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**PATIENT REFERRALS IN DANGME-WEST DISTRICT:
PATIENT AND SERVICE PROVIDERS PERSPECTIVE**

By

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

AUGUST, 2002

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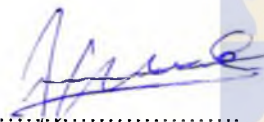
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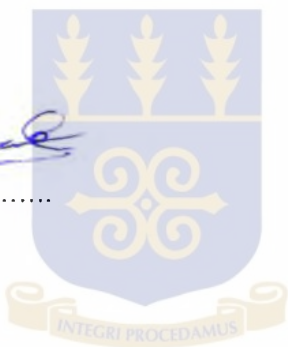
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DECLARATION


I hereby declare that, with the exception of reference to other researchers' work, which has been duly acknowledged in this work, this dissertation is my own work and to the best of my knowledge this work has neither in part nor in whole been presented elsewhere for any university degree.

Signed.....


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.....
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.....
for: PROF. MICHAEL DOUGLASS
(Academic supervisor)

DEDICATION

This work is dedicated to my three lovely daughters, Elizabeth, Vera and Edna, their mother, Agatha and my aunt Dr Elizabeth Amoah.

ACKNOWLEDGEMENT

I am grateful to a number of people who through diverse ways gave me advice, direction and support during the preparation of this work.

-My appreciation goes to my academic supervisors Prof Michael Douglass and Dr Eric Amuah for their advice and support during the preparation of this work.

- I also express my gratitude to my field supervisor Dr. Irene Agyapong, the Dangme-West district director of health services for her guidance and assistance during my field practice.

- I wish to thank, Dr. (Mrs.) Margaret Gyapong, Dr Evelyn Ansah and all DHMT members all of Dangme-West District for their encouragement and social support during my fieldwork in the district.

- My research team, who helped me in diverse ways to collect the needed information for my work I say, thank you all for your effort.

My special thanks go to my family, especially Dr. Elizabeth Amoah for their assistance and encouragement during the course of study.

I am also grateful to Lawuo Gwesa, colleague student for her moral support and encouragement during the field work.

To all lecturers of School of Public Health, I say thank you all for imparting such great knowledge and skills to me for the entire period of study.

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LIST OF ABBREVIATIONS

1. DHMT District Health Management Team
2. JSS Junior Secondary School
3. SSS Senior Secondary School
4. DOTS Directly Observed Treatment Short Course
5. Epi Info Computer programme
6. Level A First level of primary health care
7. level B Second level of primary health care
- 8.S.M.O Senior Medical Officer
- 9.M.A Medical Assistant
- 10.F.G.D Focus Group Discussion
- 11.WHO World Health Organization

ABSTRACT

Patients' referral is an integral part of health care delivery in the district of study. The Dangme-West District with relies on satellites of referral hospitals outside the district for care of patients referred from the districts. With the introduction of community based health insurance scheme, the linkage with these referral hospitals has seen the greatest challenges. A lot of effort and negotiations had to be put in place to make it possible for the referred patients from the district to be managed at these referral hospitals. Besides the physical access, the travel cost and other challenges on patient referral, there is growing dissatisfaction among referred patients on referral process, which may have negative effect on participation in the health insurance scheme in the district.

The main objective of the study was to assess the perceptions and attitude of referred patients and health service providers on patient referrals in the district and also identify the various factors affecting patient referral in the district.

The study was a descriptive cross-sectional study involving referred patients and health service providers. One hundred and eighty eight referred patients and forty-two health service providers were interviewed using questionnaires. Focus group discussions were carried for the referred patients and in-depth interviews were conducted on service providers. Review of available records on referred patients with a checklist was also carried. Fifty five percent of the referred patients interviewed were registered in the community health insurance scheme in the district. The patient referral rate from the primary health care facilities to the referral hospitals was eight per thousand patients (0.8%) for the period under

study. Ninety percent of the patient referrals were for treatment and operation whilst ten percent of these referrals were for various investigations. 72% of referred patients were given referral notes and only 15% of referred patients were given referral feedback note to the referring primary health facilities.

The average travel time to these referral hospitals was 1-2 hours. From the perspective of these referred patients, the attitude of health staff at these referral hospitals was cordial except 13% of them who were unhappy with the service providers' attitude. The referred patients experienced less waiting time at the referral hospitals. 7% of the referred patients were transported to the referral hospitals by an ambulance whilst 93% used commercial transport. Review of the existing records on patient referral at the referral hospitals showed that none of these referral hospitals had a record of patient referral in outpatient department registers. At the primary referring health facilities 75% of them had records on patients' referral in the outpatient department registers. The insured patients were properly referred with referral notes than non-insured patients. Patient referrals from level A to level B health facilities were delayed especially referrals from Traditional Birth Attendants and the reasons for such delays were lack of skills of these health practitioners. Reasons for the delay of patient referrals from level B health facilities to referral hospitals were long distance travelled to these hospitals.

The identified factors that have an impact on referral process in the district include physical access of referral hospitals, longer travelling time, inadequate referral records, weak inter-facility communication, referral delays and staff attitude. The following recommendations are suggested, improve referral records

and inter-facility communication, education of service providers on timely referrals, provision of designated transport like ambulance for sub-districts and also involvement of private transport owners in the referral process. Good patient information and cordial relationship between service providers and patients should be encouraged. Upgrading of health centre to referral hospital in the district is recommended to reduce the travel time and cost to referred patients. Expansion of the health insurance coverage is also recommended. Besides the financial access, the insured patients are properly referred and records on such patients are accurate.

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Referral mechanism is the procedure for and ways of sending patients to an appropriate facility, institute or specialist at the next level of health care system (Monekosso, 1994). Medical referrals systems have been in the centre of medical practice for years with the sole aim of delivering the best care to the clients and also to reduce morbidity and mortality within the service delivery.

The purpose of a referral system is to recognize early warning signs and undertake prompt referral of cases to the next level of care where the best care can be obtained. An effectively run referral system besides reducing mortality also reduces service cost to the patient. Early detection of the complications and prompt referrals to the next level of care saves the patient the cost of medical care. The referral systems face a number of challenges, which eventually affect service utilization. Some of these challenges include, cost of referrals, distance to the referring points, delay referrals, refusal of referrals by patients, lack of communication system and transportation and poor records system.

These challenges that affect health service utilization must be seriously addressed. Access to referral hospitals or facilities poses a challenge to patient referral system. Referral facilities or hospitals located far away from referring facilities make access difficult and also endangers lives of referred patients. Poor transportation system and the long distance to travel to these referral facilities hamper effective referral system. Delays and inappropriate referrals within a referral system are sometimes a reflection of the skills and competence of health staffs. Well-trained health staffs and availability of referral guidelines aims to reduce unnecessary delays and inappropriate referrals.

