseases;
6. Prevention and control of locally endemic diseases;
7. Education concerning the prevalent health problems and the methods of their prevention and control; and
8. Appropriate treatment for common diseases and injuries.

After the WHO had adopted the EPI programme, Ghana was the first country chosen for the meeting to plan strategies and the details of the programme. A WHO pilot project to study the new strategies was carried out in the Central and Northern regions of Ghana between 1976 and 1978.

Ghana launched it`s EPI programme in 1978. However, the programme became operational in all districts in 1985. At the beginning of the programme in Ghana the coverage rate of children aged 12-23 months was less than 1%. However by 1989, the national average had improved to 25% (EPI Cold Chain and Logistics Survey, 1995). The Ghana Demographic and Health Survey gives a national coverage of nearly 55% as at 1993.

The Ministry of Health, in it`s desire to address Ghana`s health, problems in view of limited resources, initiated pilot health care programmes in 1979, in 10 districts nationwide. The Asante Akim district which was later divided into two districts (Asante Akim North and South), was one of these ten districts.

1.2 THE STUDY AREA

The Asante Akim North district is one of eighteen districts in the Ashanti Region. It is bounded on the north by the Sekyere East District, on the west by Ejisu Juaben district, on the east by Kwahu South district and on the south by Asante Akim South district.

The district covers an area of 1361 sq. km. with an estimated population of 132888 (1998 projection based on the 1984 census). The annual growth rate has been estimated to be 3.1%.

The age breakdown of the population is as follows:

CATEGORY	AGE GROUP	PERCENTAGE	NUMBER
Children	0 - 11months	4%	5315
	12 - 23months	4%	5315
WIFA	15 – 49years	20%	26577
Expected pregnancies		4%	5315
Expected births		4%	5315

(Source: District Profile)

About 70% of the population live in the rural areas. Ethnic groups in the district include Akans who form the majority, Ewes, Nzemas, Dagombas and Kussasis. The majority of the Dagombas and Kussasis are found in the Afram Plains which stretches to the northeastern part of the district and is hardly accessible during the rainy season. Adult literacy is about 60%. Majority of the people are into small scale farming, petty trading and raising livestock. The District Health Management Team is the organisation responsible

for managing health activities in the district. It is headed by the District Director of Health Services(DDHS).The DDHS is also the coordinator of Rural Health, the Public Health Care arm of the Agogo Hospital.All the vehicles being used for health activities in the district belong to Rural Health. The district is divided into 4 health subdistricts. Each subdistrict has a Health Team to facilitate health delivery. The subdistricts are Agogo, Konongo, Juansa and Dwease Praaso. Immunization services are delivered by community health nurses Disease control officers are responsible for the availability of vaccines. There are twelve (12) community health nurses and four (4) disease control officers in the district. The immunization schedule used in the district is as recommended by the WHO, which is as follows:

AGE	VACCINES
At birth	BCG, OPVo
6 Weeks	DPT1,OPV1
10 Weeks	DPT2,OPV2
14 Weeks	DPT3,OPV3
9 Months	Measles
9 Months	Yellow Fever

The tetanus toxoid immunization schedule for women of child bearing age and pregnant women is as follows:

TT1	At first contact or in pregnancy
TT2	4 weeks after TT1 or during subsequent pregnancy
TT3	6 weeks after TT2 or during subsequent pregnancy
TT4	One year after TT3 or during subsequent pregnancy
TT5	One year after TT4 or during subsequent pregnancy

CHAPTER TWO

2.1 STATEMENT OF THE PROBLEM AND SELECTION CRITERIA

There are many health and related problems in the Asante Akim North district, with high prevalence including schistosomiasis, buruli ulcer, scabies among school children, yaws, teenage pregnancy and low immunization coverage are also among the priority problems in the district. Three criteria were taken into consideration in the selection of low immunization coverage as the problem and these are:

1. Whether the problem has a negative impact on morbidity and mortality,
2. Whether the problem can be solved if reasons for it's occurrence are found, and
3. Whether resources needed to solve the problem are available or could easily be mobilised.

The issue of low immunization coverage seems to meet all three criteria, hence it's selection.

2.2 JUSTIFICATION OF THE STUDY

The DHMT of the Asante Akim North district is responsible for the planning, organisation and implementation of health programmes and activities in the district.

The district has been receiving assistance from NGOs, for example the Swiss Red Cross and the Presbyterian Church of the Netherlands and Germany in the form of vehicles and motorcycles. Additionally, the district has been receiving immunization logistics from the Regional Health Administration.

However, statistics on immunization coverage (see table 1) indicate that coverage levels have not improved as anticipated. Targets are not being reached. Moreover, the district has the ambition of achieving coverage levels similar to those set by the MOH by the year 2000. The district was one of the ten districts to start PHC activities in the country, and finds this state of affairs demoralising and, therefore, wants to find out the reasons for its inability to achieve the set targets.

Figures extracted from the district's 1997 annual report and the National EPI Policy document are presented in the following table and illustrate the situation over 3 years and vis-à-vis national targets:

Table 1: Coverage Situation over 3 Years and Vis-à-vis National Targets

Antigen	Coverage	Coverage	Coverage	Target	National Targets	
	1995	1996	1997	1997	1998	2000
BCG	72%	75%	80%	85%	75%	90%
DPT3	54%	60%	61%	65%	70%	90%
OPV3	52%	54%	62%	65%	70%	90%
Measles	48%	53%	58%	65%	70%	90%
TT2	47%	9%	17%	50%	50%	90%
YF	24%	24%	46%	50%	50%	90%

Additionally, some districts in the Ashanti Region without the level of support the Asante Akim North (AAN) district has been getting, were able to achieve higher immunization coverage, as presented in Table 2.

Table 2: Some Districts in Ashanti Region and the Coverage for 1997:

District	BCG	DPT3	OPV3	Measles	TT2
Adansi west	91.6	90.3	86.4	73.0	75.3
Offinso	81.4	-	-	-	-
Ahafo Ano North		74.0	83.0		
Ahafo Ano South		74	78	-	-

(Source; Annual reports of the districts in the table)

The district started a project in collaboration with some NGOs and a number of Primary Health Care activities were initiated. Notable among the programmes was EPI, with concentration in the Afram Plains part of the district, which is inaccessible during the rainy season.

Furthermore, examination of the Asante Akim North's annual report showed that measles occupied the ninth position among the ten top diseases 1994. In 1995, it occupied the seventh position and tenth in 1997. Tuberculosis was the tenth cause of mortality in the district in 1995.