Availability of inter-facility communication system and feedback establishes a linkage between health facilities and improves effectiveness of patient referral. Strengthening the primary health care with provisions of needed infrastructure and equipment helps to reduce unnecessary, inappropriate referrals from primary care level to the secondary care level. Patient referral should be seen as an essential component of health service delivery at the interface of primary and secondary health care levels. Such an

operational referral system should be effectively monitored and evaluated to increase service utilization.

With the introduction of community health insurance scheme in Dangme-West, the patient referral system needs to be strengthened and constantly monitored to increase patients confidence and satisfaction in the health care provided in the district. The health insurance scheme introduced into the district provides benefits to insured patients which exclude the travel costs to these referral hospitals. The patient referral must be effectively run and monitored to avoid such inappropriate referrals to sustain the satisfaction and confidence of patient within the insurance scheme.

1.2 Study Area

Dangme-West District with a total land area of 1442 sq. kilometres is the largest district in the Greater Accra Region. The district capital is Dodowa. The district shares boundaries with the Yilo Krobo district in the northwest, Akuapim north district on the west, Tema district on the southwest and Dangme-East district on the east. The Atlantic Ocean borders the southern portions. According to the 2000 population census, the district has a population of 96,015. The people of the district are predominantly Ga-Dangmes with two principal linguistics groups, the Gas and Dangmes. The indigenous people of the district are organized into four traditional areas namely Shai, Osudoku, Prampram and Ningo traditional areas.

Farming, fishing and livestock -raising are the main occupations. The district has a community health insurance scheme that started operation in October 2000. Out of the population of 96,015 only 3,081 individuals are registered with the health insurance scheme.

1.2.1 Health service delivery and patient referral system in Dangme-West district

The Health Care System in the district comprises a network of public, private and traditional health practices. There is a referral system mechanism within this network of health practices with the intention to improve the quality of care to the patients. Within the Ministry of Health, there are different levels of health care delivery. Each level of health care has specific functions and practices. The different health levels are interconnected through the referral system to ensure good quality of care to patients. The existence of this referral system helps to institute early interventions to

reduce morbidity and mortality. The district has four health centres and six community clinics. The health centres are located in the four sub districts with one health centre per sub district. Medical assistants man the health centres.

In addition to the health centres and clinics, there are 40 trained traditional birth attendants, two maternity homes, one private and several chemical drug sellers. The district has no referral hospital but relies on referral hospitals outside the district for secondary health care. The referral hospitals outside the district that are used for patient referrals include Tema General Hospital, St Martin de Porres Hospital, Agomanya, Atua Government hospital, Akuse Government hospital and Battor Catholic hospital. The locations of these referral hospitals are considered far and travel time to these hospitals is about one hour. Each sub-district has an internal referral system involving health facilities located in it. Two levels of health care operate in each sub district namely levels A and B health care.

1.2.2 Level “A” health care

This level of health care operates at community level in the villages. The health facilities involved are the community health clinics manned by trained health providers like community health nurse and midwives. The other health providers at this level are trained traditional birth attendants, chemical drug sellers, and traditional medical practitioners including herbalist and traditional circumcisers or wanzams. At this level of care, patients have access to all these health providers but difficult cases are referred from these other health practitioners like Traditional Birth Attendants to the community clinics. The community clinics thus become the first referral point within the community

1.2.3 Level B Health care

The district has four health centres namely, Prampam, Osudoku, Asutuare and Dodowa health centres in each of the four sub-district. These health centres serve as the main referring points in each sub-district. Patient Referrals are received from community clinics, traditional birth attendants and private maternity homes and clinic in the district.

From these levels of health care (A and B), patients are referred to the next level of care (Level C) (Hospital level) for health services that are not available in the primary health care levels. Since the district has no district hospital, patients who need hospital

services are referred to hospitals outside the district. Two categories of patients that are referred are the insured and non-insured. The patients who are insured in the health insurance scheme are to be referred with a referral card, referral note and insurance registration forms. These are basic requirements that the patients and service providers are to adhere to before patients are referred. For those not insured in the health insurance scheme only referral notes are required for referral.

1.3 Statement of Problem and Rationale

With the introduction of community health insurance scheme the district has instituted guidelines and procedures for patient referrals in the health care delivery. Adherence to the referral guidelines by service providers within the district falls short of expectation. Improper patient referrals have been a concern to health service managers in the district. In addition there is growing dissatisfaction among patients on patient referral process in the district. The district relies on five-satellite hospitals outside the district as referral hospitals for both insured and non-insured patients within the district. This presents quite a challenge since it requires constant communication and negotiation with a wide variety of service providers and managers who are geographically and administratively separate.

As part of the package for community-based health insurance scheme the district health administration has taken steps to streamline and strengthen the patient referral process to make health services available and accessible to patients in the district. Measures taken to improve the referral process include training of health personnel in referral procedures and guidelines and making material resources available to health facilities in the district. In spite of these efforts, the patient referral service faces challenges like referral delays, inappropriate referrals, wrong service providers attitude to referred patients and poor communication network among service providers.

In view of this, the referral process needs to be evaluated to identify possible factors and reasons accounting for these challenges and to make recommendations to improve the referral process in the district. This will enable the district to formulate and redesign policies on referral system within the district in order to maximize service utilization.

1.4 OBJECTIVES

MAIN OBJECTIVES

To describe the general perception and attitude of referred patients and service providers on patient referrals in the Dangme-West district.

SPECIFIC OBJECTIVES

1. To identify the factors influencing patient referrals in the district.
2. To describe patients' experience, attitude and perceptions of the referral system in the district.
3. To determine health service providers' perspective on patient referral.
4. To make recommendations on improving patient referral in the district to the district health policy makers.

CHAPTER TWO

2.0 LITERATURE REVIEW

A search of the literature reveals a dearth of information on both satisfactory definition or practical means and methods for evaluating the referral system except for some very recent publications on the patient referral (Sanders et al.1998).

Referral mechanism is the procedure for and ways of sending patients to any appropriate facility, institute or specialist at the next level of health care system (Monekosso, 1994). The mission of referral system is to link patients to the medical knowledge they need to make the best health care choices for themselves and their loved one. The referral system aims to help people find the right medical care in the process saving time, anguish and in some cases saves lives (Henderson et al.1982).

Referral system has been defined as a support system that assists in making health services more effective, efficient and equitable to its users (Siddiqi et al.2001). The sine qua non for its effective functioning is the establishment of primary health care services of minimally acceptable standard such that the community is encouraged not to by pass its network. In addition, each lower level facility needs to be formally linked to the next higher facility and the concerned staff be made aware of and respect such linkages (WHO, 1978).

A study in Saudi Arabia defined referral system as "a process in which the treating physician at a lower level of the health service seeks the assistance of better equipped and specially trained persons with better resources at a higher level to guide him in managing or to take over management (Tawfik et al. 1997).

In review of primary health care in Ghana, it was found out that although adequate referral systems have been outlined between all the different levels of healthy system in Ghana, their implementation has been ineffective (Adjei et al.1988). The primary health care services at community level is poorly organized and managed. Consequently quality of cares decreases as one goes towards the periphery of the health care system. The first referral point especially the district hospital may be overburdened with problems that may be dealt with by the primary health care in the communities. The decentralization of the health system involves the transfer of authority and responsibility to more peripheral level of health service. The expectation

is that service will thus become more responsive and accountable to local needs and consequently more effective (WHO, 2000).

The health system in Ghana has guidelines and procedures for referral system. The various levels of care with specific functions are spelt out in its policy guideline. Adherence to these policy guidelines varies from one health facility to another. Quality of care differs between health facilities. Management of medical emergencies is poorly organized and the required essential resources including drugs are not available. Adverse factors in case management include inadequate assessment, inappropriate treatment and inadequate monitoring and evaluation (Meehan et al.1997) Excessive referrals to specialists by primary care physicians may result in unnecessary tests, procedures and costs (Franks et al.1999). On the other hand, under referral may result in health complications and additional costs that could have been avoided by appropriate specialty care. Variability in referral practices among service providers is attributed to service provider uncertainty about appropriate referral practices at least for some patient conditions (Calman et al.1992). Those conditions associated with the greatest variation in referrals to specialists have yet to be identified.

However, certain primary care provider observers contend that there is a set of conditions for which referral to a specialist is likely to be considered “discretionary” by the primary care providers (Chao et al.1993). These are non-urgent conditions for which there is lack of consensus among experts on the appropriate timing or indications for referral to specialist. It is reasoned that financial constraints have the most restrictive impact on these discretionary referrals as opposed to referrals for emergent or life saving treatment beyond the usual range of primary care practice.

Patients anxiety about their health problems also influence the referral behaviour of health care providers or physicians and this may explain the observed variations in referral rates (Gilson et al.1993). In their study into referral system in Zimbabwe it was observed that there were inappropriate referrals and admissions in Zimbabwe hospital (Sanders et al 1998). Inappropriate referrals account for large referral rates in health facilities. Most of these referrals could have been treated at a lower level of care. Developing or strengthening intermediate level facilities by changing the mechanism of access to specialist facilities or by training health professionals in community settings could improve appropriateness of referrals.

Improper referrals have also been mentioned as the factors making implementation of referral system ineffective in the Ghana health service delivery (Adjei et al. 1988). Self-referrals by patients also account for inappropriate high rate of referral (WHO, 1978). WHO monograph on ways and means of implementing health for all by the Year 2000 stresses both the availability and appropriateness of the referral process for the improvement of care (WHO, 1981).

A high referral rate does not imply a high level of inappropriate referral (Reynolds et al.1991). Application of referral guidelines would be unlikely to reduce the number of patients referred to hospitals (Fertig et al.1993). The wide variations in referral rates and the consequent implications for cost and quality of care need to be evaluated for the appropriateness and effectiveness of referrals. A study by Coulter et al in 1989 found that 35.4% of referrals were for particular treatments or operations and further 34.9% were for specific investigation or diagnosis (Coulter et al.1989).

Primary health care givers act as the gatekeepers at the primary health care level to the more specialized and more expensive secondary health care. Health care services require referral from the primary health care levels to the next level of care where such services can be provided. Most patients bypass the primary health care and utilize the secondary health care services for various reasons. In their study into self-referrals, Kulu-Glasgow et al, in 1998 observed that patients self-refer to a specialist for medical conditions/complaints for which they expect to end up at the specialist anyway as they consider these problems as specific for the specialist. Patients who are living in relatively highly urbanized areas, who are better educated and who expect to achieve a better quality of communication at the consultation with specialist more commonly self-refer for specialist care (Kulu-Glasgow et al.1998).

The primary care system in the country involving the primary health care servicing providers as gatekeepers to further health services has helped to keep health care costs down. Despite this, unexplained variation in referral rates and increasing health care costs have led to the search for methods of improving efficiency in the referral process. There is relatively little recent descriptive data on the processes of care at the primary-secondary care interface.

In evaluation of essential obstetric care in Adansi East District, it was found out that 93% of women with obstetric complication did not use the district referral point and

82% of pregnant women did not use the sub-district first point of contact (Kyei-Faried, 1997) .

A considerable degree of disagreement between the opinions of patients, health care providing general practitioners and consultants on reasons for patient referrals had been identified (Grace et al. 1986). Most referrals are made for a combination of medical and non-medical reasons. Some of these referrals were considered avoidable.

The most frequent reasons for referral failure were administrative factors and patient's belief that the referral was not necessary. The patients' opinion of referral necessity and the level of the referring physician have significant influence on the referral failure rate (Wu et al.1996). Improving administrative efficiency, enhancing communication between physicians and patients, consultants assessing the willingness of patients to follow through on a referral may reduce the referral failure rate (Gilson et al.1993). Another reason for patient referral is the influence of parents or relatives of patients requesting to seek a second opinion outside their district network (Dale, 2000).

Certain health insurance schemes conduct referral profiling of primary care providers and evaluate intra-provider variation in referral practices. Such profiling analyses have been shown, however, to be highly problematic in the absence of adequate measures of case-mix or standards units of analysis (Salem-shartz et al.1994). The intended effect of cost containment policies is to restrict patient referrals and the implications of such policies for the quality of care need to be addressed. The quality of care provided to patients insured through insurance scheme may be vulnerable to policies that restrict referral (Salem-shartz et al.1994).

In 1987, Wilkin reported that the frequency with which general practitioners referred patients to hospital ranged from less than one per hundred consultations to over sixteen per hundred (Wilkin, 1987). Medical practice variation is extensive and well documented particularly for surgical interventions and raises important question for health policy. To date however little work has been carried on inter -practitioner variation in referral activity in the primary care setting (Nordberg et al.1996).

In a study into variations in referral rates among general practitioners, O'Donnell in 2000 observed that variations in referral rate remains largely unexplained. Patients' characteristics explained less than forty percent (40%) of the observed variation whilst practice and general practitioners characteristics accounted for less than ten percent

(10%) of the variation Targeting high or low referrals through clinical guidelines may not be the issue. Rather activity should concentrate on increasing the number of appropriate referrals, regardless of the referral rates. It was observed that appropriateness of referrals is more important than the referral rate (O'Donnell, 2000). Fertig A. et al in 1993 also observed that the variation in referral rate among general practitioners could not be explained by inappropriate referrals. They found 2.5 folds variation in referral rate among general practitioners (Fertig et al.1993). In a study to determine the relationship between utilization and referral found no significant correlation between variables, resource utilization, access to referral and use of referral (Lawler et al.1987). Decision to initiate referral process is complex and not easily explained. The referral rate provides no indications of the appropriateness of referrals. Any intervention designed to improve the referral mechanism should aim to increase the proportion of people who are appropriately referred to hospital and to reduce the proportion that are inappropriately referred (Franks et al.1999).