2.3 LITERATURE REVIEW

The World Health Organization defined health in 1979 as" a state of physical, mental and mental well being and not necessarily the absence of disease or infirmity " With this definition, it is obvious that the health status

of people worldwide, be it in the developed or developing world is far from ideal.

However the disease burden in developing countries as far as preventable infectious diseases are concerned, is much higher than in developed countries.

In 1974, when EPI was launched by WHO, less than 5% of the world's children were immunized against the six childhood vaccine preventable diseases namely diphtheria, tetanus , whooping cough, poliomyelitis, measles and tuberculosis. (State of the world's Vaccines and Immunization 1996).

In 1980, Ghana's immunization coverage for children under one year old was BCG 9%, DPT3 7%, OPV3 7% and measles was 15%. This compared poorly with the average for Africa which were then of BCG 29% , DPT 22%, OPV3 19% and measles 33% showed that Ghana had a long way to go. However by 1991, coverage had improved with BCG recording 55%, DPT 39%, OPV 39% and measles 39%. This compared favourably with the average in Africa of BCG 61%, DPT3 45%, OPV3 45% and measles 45%. However compared to the coverage for less developed countries (The World excluding Europe , North America, Australia, New Zealand and Japan with BCG 89%, DPT 82%, OPV3 84% and measles 79% showed that Africa and for that matter Ghana , needed to improve markedly.(Better Health for Africa)

For immunization campaigns to be successful, it would require the availability of the necessary logistics and personnel. A study carried out in

Nigeria identified constraints in achieving immunization targets as poor and erratic supply of logistics, poor maintenance of the cold chain and inadequate capabilities (Raimi 1986).

Scheduling problems, personnel shortage, transport problems for workers and budgetary constraints were some of the problems identified in Liberia. (Bender, Macauley 1988).

Such problems mentioned earlier are mostly found in the developing world where apart from logistics and financial constraints, health workers have to deal with poor patronage of immunization services as a result of parents' ignorance, misconceptions and lack of access to immunization site. (Alakija 1987).

It is a known fact that, for an immunization programme to succeed, there is the need for intensive education throughout the community or district in which the programme is to take place. In addition, mobilisation of mothers needs to be done, to ensure maximum success. This was applied with resounding success in an immunization project in Mozambique. The project was able to reduce markedly the dropout rate between first and second vaccinations. (Jacobs 1988)

In Ghana, mobilisation of mothers for immunization activities was largely done by trained village health workers (VHWs). This in part was responsible for the improvement in immunization coverage in the 1980s.

However, there were problems. A review of EPI programmes in 10 districts, revealed that the problems were related to lack of remuneration of VHWs, poor supervision and abuse of functions on the part of the village health workers. (Better Health for Africa, 1991).

It is said that, if you educate a man you educate an individual, but if you educate a woman, you educate a nation.

Educating a woman, invariably leads to an improved social as well as economic independence. The women therefore are better able to take care of themselves and their children. Generally, female literacy is improving. The percentage of females enrolled in secondary schools in Ghana in 1970 was 8%.

However, by 1990, this had improved to 31%. (Better Health for Africa 1994).A more effective use of PHC services by women is linked to higher literacy level, improved economic status and lower parity (Brugha , Kevany 1995). It has also been established that, there is a strong association between maternal education and children's vaccination coverage. Surveys done in several countries in Africa, Asia, Latin America and the Carribean, indicated that vaccination coverage levels were highest among children whose mothers completed primary or secondary education. Additionally, differences in vaccination coverage levels by educated and uneducated were large ranging from twenty per cent to over forty per cent. (Sommerfelt, Piani1997).

Access of mothers to health services varies considerably between the rural and the urban areas. However access is generally improving.The average percentage access to health services as at 1990 was estimated at 76%. (Better health for Africa 1994).

Despite this impressive figure, most women in the rural areas are at a disadvantage as geographical access to immunization services is poor. (Alakija 1995).

Added to this are misconceptions and lack of financial access.

Other reasons attributable for low immunization coverage are long waiting lines, charges for health cards and abscesses at injection sites (Bender, Macauley 1988).

It has been suggested that for maximum gains in immunization coverage, community education and mobilisation of mothers must be improved.(Chiwuzie 1986).

CHAPTER THREE

STUDY OBJECTIVES, DESIGN AND METHODOLOGY

Based on the problem identified and what has already been done with regards to the problem, as per the reviewed literature, the following objectives are defined:

3.0 OBJECTIVES

3.1 GENERAL OBJECTIVES

To identify factors contributing to low immunization coverage in the Asante Akim North district and make recommendations to address them.

3.2 SPECIFIC OBJECTIVES

3.2.1 HEALTH SERVICE FACTORS

- To review the available logistics for immunization activities in the district.
- To describe the operational strategies being used for immunization activities.
- To ascertain the level of supervision of health workers during immunization activities .
- To ascertain the adequacy of the number of health workers involved in immunization activities in the district.

3.2.2 COMMUNITY FACTORS

- To describe the knowledge of mothers relating to immunization.
- To ascertain the access of mothers to immunization services in the district.
- To ascertain mothers' perception of immunization services in the district.

3.2.4 DEFINITIONS

1. Low Immunization Coverage

For purposes of this study low immunization coverage is defined as follows.

The inability of the District Health Management Team to achieve set immunization targets for the year.

2. Static Approach

Immunization services offered at the health institution by health staff.

3. Outreach Approach.

This is where health staff at a health institution, move out from their institution to offer immunization services and return the same day to their station.

4. Extended Outreach Approach

This is where the Health Unit staff go beyond their usual outreach area, to give immunization services but return the same day to their station.

5. Mass Approach

This involves health workers going beyond their usual outreach area to offer immunization services within a period without returning to their station within the period of the activities.

3.3 STUDY DESIGN AND METHODOLOGY

3.3.1 STUDY TYPE AND VARIABLES

The study was descriptive because it described resources available for immunization activities and explorative because it identified areas where there

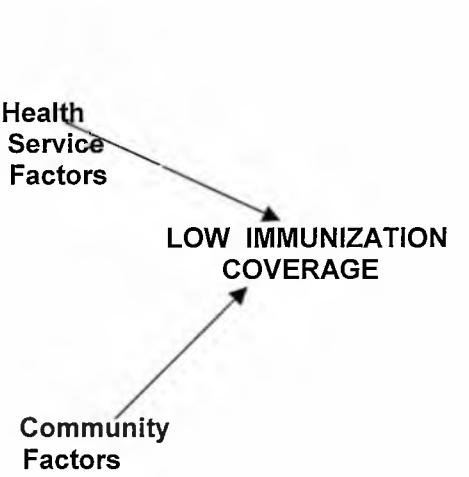
are problems contributing to immunization coverage. It is anticipated, on the basis of a review of the available literature and on the basis of professional experience that certain factors (independent variables) may contribute to low immunization coverage (dependent variable).

This hypothesis is illustrated as follows:

Independent **Dependent**

1. Fuel and transport availability)
2. Vaccines availability)
3. Cold chain equipment availability)
4. Needles, syringes and road to health cards availability) **Health Service Factors**
5. Health workers adequacy)
6. Operational strategies being used)
7. Supervision of health workers)

8. Knowledge of immunization)
9. Schedule of immunization)
10. Time of immunization)
11. Site of immunization)
12. Cultural beliefs about immunization)
13 Rumours about immunization) **Community Factors**
14. Geographical access of mothers)
15, Financial access of mothers.)



3.3.2 SAMPLING TECHNIQUE

Purposive sampling was used in the case of the District Health Management Team members, the Subdistrict Health Team members and the community health nurses.

From each subdistrict, with the assistance of Subdistrict Health Team members, mothers in communities with good and poor CWC attendance were identified.

The communities labelled good were labelled as such because the attendance of mothers has improved consistently since the beginning of the year.

Those labelled poor were labelled as such because the attendance of the mothers has decreased compared to levels at the beginning of the year.

By simple random sampling, a community in each group in each subdistrict was selected. Two communities in each subdistrict were therefore selected.

With assistance from local contact persons, ten mothers between the ages of 20 and 35years were recruited in each community for the Focus Group Discussion.

Ultimately, eight (8) focus group discussions were conducted.

3.3.3 PRETESTING OF FIELD INSTRUMENTS

Pre-testing of the focus group discussion guide was done at a static child welfare clinic at Konongo. Five women were involved in the pre-testing exercise. Konongo town was not one of the communities from which FGD participants were recruited.

The pre-testing of the structured questionnaires for the DDHS, the heads of the Subdistrict Health Teams and the Community Health Nurses was done on selected health workers at the Agogo hospital.

3.3.4 DATA COLLECTION

Before data collection started, two national service persons were identified by the resident with assistance from the District Disease Control officer. The two were trained as research assistants. Their role was limited to the focus group discussion. One played the role of facilitator and the other a recorder. The same team was used for all eight (8) FGDs, to maintain consistency in the data collected. The eight communities in which FGDs were conducted, are:

1.	Dome	Juansa Sub-district
2.	Akutuase	
3.	Atunsu	Konongo Subdistrict
4.	Obenemase	
5.	Beposo	Dwease-Praaso Subdistrict
6.	Boatengkrom	
7.	Kowireso	Agogo Subdistrict
8.	Abrewapong	

The structured questionnaires to the DDHS, the heads of the SDHTs and the community health nurses were administered by the resident, at arranged times convenient to all parties, particularly the respondents.

The checklist for the vaccines, syringes, needles and road to health cards were administered to the District Disease Control Officer and the disease control officers in the three subdistricts and the one community health nurse.

The checklist for the cold chain equipment was administered by the resident to the same health officers.

3.3.5 DATA PROCESSING AND ANALYSIS

The taped focus group discussions were transcribed and analysed.

Data from the structured interviews were analysed using the Epi. Info software package.

Data from the checklists were compared to standard guidelines and analysed and interpreted.

3.3.6 ETHICAL CONSIDERATIONS

The identities of participants were kept confidential. Participants names were not entered on the screener form.

The comments of the mothers of the FGDs were kept confidential within the context of the study.

3.3.7 LIMITATIONS OF THE STUDY

Budgetary and time constraints were the main limitations in this study. In view of the time constraints the number of the FGDs had to be reduced.

CHAPTER FOUR

FINDINGS OF THE STUDY

4.1 COLD CHAIN EQUIPMENT

Table 4.1 presents how the district fared, in terms of the adequacy of cold chain equipment.

Table 3: Cold Chain Equipment Available at the District Level

			Adequacy	
Level	**Equipment (Electric)**	**Number**	**Yes**	**No**
District	Fridge Freezer	1		
	Ice packs Freezer	1		
	Ice lining freezer	1		
	Cold Boxes	2		
	Vaccine Carriers	5		
	Ice packs	20		✓

The district cold store is located at Konongo. All the equipment were provided by the Regional Health Administration. The equipment are all functioning well. All the equipment are expected to function well.

Table 4: Distribution of Cold Chain Equipment in the Subdistricts and the Adequacy Level

Subdistrict	Equipment	Source of power	Number	Adequacy Yes	Adequacy No
Agogo	Fridge freezer	Electricity	2		
	Vaccine carrier		12		
	Cold boxes		2		✓
	Ice packs		18		
Juansa	Fridge freezer(not functional)	Electricity	1		
	Vaccine carrier		6		
	Cold boxes		2		✓
	Ice packs		10		
Konongo*	Fridge freezer	Electricity	1		
	Ice		1		
	Ice lining fridge		1		✓
	Cold box		2		
	Vaccine carriers		5		
	Ice packs		20		
Dwease/ Praaso	Fridge freezer	Electricity and Kerosine	1		
	Vaccine carrier		4		
	Cold box		Nil		✓
	Ice packs		6		

The cold chain equipment are provided by the Regional Health Administration. According to the District Director of Health Services, allocation of the equipment to the subdistricts is done according to where they are needed.

Konongo subdistrict is at an advantage because the district cold store is located in the subdistrict

4.2 VACCINES

The following indicates the availability of vaccines by subdistricts after stock taking of the vaccine register was done.

Table 5: Vaccines Availability by Sub-districts.

Level	Stock register available		Stock register not available		Type of vaccines
	Vaccines available always	Intermitent shortage	Vaccines available always	Intermitent shortage	
District		✓			DPT,measles ,OPV, BCG
Subdistricts					
1. Agogo		✓			BCG,DPT YF
2. Konongo		✓			DPT,Measles ,OPV, BCG
3. Juansa				✓	DPT
4. Dwease/ Praaso				✓	DPT

Vaccines were procured from the Regional cold room by the District Disease Control officer. The district has a stock register in which all vaccines are entered . Only two subdistricts have stock register indicating vaccines available or in short supply . However, information on shortages from the subdistricts without stock registers were obtained

from the community health nurses. Almost all the vaccines were in short supply at one time or the other.