In their study into quality of emergency obstetric at the first and secondary referral levels, Sourou Gbangbade in 1998 observed that 58% of the respondents in the study declared that they experienced very little waiting time and 62% declared the demeanor of providers as good. Gilson et al in 1993 found a referral rate of 2.3% in their study of referral care in Kilombero district in Tanzania but a more recent study in Kenya by Nordberg et al found that less than 2% of all new patients had been referred.

CHAPTER THREE

3.0 Research Methodology

3.1 Study Design

This study was a descriptive cross-sectional one involving referred patients and health service providers. The study was done in Dangme-West District in Greater Accra Region from 10th June – 30th July 2002.

Study population

Referred Patients (referred within the period May 2000 -May 2001)

Health Service providers (In the Referring Health Facilities and Referral Hospitals)

3.2 Sampling

3.2.1 Size

With a precision of 0.05, confidence interval of 1.96, it was determined that a sample size of 122 was needed. But on the fields 188 referred patients were interviewed. 42 health service providers were also interviewed. (Refer Appendix viii for calculation).

3.2.2 Sampling Method

A multistage sampling technique was applied. Three out of four sub-districts were randomly selected. Records of referring health facilities in each sub-district on referred patients were reviewed and all referred patients for the past one year (May, 2000 -May 2001) were identified .A sampling frame consisting of names of referred patients was organised. Simple balloting was done to select the study units (names of referred patients) in each sampling frame for interview. The selected names were traced by their addresses for interviews. Service providers at both referring health facilities and referral hospital were also selected for individual in-depth interviews.

3.3 Data Collection Technique

A structured questionnaire designed by the principal investigator was used to collect information on referred patients' background characteristics and their attitude and referral experience on patient referral. A structured questionnaire was also used to collect service providers' perception on patient referral in the district. In addition a review of available records on patient referrals was done at both the referring health facilities and referral hospitals with a checklist by the principal investigator. Six Focus group discussions were conducted for referred patients (insured and non-insured). Two focus group discussions per sub-district, one for insured referred patients and the other for non-insured referred patients. In-depth interviews were conducted for health service managers at both referring health facilities and referral hospitals to capture their perception on the referral process in the district.

Pre-testing of Questionnaire

Three field assistants were trained to help administer the questionnaires and also help the researcher to conduct focus group discussions. The questionnaires were pre-tested in one of the sub-districts (Prampram) involving referred patients and health service providers. The pre-testing of questionnaire was done for four days from 10th -13th June 2002. The findings of the pre-testing helped to make modifications in the questionnaire to facilitate data collection. The pre-testing was done to help researcher determine reliability and applicability to the study target.

The three field assistants and the researcher carried out the actual administration of the corrected questionnaires. The researcher interviewed the service providers and also reviewed available records on referred patients. The questionnaire administration was done for three weeks (15th June – July 2002).

3.4 Data Processing and Analysis

The collected data were first assessed for quality by the researcher who checked the filling of these questionnaires and assessed their completeness and consistency. The data were then coded, sorted out and edited manually by the principal investigator and the three field assistants. The researcher organised and analysed the data with EPI-Info 6 computer software. My field supervisors, (Dr. Irene Agyepong and Dr. Margaret Gyapong) were consulted for assistance in data analysis. A preliminary report was prepared and presentation done to DHMT.

3.5 Limitations of the Study

Some of the referred patients selected for interview could not be reached for the interview because some of them had died or travelled outside their residence or community. Because of this situation the sample size was increased to make room for such occurrences. Interviews by different field assistants were likely to introduce inter-observer errors because these interviewers may not be too familiar with the concept of the research or were not experienced to get the relevant information from the referred patients.

3.6 Ethical Issues

Informed consent was sought from the target group before interviews were granted. For service providers, authority was sought from the health facility's management team before the interviews were conducted. The target group were assured of the confidentiality of the information they provide.

3.7 Variables Definition and Measurement

Table:1 Variable definition and measurement

Variable Name	Definition	Measurement
AGE	Last birthday	Years
SEX		Male, female
Access to clinic	How far or close to clinic	Distance (km) to clinic (Far, not far)
Access to referral hospital	How far or close to referral hospital.	Distance (km) to referral hospital (far, not far)
Reporting time to hospital	Time patient reports to clinic	Early, late reporting
Alternative care	Use alternate care of	Yes, no
Means of transport	How do patient get to referral hospitals	Vehicle (Ambulance, private)
Travel time to hospital	Duration of travel	Hours spent in travel
Travel cost to hospital	Cost of transportation	Amount spent on transport
Cost of service (hospital)	Cost of treatment	Monetary cost (Expensive/affordable)
Staffs competence	Trained/skilled staffs	Level of training
Staffs attitude to patient	How are patients treated	Patients perception
Patients attitude to referral	Do patient complete the referral process	Staffs and patients perception
Referral guidelines	Available and use of guidelines	Checklist Yes, no
Insurance status	Is patient insured?	Yes, no
Timelines of referral	How early are patients referred	Early, late referral
Inter-facility communication	How are referrals communicated	Review/checklist of comm.. linkages
Referral records	Keeping of referral records	Review of records
Working tools	Are they available	Checklist of tools

CHAPTER FOUR

4.0 RESULTS

4.1 Demographic Information of referred patients

One hundred and eighty eight referred patients were interviewed.

4.1.1 Distribution of Referred Patients by sub-districts

80 of the referred patients were from Dodowa sub-district, 56 were from Ningo sub-district and 52 referred patients were from the third sub-district, Osudoku.