4.3 NEEDLES, SYRINGES AND ROAD TO HEALTH CARDS BY SUBDISTRICTS.

The following table indicates needle, syringes and road to health cards by subdistricts.

Table 6; Needles, Syringes, and Road to Health Cards by Subdistricts

LEVEL	Stock register available		Stock register not available	
	Stock levels show no shortage	Stock levels show intermitent shortage	No shortage experienced	Intermitent shortage experienced
District	✓			
LEVEL **Subdistrict**				
Agogo	✓			
Juansa			✓	
Konongo	✓			
Dwease/Praaso			✓	

Needles. Syringes and road to health cards are received from the Regional Health Administration (RHA) and the Rural Health. The supplies from the Regional Health Administration are received quarterly. Rural Health funds are used to procure the supplies

4.4 TRANSPORT AND FUEL

The district has three vehicles. However, all the vehicles belong to Rural Health, the public health delivery arm of the Presbyterian Church. Additionally, there are thirteen motorbicycles. Three are unserviceable because of exceptionally high maintenance costs. One out of the three in use is in the Agogo subdistrict. One is in the Juansa subdistrict and one in the

Dwease/Praaso subdistict. The transport schedules are used to draw up a composite transport schedule incorporating the available outreach programmes.

All the heads of the subdistricts admit that mostly outreach points are reached with Rural Health vehicles. The motorbicycles are not frequently used for outreach clinics. Diesel is usually bought and stored in drums over long periods hence the availability always.

Problems mentioned by the community health nurses and the heads of the subdistrict teams are;

1. Late arrival of Rural Health vehicles for outreach clinics.
2. Shortages of fuel for motorbicycles.
3. Occasional overlap of programmes. This leads to delays or the community health nurses may have to use public transport.

The composite transport schedule indicating the outreach points and the proposed time of departure of the vehicle is indicated on appendix 5.

4.5 OPERATIONAL STRATEGIES

Table 7: Distribution of Immunization Strategies by Type, Number of Communities Covered and by Frequency.

Subdistrict	Strategies being used	Number of commu-nities in subdistrict	Number of outreach points	Frequency	Number of Static points	Frequency
Agogo	Static Outreach	44	10	Monthly	5	Weekly
Juansa	Static Outreach	14	8	Monthly	1	Monthly
Konongo	Static Outreach House to house	12	6	Monthly	2	Weekly
Dwease/Praaso	Static Outreach	8	5	Monthly	1	Monthly

Agogo subdistrict is the only subdistrict with hard to reach areas - ie. the Afram Plains. Out of thirty-four communities in the subdistrict, only six are being covered through outreach services.

Previously, mass immunization programmes were being organized and conducted every three months during the dry season. However, for the past three years none has been organized. Home visits are organized in every subdistrict. However, the frequency vary from subdistrict to subdistrict. Immunization services are not provided on such visits.The Konongo subdistrict practices an additional strategy, house to house. This involves daily immunization by disease control officers from house to house. However, this is done infrequently. Tetanus toxoid is administered to pregnant women at antenatal clinics by community health nurses in all the subdistricts.

4.6 SUPERVISION

Supervision of health workers involved in immunization is important as this ensures efficiency. Information gathered from respondents in the subdistricts indicate that direct supervision of health workers during immunization sessions is not done. Additionally, supervision of the subdistricts is not done regularly.

DISTRIBUTION OF COMMUNITY HEALTH NURSES AND DISEASE CONTROL OFFICERS

Table 8: Distribution of Health Workers by Type and by Health Facility

SUBDISTRICT	HEALTH INSTITUTION	CATEGORY OF HEALTH WORKERS	EXPECTED NUMBER	NUMBER AT POST	ADEQUACY LEVEL	
					YES	NO
AGOGO	AGOGO HOSPITAL Ananekrom Health Centre	CHNs D.C.O (TO)	4 1	5 1	✓	
JUANSA	Juansa health Centre	CHNs D.C.O. (FT)	2 1	2 1	✓	
KONONGO	Konongo Health Centre	CHN D.C.O. (TO)	2 1	4 1	✓	
DWEASE/PRAASO	Dwease/Praaso H. Centre	CHN DCO	2 1	2 nil	✓	

Information of the table shows that there is adequate number of health staff in all the subdistricts according to the Ministry of Health staffing guidelines.

Agogo and Konongo subdistricts usually have heavy static immunization sessions. There is one health post in the Agogo Subdistrict but it is categorized as an outreach point because it is manned by an enrolled nurse.

4.8 DATA ON MOTHERS WHO TOOK PART IN FOCUS GROUP DISCUSSION (FGD).

Focus group discussion (FGD) was conducted in two communities in each subdistrict. There are four subdistricts. Eighty mothers were involved in the FGD session; Ten were involved in each FGD session. Their ages ranged from twenty to thirty-five years. Most of them were farmers, followed by those unemployed and traders. Examination of the immunization cards of the children

of the mothers indicated that the five out of eighty had incomplete immunization profiles. The five cards belonged to children whose mothers had no schooling. The following table shows the educational level of the mothers involved in the FGDs.

Table 9: Educational level of Mothers who took part in the FGDs

Level of education	Number	Percentage
No schooling	17	21.2%
Primary	13	16.25%
Middle school	41	51.25%
JSS	8	10.0%
Secondary	1	1.25%
Total	80	100%

4.9 FOCUS GROUP DISCUSSION RESPONSES

4.9.1 Knowledge Of Mothers

The following are the views expressed by mothers who took part in the focus group discussions. Most of the mothers were of the opinion that immunization protects children against diseases. Additionally, it is their view that immunized children who catch a disease develop the milder form and also those without immunization develop the severe form of a disease.

Most mothers responded that without immunization the child will develop stunted growth or the child may die.

On why pregnant women are vaccinated, they responded that immunization given to pregnant women protects them and the unborn children against tetanus. Some mothers were also of the opinion that weak children from birth become strong after immunization and also immunization protects children against convulsions.

Diseases children are immunized against which were mentioned are tuberculosis , poliomyelitis, measles, kwashiorkor, chicken pox, yellow fever, shistosomiasis, intestinal worms, diarrhoea, and pertussis.

The site of immunization was well known to the mothers. The schedule

of immunization was well known to the mothers. The time of inception of outreach immunization was given as between 8.30 and 10.30 am.

4.9.2 Geographical Access

Six (6) out of eight (8) of the communities in which the FGD took place have easy access to immunization services. The easy access meant the FGD was conducted in the community. Mothers in the remaining two communities had to move to other communities. Distances ranged from two kilometres to four kilometres. Vehicles do not ply those areas, so the mothers have to walk to the immunization sites. The movement from their community to the immunization site usually takes between one and two hours.