4.1.2 Age distribution of referred patients

Most of the referred patients 160 (95.7%) were above 20 years and were mature to give an account of their referral experience. 150 (89.3%) of the referred patients were in the age group 20-69 years of age. 6.4% of patients were above 70 years and 9.6% were below 20 years of age. The age group 20-49 had 131(69.7%) referred patients, which is very significant because the pregnancy related referrals were within this age group. (refer table 2)

Table: 2 Age Distributions of Referred Patients

Age Group	Number	Percentage (%)
< 20	18	9.6
20-29	41	21.8
30-39	56	29.8
40-49	34	18.1
50-59	9	4.8
60-69	8	4.3
70 and above	12	6.4

4.1.3 Socio-demographic and Economic Characteristics of Referred Patients

130 (69.1%) of the referred patients were female and 58 (30.9%) were male. 66 out of 130 female referrals were pregnancy-related referrals. (refer table 3)

Table.3.Socio-demographic and Economic Characteristic of referred patient

Characteristic	Number of respondents (n)	Percentage (%)
Sex		
Female	130	69.1
Male	58	30.9
Marital Status		
married	144	74
single	33	18
divorced	3	2
separated	11	6
Religion		
Christianity	178	95.2
Islam	6	3.2
Traditional	3	1.6
Insurance Status		
insured	104	55.3
non-insured	84	44.7

Table: 3 (cont'd)

Characteristic	Number of respondents (n)	Percentage (%)
Education		
No education	80	42
primary	43	23
JSS	32	17.5
SSS	16	8.5
tertiary	17	9
Occupation		
farmer	66	35.3
trader	47	25.1
civil servant	24	12.8
fisherman	8	4.3
others	42	22.5

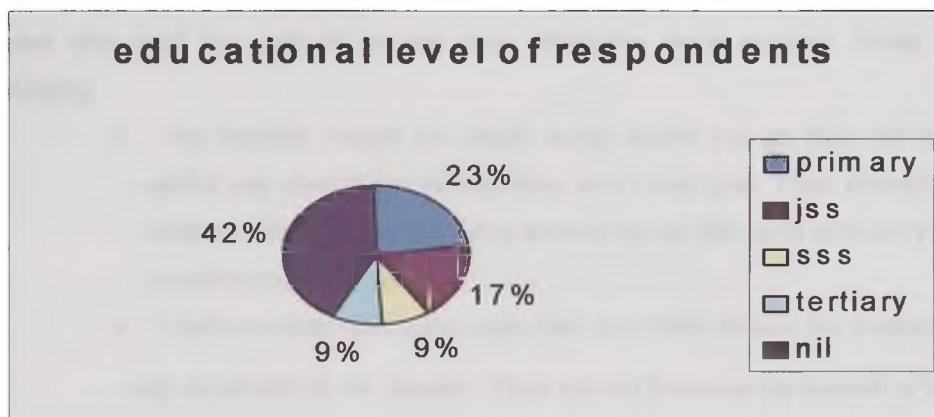
From the six focus group discussions conducted, with two FGDS per sub-district, the total number of participants was 48. Of the 48 participants, 32 (66.7%) were female and 16 (33.3%) were male. The age range was between 19 and 64 years. 17(35.4%) of the participants had no formal education. Farmers constituted 30 (62.5%) of the

FGD participants, 6 were fishermen, 7 were traders and the rest were from other occupational groups.

4.1.4 Educational Background of Referred Patients

55 (36%) of the referred patients had education beyond the primary education. About 80 (42%) had no formal education. Majority of respondents 108(58%) had some form of formal educational and thus capable of giving adequate information on their referral experience.

Figure : 1 educational level of referred patients



4.1.5 Occupation of Referred patients

Majority of respondents 66 (35.3%) were farmers whilst traders (47) constituted 25.1%. The remaining 42 (22.5%) were self-employed in activities like carpentry.

4.2 Perception of Referred Patients

4.2.1 Perception of Cost of Service at Referral Hospitals

108 (57.4%) of interviewed referred patients stated that the cost of service at the referral hospital was expensive whilst 80 (42.5%) perceived it as affordable. For those who perceived the cost as affordable 57 (71.3%) are insured as against 23 (28.7%) of non-insured patients. This difference in perception amongst the two groups of patients was found to be statistically non-significant. (refer table 6)

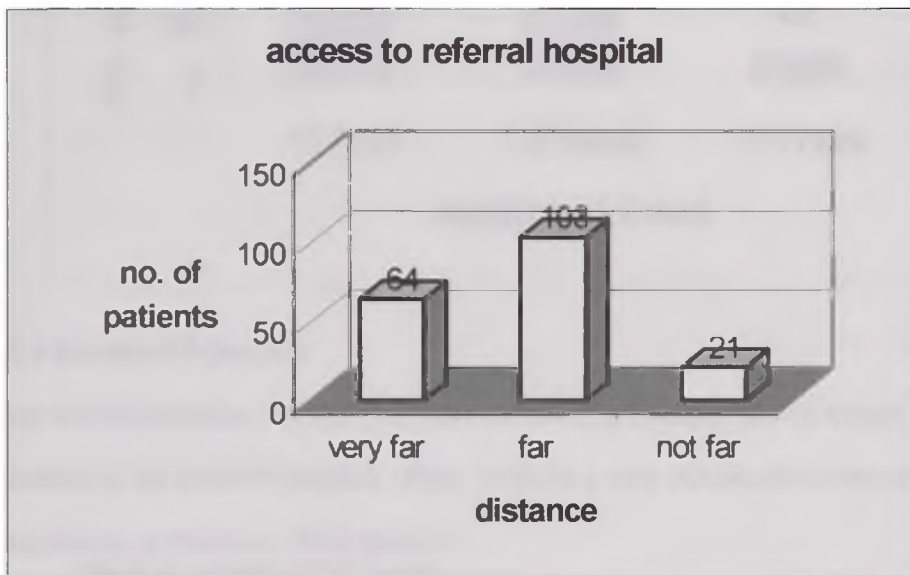
28 of the FGD participants (58.3%) said the cost of service was expensive. 12 of those who said the cost of service was affordable were insured. Some said the following.

- *“The hospital charge too much, every where you go they ask for money and if you don't have money they won't treat you. They should treat you before collecting money. They should cancel the cash and carry thing. By non-insured male patient.*
- *“I had operation and paid more than ₵800,000.00 and the insurance paid only ₵200,000.00 as benefit. They should increase the benefit of the insurance for us who have operation because the operations charge is high and we can't pay for it. By Insured pregnant patient in labour who had a surgical operation.*

4.2.2 Physical Access to Referral Hospitals

103 (54.8%) of referred patients said the distance to the referral hospitals was far. 64 (34%) of them said it was very far whilst 21(11.2%) perceived the distance as not far.(refer figure 2)

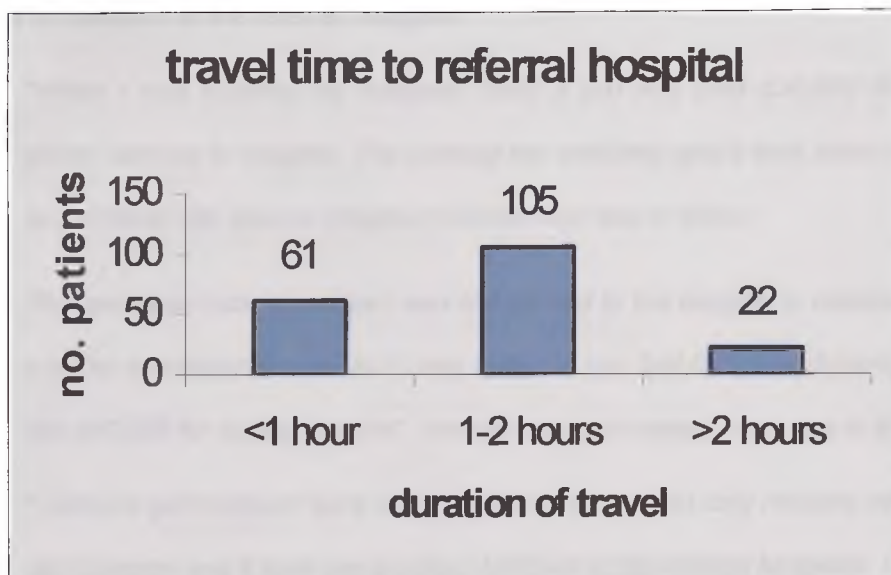
Figure 2: perception of access to referral hospital



Not far = distance <20km far = 20-30km very far = > 30km

4.2.3 Travel Time to Referral Hospital

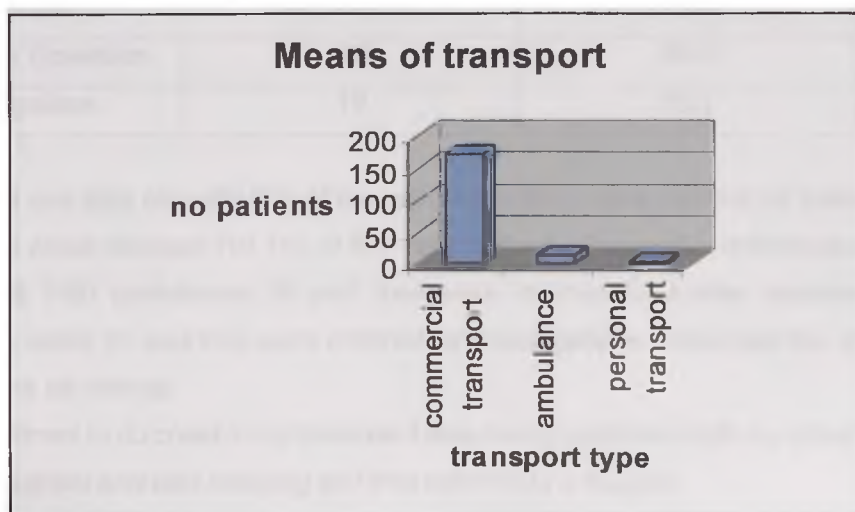
According to 105 (56%) of the referred patients, travel time to referral hospital was 1-2 hours whilst for 61(32%) of them said it took less than 30 minutes to get to the referral hospitals and 22(12%) spent more than two hours to get to the hospitals.(refer figure3)

figure 3: travel time to referral hospital

4.2.4 Means of Transport

Most referred patients 175 (93.1%) used commercial transport as the means of transport to the referral hospitals whilst 13 (6.9%) were transferred to the referral

hospitals by ambulance. Refer figure 4

Figure 4: means of transport

From the focus group discussion, some of the participants had this to say on the means of transport to the referral hospitals.

- *“When I was referred my husband hired a taxi and paid ₵30,000 before the driver sent me to hospital. The journey too was long and it took about one hour to get there”. By insured pregnant woman who was in labour.*
- *“For me I was lucky because I was transferred to the hospital in ambulance and a nurse accompanied me. But I was asked to buy fuel for the ambulance. It cost me ₵40,000 for buying the fuel”. Insured pregnant woman who was in labour.*
- *“ I did not get transport early and I waited for more than forty minutes before I got transport and it took me one hour to travel to the referral hospitals. I think health authorities should do something to get doctors or trained health workers to give us the same treatment in the health centre”. by non-insured male patient*

4.2.5 Reasons for Patient Referral

Table: 4 Reasons for Patient Referral

Reasons	Number (n)	Percentage (%)
Treatment / Operation	169	89.9
Investigations	19	10.1

One hundred and sixty nine (89.9%) of the referred patients were referred for treatment or operations whilst nineteen (10.1%) of them were referred for various investigations

Of the 48 FGD participants 36 said they were referred for further treatment or operation whilst 12 said they were referred for investigations. Some had this to say on reasons for referral.

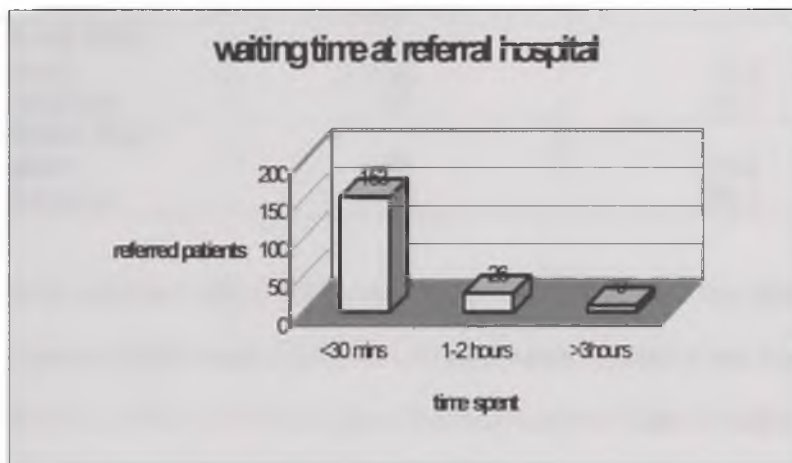
-I was referred to do chest X-ray because I was having problems with my chest.

-I was pregnant and was bleeding so I was referred to a hospital.

4.2.6 Waiting Time at the Referral Hospitals

Most patients 153 (81.4%) were seen and treated within 30 minutes of getting to the referral hospital whilst 26 (13%) said they had to wait for 1-2 hours before being seen and treated. (refer figure 5)

figure 5: waiting time at referral hospital



30 out of 48 FGD participants said they were seen and treated within 30 minutes of getting to the referral hospitals. 10 of the FGD participants said they had to wait for more than an hour before treatment. Some had these to say.

- *“when I got to the hospital, I was sent to theatre because my condition was serious. I was pregnant and I was bleeding. The nurses did well to save my life”. By non-insured pregnant woman in labour.*

- *“Sometimes the way they treat we the insured people is not good. If they see the green card they asked you to wait and they don’t mind you. If you don’t have green card they treat you fast”. by insured male patient.*

4.2.7 Referral Notes (Referral Note and Referral Feedback note)

Table: 5 Referral notes

	Number of Referred Patient (n)	Percentage (%)
Referral Note		
-given	136	72.3
-not given	52	27.7
Feedback Note		
-given	28	14.9
-not given	160	85.1

Most referred patients (136) (72.3%) were given referral notes to the referral hospitals. For those given referral notes (136), 85% of them were insured in the health insurance scheme whilst 51(15%) were not insured. For those without referral notes (52), 19 were insured and 33 were not insured. The difference in the use of referral notes amongst the insured and non-insured referred patients was found to be statistically significant indicating the insured patients are given referral notes than the non-insured patients.