4.9.2 Financial Access

Token fees of ¢100 are paid by mothers at Child welfare clinics. Paracetamol syrup is also sold to mothers whose children had DPT vaccination. However this is only recommended by the health workers.

Most mothers say they bought the weighing bag used to weigh children at child welfare clinics (CWC) because they think it is hygienic and beneficial to the children. Finance for CWC is usually provided by the husbands. However some of the mothers said they provide funds when the husbands are not in the position to do so.

4.9.3 Perceptions Regarding Immunization Services

The following are the perception of immunization services expressed by mothers: Generally most mothers believe strongly that immunization is essential for the well being of their children. Fever and convulsion were mentioned as being contraindications to immunization. Immunization was mentioned by some mothers as being a source of disease to the child. According to some of the participants, some mothers are spreading rumours around that one's child is likely to develop injection abscesses at CWC because of personal experiences.

Some of the mothers were of the opinion that immunization exposes diseases hiding in children. The mothers were unanimous that the competencies and attitude of the nurses are excellent.

A case of one woman was reported as believing in herbal medicine as a form of protection for her children against vaccine preventable diseases. The

issue of new clothing to immunization clinics as being a necessity was mentioned in all the FGD sessions as well as gossiping about mothers without new clothing.

In summary, the various data collection procedures indicate the following:

- Cold chain equipment are inadequate at the district cold room as well as the four subdistricts. Two subdistricts have nonfunctional refrigerators.
- There have been intermittent vaccine shortages since the beginning of the year.
- There are adequate number of needles, syringes and roads to health cards at the district store and the subdistricts.
- There appears to be an adequate number of vehicles but sometimes arrive late at health centres. For immunization outreach programmes diesel, however, is available. Petrol shortages have been experienced by motorbicycle users.
- Strategies currently being used for immunization are the static and outreach approaches in all subdistricts and house to house in Konongo.
- Supervision of health workers involved in immunization is not done.
- The number of health workers are adequate in three subdistricts according to Ministry of Health staffing guidelines.
- Knowledge of mothers about immunization and the services is reasonably good.

- Geographical access is poor in two communities out of eight involved in focus group discussion.
- Financial access is a problem for some mothers when it comes to drugs for addressing fever after vaccination.
- There are misconceptions about immunization.

Table 10: The Coverage of the District for the first 6 months of the year 1998, and the District and National Targets for 1998

Antigens	Coverage for the past 6 months in 1998	District Coverage Target for 1998	National Coverage Target for 1998
BCG	40%	85%	75%
OPV3	27%	65%	70%
DPT3	28%	65%	70%
MEASLES	25%	65%	70%
TT2+	4%	50%	50%
YF	25%	50%	50%

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 COLD CHAIN EQUIPMENT AND VACCINES

The Ministry of Health's standard cold chain equipment list for the district and the subdistrict is quite comprehensive. Compared to what exists throughout the district, one could conclude that cold chain equipment is inadequate. However, as the DDCO explained, despite the obvious inadequacy, what exists at the district cold room is able to cater for the cold chain needs and vaccine storage for the district.

The Konongo subdistrict, by virtue of the location of the district cold room in Konongo does not seem to have problems.

The Agogo subdistrict, though has inadequate equipment, is able to ensure vaccine availability through frequent restocking. In case of power outage, the Agogo Hospital serves as a source of storage of vaccines as the hospital has a backup generator.

The Dwease/Praaso and Juansa subdistricts do not have the appropriate cold chain equipment to keep the vaccines at the Health Centres. Both refrigerators have broken down and as a result the community health nurses have to travel to the district cold room to collect vaccines for immunization activities whenever necessary. This sometimes leads to serious delays for outreach immunization programmes.

The type of cold chain equipment available in the district operate on electricity and kerosene. Solar equipment is not available in the district . This contrasts sharply with the findings of a nationwide survey which showed solar equipment to be the most commonly used in Ghana, followed by electric and gas run equipment.

Presently, because of the energy crisis , the volume of vaccines requested for at each visit to the Regional Cold room has been reduced to avoid wastage. Sometimes, requests from the subdistricts are higher than the normal requests. That in part, explains occasional shortages. Because of this new arrangement vaccine procurement from the Regional cold room has to be done more frequently. However, the period within which vaccines are not available varies from a day to four (4) days. A countrywide survey(Review of EPI Surveys,1998) conducted three years ago revealed that 16.7% of health facilities and 15.8% of districts claimed that their stocks were not sufficient.

5.2 NEEDLES, SYRINGES AND ROAD TO HEALTH CARDS

The ready availability of needles, syringes and road to health cards for immunization activities can be attributed to Rural Health, as well as quarterly supplies from the Regional Health Administration.

Examination of stocks indicate that needles, syringes and road to health cards have been available in adequate quantities since the beginning of the year. (1998)

This contrasts with findings from a national survey in 1995(Cold Chain and Equipment Survey) which indicated that about a third of districts claimed not to have enough stocks to cover two weeks of work.

5.3 TRANSPORT AND FUEL

Fuel and transport form the backbone of every public health activity, since they ensure early arrival of personnel and logistics at service points. The fact that the district has three functioning vehicles and six motorbicycles and a composite transport schedule, indicate that transport logistics and planning is quite good. Additionally fuel shortage has been limited to petrol for motorbicycles. Although the district prepared a composite transport schedule regularly, there appears to be a problem with the implementation of the schedule. There have been complaints from the community health nurses about the late arrival of Rural Health vehicles for outreach programmes at Health Centres, and this attests to the fact that there are problems of implementation. Notably, fuel for vehicles was not mentioned as being a problem.This can be attributed to Rural Health support.

Vehicle breakdowns have been very few. Regular maintenance is done with funding from Rural Health and Financial Encumberance and this accounts for the few breakdowns. On the other hand, findings from the national survey of 1995 indicate that 85% of districts with vehicles claim that funds for maintenance and repair are not sufficient. In addition all the districts covered by the survey reported vehicular and or motorcycle breakdown six months prior to the survey and 50% of repairs took over thirty(30) days.

5.4 OPERATIONAL STRATEGIES

Presently the strategies being used in the district are the outreach and static approaches. The Konongo subdistrict also uses the house to house strategy though infrequently. However,the frequency of the static clinics varies according to subdistricts.

In addition, the number of static clinics vary from subdistrict to subdistrict. Agogo and Konongo subdistricts have satellite clinics at strategic points in the towns. More mothers are patronising the CWC because of the convenience and proximity. However, the district has some hard- to-reach areas in the Afram Plains .Out of 34 communities in the plains only 7 are being covered by outreach teams.Three years earlier, mass immunization campaigns were organized for those communities but this had to be discontinued because according to the DDHS, the campaign was not cost effective.

Outreach clinics appear to be the more effective strategy to address immunization of children. A survey done in the Sefwi Wiowso, district showed that 79% of children received immunization from outreach points followed by static points with 19%.(Review of EPI Surveys1998). However,limited mini –mass is recommended be used in the subdistricts where necessary (EPI Committee Report 1992)

5.5 SUPERVISION

Supervision of health workers in any health programme is very crucial because it ensures that procedure and activities are carried out in a correct and timely manner. However, evidence from the findings indicate that direct supervision of health workers is not routinely done. This was reiterated by two of the Subdistrict heads as a contributary factor to late arrival at outreach points as staff tend to arrive late to work especially on days when outreach immunization activities have been programmed to take place.

5.6 ADEQUACY OF NUMBER OF HEALTH WORKERS

Judging from Table 4.4, most of the health institutions have an adequate number of health workers involved in immunization activities according to Ministry of Health staffing guidelines. Though the staffing situation according to the staffing guidelines is adequate in the subdistricts, there tends to be long waiting time for mothers in the places where the clinics are heavy. In addition, the community health nurses carry out other MCH activities. Furthermore, if one of the nurses goes on leave, be it annual or maternity, there tends to be problems with adequate staff to offer the full range of maternal and child health services including immunization services.This has also been reported in Liberia (Bender and Macauley1988) as one of the contributory factors to low patronage of immunization services.This has also been identified in a study in the Eastern Region. (Brugha, Kevany 1995). The Ministry of Health, Manpower Division, should consider revising the numbers of community health nurses upwards to reflect the realities on

the ground.According to the transport schedule (see appendix 5), environmental officers are supposed to assist the community health nurses at outreach clinics.However, in reality this is not the case.

5.7 COMMUNITY FACTORS

Knowledge of mothers about immunization services is one of the important factors which contribute to the success of an immunization programme.

Responses from the mothers, indicate that the knowledge of the mothers about immunization as a concept and a service is quite encouraging. The importance of this factor was realized in a study in the Komenda Edinam Eguafo Abirem district(Review of EPI Surveys,1998) . However, a few misconceptions about immunization were also identified. It is interesting to note that, a few of the mothers who took part in the focus group discussion mentioned that children are immunized against diseases like kwashiorkor, shistosomiasis, intestinal worms and diarrhoea, which indicates that much more remains to be done by the nurses by way of education. Despite these misconceptions, it is heartening to note that these diseases were not labelled as contraindications to immunization, which would have been false contraindications.

This finding is not surprising, since over twenty percent of the mothers who took part in the focus group discussion had no schooling. However, in view of the fact that the mothers were not grouped according to specific

educational level groups it is not possible to make a direct relationship between the level of misconception and schooling.

Most of the mothers were farmers.

The immunization schedule, time of immunization and the site of immunization was known to the mothers.

Access to immunization service was good in the communities in which the FGDs were conducted.

In the communities, where mothers have to move to immunization sites, which entails walking and takes between 1hour and 2hours, this is likely to serve as a disincentive to attend CWC. Some mothers may not be able to walk such distances, with their children, for various reasons. The Sefwi Wiowso study(Review of EPI Surveys) also identified this factor as being the most significant obstacle to immunization.

On financial access, token fees were not mentioned by FGD participants as being a hindrance. However, the purchase and giving of paracetamol syrup for the children after DPT vaccination was cited as being a major hindrance, even though this is optional.It was cited as such , because some mothers admitted that if they did not have enough to pay for the token fees and the syrup paracetamol (c500) they were not likely to attend CWC.Surprising, though was the fact that most mothers considered buying an immunization bag for weighing their children as not being a hindrance even though it is relatively expensive(c1500). This is considered highly positive by the mothers,

since the expenditure is cost effective because the children are not likely to suffer from cross infection from other children.

The fact that most of the mothers endorsed the competency and attitude of the nurses as being excellent may imply continuous patronage of the service.

Other reasons given by mothers for not patronising CWC are lack of new clothing and rumours relating to injection abscesses. The mothers also mentioned apathy, as some mothers prefer to go to the farm or finish various house chores before attending Child Welfare Clinics (CWC).

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.0 CONCLUSION

From the discussion of the study findings one concludes that factors contributing to low immunization include:

- Late arrival at outreach points as a result of late arrival of vehicles Health Centres.
- Inadequate staff in three subdistricts.
- Cost of drugs which mothers cannot afford.
- Apathy and ignorance on the part of some mothers.
- Intermittent shortage of vaccines at the district cold room.
- Lack of supervision of Community Health Nurses by Senior Health Workers.
- Poor geographical access of some communities to immunization services.
- Mothers' misconceptions about immunization services in the district.
- Unavailable functioning cold chain equipment in two subdistricts.

6.1 RECOMMENDATIONS

Recommendations to address the problems identified in the study are as follows:

- Mini mass campaign should be organized on a quarterly basis to address the immunization needs of the hard to reach areas. This can be done with financial assistance of the District Assembly and additional vehicles from other decentralized departments in the district.
- Refresher training should be organized for Community Health Nurses periodically on injection techniques to prevent possibilities of side effects like injection abscesses. Funds for such training could be mobilised from the district's financial encumbrance.
- Tetanus toxoid should be administered to all women of child bearing age and not only pregnant women. The immunization cards could be procured using Rural Health funds. The programme could start through the School Health programme.
- The DHMT should consult with community leaders and together decide on the best way of addressing the issue of poor patronage especially in the communities with such problems.Monthly meetings with those communities to discuss progress of patronage could result in improvement.

- The District Assembly should enact a bye law making it compulsory for every child entering school for the first time, to produce a completed immunization card.
- A programme should be put in place to supervise health workers involved in immunization services delivery. The District Director of Health Services, the District Disease Control Officer and the District Public Health Nurse as well as the Subdistrict Health Team heads should be actively involved in this.
- Cold chain equipment for the Juansa Health Centre and the Dwease/ Praso Health Centres should be addressed by the District Director of Health Services through the Regional Director of Health Services.
- The house to house strategy being used in the Konongo subdistrict could be extended to the other subdistricts. This will be appropriate for the big towns as wastage could be reduced and at the same time missed opportunities could be addressed. However, staff involved in the exercise will have to be motivated. The motivation could be in the form of night allowances on a quarterly basis calculated using an agreed upon criteria.
- The DHMT should form a committee to produce an immunization education package that would be appealing to the mothers. This could include a jingle.
- Baby shows could be organized in the four subdistricts and token prizes given to deserving mothers on an annual basis to serve as an enticement to defaulting or non attendant mothers.