From the FGD some of the participants said these:

-"I fell ill suddenly and I was rushed to the hospital. Because I did not go with a referral note from the clinic, I was asked to go back for a referral note or I should pay for the cost of the service. I sent my brother to go for the referral note but at the clinic, the staff refused to give us referral note because I did not report to the clinic for proper referral. I had to pay for the service although I am insured in the health insurance". By female insured patient

-the nurse did not give me any referral note, she told me to go the hospital because they cannot treat me at the clinic. By non-insured patient

160 (85.1%) of referred patients were not given feedback note to the referring health facilities. Referred patients given feedback note were patients who had undergone surgical operations (23) and needed further wound dressing at the referring health facilities whilst the rest (5) were asked to continue special treatment like DOTS for tuberculosis.

4.2.8 Reasons for choice of referral hospitals

Most referred patients 163 (86.7%) had a choice of referral hospitals and the reasons for choice of referral hospitals included distance to referral hospitals (86.4%), service providers' attitude accounted for 8.7% and cost of service (4.9%). This goes to prove the fact that access to the referral hospital was the greatest concern of patients taking into consideration the travel time and travel cost to these referral hospitals.

4.2.9 Referral refusal

Only 4 (2.1%) out of 188 referred patients said they were refused referral to hospital. All these four referred patients were registered in the health insurance scheme. They gave reasons for such referral refusal as failure of the medical assistant to refer them because the medical assistant thought their conditions could be treated at the primary clinic.

4.2.10 Reporting time to clinics for health care by patients

Most of the referred patients interviewed 108 (57.4%) indicated that they report to clinic the same day of falling sick. Those who report to clinic, 2-3 days of illness constituted 71 (37.8%), whilst the rest 5 (2.7%) report after 3 days of illness. The insured patients

report early to clinic than non-insured patients. The reasons by the non-insured patients for reporting late to clinic were assigned to lack of funds to pay for the high cost of care. The difference in perception on reporting time to clinic among the insured and non-insured patients was however found to be statistically non-significant. (refer table 6)

4.2.11 Perception of Service providers' Attitude at referral hospitals

Service providers' attitude at referral hospitals was found to be friendly by 160 (85.1%) of referred patients, whilst the rest 28 (14.9%) were dissatisfied with their attitude. 35 out of 48 FGD participants (72.9%) said the attitude of service providers at the referral hospitals was friendly. Some said these.

- *male non-insured patient said "Some of the staff shout at us and don't respect us " .*
- *" When I was sent to the clinic, the nurse did not examine me to see my condition but said I should be sent to hospital direct because my condition was serious". By non-insured pregnant woman who was in labour.*

This was one case of "verbal referral" from a referring health facility in the district. This was confirmed by service providers who said they sometimes do "verbal referrals" without examining the patient. The reason given for such verbal referral was that such cases were serious and were beyond their ability to manage such difficult cases at their health facilities.

- *"some of the nurses do not help you to the ward, for me, my relatives have to push me in a wheelchair to the ward while they look on" by Female non-insured patient .*

4.2.12 Availability of Resources and Medical Tools

From the perspective of service providers (81%) at the primary clinics, the basic tools and drugs to work with are available while 19% indicated that more equipments and skill staff are needed to reduce patient referral rate.

4.2.13 Use of referral guidelines or protocols

There is no existing referral guidelines or protocols used by service providers at the referring primary clinics. The service providers rather use standard treatment guidelines and 81% of them have been trained in it.

4.3 Service Providers perceptions of patient referral

4.3.1 Timely referrals

16 out of 21 (76.2%) health service providers interviewed at the referring primary care clinics(level B) indicated that referrals from level A health practitioners especially traditional birth attendants were delayed. The reasons for such referral delays were, 12 (57.1%) said level A health practitioners do not want to lose confidence of their clients, 6 (28.6%) attributed the delays to lack of adequate skills of these practitioners to recognize complications and undertake prompt referrals .5 out of 21(23.8%) service providers interviewed at referral hospitals said referrals from referring health facilities (level B) were also delayed.

From the perspectives of level A health practitioners (TBA) most patients refuse referral to level B because of the high cost of services and the unfriendly attitude of service providers at level B health facilities.

From the referring facilities (level B) to referrals hospitals (level C), 11 (52.4%) out of 21 service providers interviewed at the referral hospitals said the referral cases from referring facilities are delayed. 61.8% of the service providers cited reasons for such delays as long distance traveled by patients, 28.7% of the service providers at the referral hospital said lack of transport as reasons for such delays. Only 2 (9.5%) attributed the delays to lack of skills of service providers at the primary referring health facilities. some of service providers said these:

-the TBA delay patients before they refer despite the training we give them and they delay these patients because they do not want lose the confidence of these patients. by level B service provider

-some of the patients are delayed because of the long distance they travel and lack of transport. by level C (hospital) service provider.

4.3.2 Referral communications

From the perspective of 16 (80.9%) service providers interviewed at the referring facilities, no feedback information on patient referrals are received from the referral hospitals. The rest 19.1% said feedback are received in the form of postoperative care and continuation of certain treatment. Feedback information from level B health facilities to level A care is done through facility visits.

4.3.3 Service Providers attitude at the referral hospitals

71.4% of service providers at referring primary clinics indicated that the service providers at the referral hospital are friendly except 28.6% who said the attitude is not cordial and needs an improvement.

5.1 Referral Records

-Review of available records showed that 409 out of 51,000 of patients were referred giving the patient referral rate from the primary health care levels to the secondary levels as eight per thousand patients seen within the period under study.

At the referring health facility level only two out of seven referring health facilities (28.6%) kept up to date and proper outpatient records on patients' referral. 71.4% (5) health facilities did not keep proper and up to date records on patient referral. These two health facilities kept outpatient referral registers indicating diagnosis, referral hospital, and time of referral, date of referral. The other health facilities kept inadequate information on patient referrals in outpatient consulting room registers.

-At the referral hospital levels, review of records on referred patients showed that none of the referral hospitals had outpatient referral registers or records on patients referred to these hospitals at the outpatient records office. This made it difficult to obtain information on patients referred to these referral hospitals.

5.2 Referral Notes

-At the referring health facilities, review of records of seven public health facilities and one private health facility in the district showed that none of the seven public health facilities kept copies of referral notes given to referred patients while the only private health facility kept copies of referral notes in duplicate forms in a referral book.