Funds for such an exercise could be mobilised from the subdisticts' financial encumberance allocation.

REFERENCES

1. Ampofo D. A., 1988; Maternal and Child Health and Family Planning in Ghana Population Impact Project (PIP)/Ghana. P.3.

2, Anaklu, M. D. , Alakija W., 1983; The Expanded Programme on Immunization in Ondo State, Nigeria. Annal of Tropical Paediatrics. P.117-180

3. Bender D, Macauley R.J., 1988; Immunization Drop outs and Maternal Behaviour. Evaluation of Reasons Given and Strategies for Maintaining Gains Made in the National Vaccination Campaign in Liberia, Presentation at 116th Annual Meeting of the American Public Health Association Boston, Massachussets. Pp. 19-20

4. Better Health for Africa, 1994; World Bank Publication.Pp 55, Tables A-6, A-9, A-10.

5. Blum D., Phillips M., 1986; An Assessment of the Expanded Programme in Nigeria. (New York, New York) UNICEF. Pp. 52.

6. Brugha R., Kesany J, 1995; A Study on Immunization Determinants in the Eastern Region of Ghana.

7. Chiwuzie, J. C. , 1986; Immunization in Nigeria, Public Awareness is

inadequate, World Health Forum , (2): 165.

8. Cutts F., Smith, P.G. 1994; Vaccination and World Health, Wiley.

9. Ekunwe E.O., 1984; Expanding Immunization Coverage Through Improved Clinic Procedures, World Health Forum. Pp. 361-3

10. EPI Cold Chain and Logistic Survey, 1995; Ministry Health Forum.

11. Expanded Programme on Immunization Community Participation and Immunization Coverage. World Health Organization (WHO) Expanded Programme on Immunization (EPI) 1984, Weekly Epidemiological Records Pp. 117-119.

12. Ghana, EPI Policy, 1997; Ministry of Health, Ghana. Pp.13, 17, 18 and 24.

13. Global Programme for Vaccines and Immunization, 1995; Programme Report, World Health Organization.

14. Immunization in Practice. A Guide for Health Workers who give Vaccines, 1989, WHO, Oxord University Press.

15, Jacobs M., 1988; Success for Immunization Project, Education for Health. Pp 2

16. Monteirio, O., 1987; Immunization for all in Maputo, Education for Health. Pp 2

17. Ntilivamunda A., 1988; Expanded Programme on Immunization : Status and Perspectives, Familie, Sante Development/ Imbonezamago. Pp. 29-34.

18. Raimi, N. A., 1985; The Expanded Programme on Immunization in Oyo State, Conference on the Oyo State CBD Project Community Based Delivery of Health and Family Planning Services. Pp.5 186-88.

19. Report of a Committee on the Strategies to Implement EPI, 1992; Ministry of Health. Pp. 4-5.

20, Review of EPI Surveys, 1998; Disease Control Unit, Ministry of Health, Ghana.

21. Sommerfelt A. Elizabeth, Piani L. Andrea; 1997, Childhood Immunization: 1990 – 1994, DHS Comparative Studies Number 22, Calverton, Maryland: Macro International Incorporated. Pg. 38

22. State of the World Vaccines and Immunization, 1996, World Health Organization Publication. Pp.3.

23. Were M. K., 1985; Communicating on Immunization to Mothers an Community Groups, Assignment Children, pp. 422-429.

CHECKLIST FOR COLD CHAIN EQUIPMENT

ASANTE AKIM NORTH DISTRICT

District Level : .....

Subdistrict Level : .....

Officer Responsible: .....

Date: .....

Cold Chain Equipment Available at the District Cold Room	Number	Standard Cold Equipment Requirement at the District Level.	Number
		1. Standby Generator	1
		2. Refrigerator freezer GE	1
		3. Ice pack freezer	2
		4. Cold boxes	5
		5. Vaccine Carrier	10
		6. Thermometer	10
		7. Ice pack '0.6L	100
		8. Ice pack 0.4L	100
Cold Chain Equipment Available at the Sub-district	**Number**	**Standard Cold Chain Equipment Requirement at the Subdistrict Level**	**Number**
		1. Standby Generator	1
		2. Kerosine/Gas electric	1
		refrigerator or	1
		3. Refrigerator with ice packs.	2
		4. Vaccine Carrier 3L	
		5. Ice packs 0.4L	10
		6. Thermometer	1
		7. Gas Cylinder	1

CHECKLIST FOR VACCINES, NEEDLES, SYRINGES AND ROAD TO HEALTH CARDS

LEVEL: District:.....

Subdistrict: .....

Officer Responsible: .....

Date:.....

STOCK LEVELS FROM STOCK REGISTER

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
BCG OPV Vaccines DPT Measles YF TT						
Needles						
Syringes						
Road to Health Card						

FOCUS GROUP DISCUSSION

SCREENER FORM

SUBDISTRICT:----------

TOWN/VILLAGE:----------

Number	Age	Occupation	Educational Level

Age	**Occupation**	**Educational Level**
20 –35	Farming	No schooling
	Trading	Primary
	Teaching	Middle/ JSS
	Unemployed	Sec./ Voc.
	Others	

FOCUS GROUP DISCUSSION GUIDE

SUBDISTRICT: .....

COMMUNITY: .....

A. KNOWLEDGE OF MOTHERS

1. What do you know about immunization ?

2. Why do you think immunization is given to

   [a] children
   [b] pregnant women

3. What happens if a child does not receive all the vaccinations he/she needs?

4. What are some of the diseases children are immunized against?

5. Where nearest you does immunization service delivery take place?

6. What is the schedule of immunization and the time it takes place?

B. ACCESS OF MOTHERS

1. How far do you have to travel to immunize your child?

2. How difficult is it getting to the immunization point?

3a. How much money do you usually need to attend CWC?
b. Who provides the funds?

4. What are the expenditures you make when you attend CWC?

5. Do you think the level of expenditure is a hindrance to mothers attending CWC? Explain

C. PERCEPTION OF MOTHERS

1. What are cultural beliefs associated with immunization existing here?

2. What are some of the rumours associated with immunization here?

3. How satisfied are you with immunization services rendered by the health staff?

[Probe for competency, attitude of community health nurses and time spent at CWC by mothers]

4. What other reasons do mothers give for not attending CWC?

5. What do you think if done by (a) and (b) will lead to improvement in attendance to CWC by./

   a] community health nurses

   [b]Mothers [communities]

QUESTIONNAIRE FOR DISTRICT DIRECTOR OF HEALTH SERVICES. ASANTE AKIM NORTH DISTRICT.

Date: ----------

OPERATIONAL STRATEGIES

1. Which of these operational strategies are practised in the district?

   (a) Static services

   (b) Outreach services

   (c) Extended outreach services

   (d) Mini mass immunization

   (e) Other (s) specify

2. (a)Do you address missed opportunities in the district ?

   Yes [ ] No [ ]

   (b) If Yes which institutions offer that service? ----------

   ---

   ---

3. (a)Do you have hard to reach areas in the district ?

   Yes [ ] No [ ]

   (b) If Yes do you address their immunization needs?

   Yes [ ] No [ ]

   (c) If No Give reasons ----------

STAFF ADEQUACY

4.(a) What is the number of community health nurses in the district ?----------

(b) What is the breakdown according to subdistricts? ----------

---

SUPERVISION

5.(a) Do you make supervisory visits to the Health facilities in the district? Yes [ ] No [ ]

(b) If yes how often do you make such visits ?

(1) Monthly

(2) Quarterly

(3) Once every 2 months

(4) Others specify

6.What tool(s) do you use on such visits? (Evidence)----------

---

TRANSPORT AND FUEL

7.(a) How many vehicles does the DHMT have at it's disposal?----------

(b)Do the vehicles belong to Ministry of Health ?

Yes [ ] No [ ]

(c) Which organization do the vehicles belong to? ----------

8. Is there an itinerary for the movement of the vehicles?

Yes [ ] No [ ]

9.Which of these problems have come to your attention?

(a) Shortage of fuel

(b) Vehicle breakdown

(a) Lateness of vehicles in arriving at subdistricts for outreach programme

QUESTIONNAIRE FOR HEADS OF SUBDISTRICT HEALTH TEAMS

SUBDISTRICT----------

DATE----------

OPERATIONAL STRATEGIES

1.How many communities are there in the subdistrict ?----------

---

2. Which of these strategies are in operation in this subdistrict?

(a) static services

(b) outreach services

(c) extended outreach

(d) others specify

3. How often do the ones in operation take place in a month?-----

---

LOGISTICS

4.(a) Has there been a complaint of vaccine shortage within the last 6 months? Yes [ ] No [ ]

(b) If yes which types?----------

5.Has there been a complaint of needles, syringes and road to health cards shortage within the last 6 months? Yes [ ] No [ ]

6.What means of transport do you have in the Health facility?-----

---

7.Do you have a transport itinerary? Yes [ ] No [ ]

STAFF ADEQUACY

8. Are community health nurses assisted by other health workers to provide immunization services? Yes [ ] No [ ]

SUPERVISION

9.Do you supervise the community health nurses during immunization sessions? Yes [ ] No [ ]

10.Do you have immunization monitoring graphs in place? Yes [ ] No [ ]

(To inspect)

11.Does the DHMT make supervisory visits to the subdistrict? Yes [ ] No [ ]

QUESTIONNAIRE FOR COMMUNITY HEALTH NURSES IN THE ASANTE AKIM NORTH DISTRICT

SUBDISTRICT----------

NAME OF RESPONDENT----------

DATE----------

1.How many outreach points do you have in the subdistrict?------

---

2.How often do the outreach clinics take place?

(a) Once in a month

(b) Once a week

(c) Once every two months

(d) Others specify

3.How many static immunization centres do you have in the subdistrict?----------

4.How often is the static immunization service provided?

(a) Once a month

(b) Once a week

(c) Others specify

5(a) What other strategies do you use in the subdistrict?----------

---

(b) How often ----------

6 (a) How do you address the immunization needs of pregnant women?

(b) How often do you do it?

7. How do you normally get to outreach points?----------

8.(a) Do you face problems with transport? Yes [ ] No [ ]

(b) If yes, which of these apply

1. Breakdown of vehicle

2.Breakdown of motorcycle

3.Late arrival of vehicle

4. Others specify

9. Has there been a shortage of vaccines within the last 6months? Yes [ ] No [ ] If yes which types----------

10. Has there been a shortage of syringes , needles and road to health cards? Yes [ ] No [ ]

PRESBY. PRIMARY HEALTH CARE, AGOGO
VEHICLE MOVEMENT FOR AUGUST, 1998

DATE	UNIT	PLACE	ACTIVITY	TIME	VEH.NO.
		1ST WEEK			
4/8/98 Tue.	Juansa	Dawireso/ Amantena	ENV, MCH/FP	7.00am	AS 3309A
6/8/98 Thu.	Agogo	Bebome/ Kowireso	ENV. MCH/FP	7.00am	AS 1570A
7/8/98 Fri.	Konongo	Kyekyewere/ Agyareago	ENV/NUT MFU/MCH	7.00am	AS 3309A
		2ND WEEK			
11/8/98 Tue.	Juansa	Menam/ Worap.	MCH/ENV	7.00am	AS 1570A
12/8/98 Wed.	Agogo	Adinkrakrom	MCH/ENV	7.00am	AS 3309A
13/8/98 Thu.	Konongo	Patriensa	MCH/MFU/ NUT/ENV	7.00am	AS 3309A
	Centres	Kumasi	Drugs Ass.	7.00am	GR 2443N
14/8/98 Fri.	Agogo	Onyemso/ Pataban	MCH/ENV	7.00am	AS 1570A
		3RD WEEK			
18/8/98 Tue.	Juansa	KKB	MCH/ENV	7.00am	AS 3309A
19/8/98 Wed.	Agogo	Brantuo	MCH/ENV	7.00am	AS 1570A
20/8/98 Thu.	Agogo	Abrewapong	MCH/ENV	7.00am	AS 3309A
	Konongo	Obenimase/ Atunsu	MFU MCH/ENV	7.00am	AS 1570A
21/8/98 Fri.	Juansa	PKK/Adiemra	MCH/ENV	7.00am	AS 1570A
	Dwease	Beposo	MCH	7.00am	AS 3309A
		4TH WEEK			
25/8/98 Tue.	Juansa	Akutuase/ Wioso	MCH/ENV	7.00am	AS 1570A
28/8/98 Fri.	Agogo	Hwidiem	MCH/ENV	7.00am	AS 1570A

SNR. ADMINISTRATIVE OFFICER
(Kofi Acquah)