-At the referral hospitals, service providers said the referral notes were poor in quality and are therefore not filed or kept in In-patients folders. Review of 30 in-patients folders of referred patients in six wards of these referral hospitals showed that only 8 (26.7%) in-patients' folders had referral notes filed. However referral notes on referred patients insured in the Dangme-West health insurance scheme were rather kept in a special file in the accounts' office rather than in the patients' folders. The reason for such arrangement was to facilitate financial transactions between the referral hospitals and health insurance scheme office.

From the perspective of health service managers the referral process in the district has been undergoing improvement in areas like training of service providers in records keeping, availability of resources, provision of ambulance service, referral feedback through regular meetings. Besides these measures the referral process is faced with challenges like poor staff attitude, communication gap, physical access to referral hospitals, and referral delays especially at the level B health facilities.

Table:6 Cross-Tabulations: Perceptions of Insured and Non—Insured referred patients (n=number of referred patients) χ^2 =chi-square p value=probability value

Perceptions	Insured (n)	Non-insured(n)	Remarks
Health facility use			$\chi^2=6.75$ p value= 0.08
Health clinic	91	62	p value > 0.05 statistically not significant
Drug store	12	20	
hospital	1	2	
Staff attitude			$\chi^2=4.6$ p value= 0.09
Friendly	84	76	p value > 0.05 statistically not significant
Not friendly	20	8	
Waiting time			$\chi^2= 7.68$ p value= 0.053
Less than 30 mins	83	70	p value > 0.05 statistically not significant
1-2 hours	18	7	
more than 2 hours	3	7	
*Cost of service			$\chi^2= 14.88$ p value= 0.0006
Expensive	47	61	p value < 0.05 statistically significant
Affordable	51	19	
Cheap	6	4	
*Referral note			$\chi^2= 10.26$ p value= 0.0014
-given	85	51	p value < 0.05 statistically significant
-not given	19	33	
Feedback note			$\chi^2=1.07$ p value= 0.30
-given	18	10	p value > 0.05 statistically not significant
-not given	86	74	
Means of transport			$\chi^2= 0.24$ p value= 0.88
-ambulance	9	6	p value >0.05 statistically not significant
-commercial	95	78	
Reporting time to clinic			$\chi^2= 5.47$ p value=0.07
-same day	68	39	p value > 0.05 statistically not significant
- 2-3 days	34	41	
-after 3 days	2	4	
Use of traditional therapy			$\chi^2=5.90$ p value=0.12
-yes	10	15	p value > 0.05 statistically not significant
-no	94	59	

From table 6, reporting time to clinic for health care was found to be earlier for the insured referred patients than the non-insured patients but this difference in perception

was not statistically significant . More insured referred patients (85) were given referral notes than non-insured referred patients (51). This difference in the use of referral notes for the two group of patients was statistically significant.

The difference in perception on cost of service at the referral hospitals amongst the insured and non-insured patients was statistically significant. The non-insured patients perceived the cost of service as more expensive than the insured patients. Both the insured and non-insured referred patients experienced little waiting time. There was no significant difference in waiting time for the two categories of patients. The reporting time to health facility for care was found to be earlier for the insured patients. This difference in reporting time to clinic was found to be statistically non-significant.

Table 7: Review of referral records (n= number of clinics/hospital)

Indicator	Referring health clinics n=7	Referral hospitals n=3	Remarks
Outpatient referral records	2	-	None of the hospital had referral records
Referral book/form	1		1 Private clinic had referral book
Feedback form		-	nil
Referral audit	7	3	Done yearly
Inpatient referral records		-	nil

CHAPTER FIVE

5.0 DISCUSSION OF RESULTS

An efficient functioning referral system aims to link primary health care with specialized care at higher health level facilities. There are few available studies on patient referral system in most developing countries. Most available studies on patient referral were done in developed countries where their type of health care delivery differs in several ways from those operational in developing countries like Ghana. The setting or environment for which such effective patient referral system operates may not be comparable to situations in developing countries.

From the results of the interviews of referred patients, staff attitude at the referral hospitals was regarded friendly by 87% of referred patients. The 13% of the referred patients however expressed dissatisfaction with staff attitude at the referral hospitals. Interviews of the service providers at the referring primary care supported this finding. More insured referred patients perceived the attitude of service providers as unfriendly than the non-insured patients but this difference in perception on staff attitude was statistically non-significant. In their study into quality of emergency obstetric at first and secondary referral levels, Gbangbade in 1998 observed that 62% of the respondents declared the demeanor of service providers as good. However a good relation and interaction between patients and service providers improves confidence and trust of patients and also increases utilization of health care.

From perspective of medical geography there is a negative relationship between physical distance and health service utilization. (Phillips 1986, Stock 1987)

Physical distance, travel time, travel cost and availability of transport are factors that influence the health seeking behaviour of patient and also affect the outcome of medical conditions of patients. It is in this vein that physical access to health facilities is seriously considered by service providers and makes it a policy to locate health care facilities within the reach of the people. Patient referral is affected by physical accessibility to these referral hospital especially emergency referrals. These emergency referrals must reach these referral hospitals early for medical intervention.

The commonest means of transport to the referral hospital was found in this study to be commercial transport, which are not readily available. The other means of transport available was the ambulance service but only 13 (6.9%) out of 188 referred patients used it. Effort should be made to encourage the use of ambulance service to transport referred patients to referral hospitals since the commercial transport is not readily available. Distance to referral hospitals was considered far and travel time to these referral hospitals takes an average of one to two hours. This has implications on the outcome of patient referrals especially the emergency referrals that need urgent medical attention. In view of this, patient referral must be initiated early and timely referred. The health practitioners at various levels of care should be properly trained in patient referral process to understand the need to initiate referral early and to avoid undue delays in patient management.

In addition the cost of transport was said to be expensive and most of the referred patients spent more than ₵20,000.00 on transport to the referral hospitals. The waiting

time at the referral hospital was found to be less than 30 minutes before treatment. 81.4% of the patients declared that they experienced very little waiting time. The conditions of most referred patients were said to be serious. However, few said they had to wait for more than 1-2 hours before they were treated. There was no significant difference in waiting time for the insured and non-insured patients at the referral hospitals.

Most of the referred patients perceived the cost of service as very expensive and spent more than ₵20,000.00 on treatment. The non-insured referred patients perceived the cost of service as expensive. The insured patients who perceived the cost of service as expensive had spent more than the benefits of ₵200,000.00 from the health insurance scheme. The perception of most insured patients who paid less than the benefit of the insurance scheme was that the cost of service was affordable. The difference in perception on cost of service was found to be statistically significant among the insured and non-insured patients.

The rationale of health insurance scheme is to remove financial barrier to health care and aims to increase utilization of health service. The cost of service at the referral hospitals was seen as financial barrier by non-insured patients. This financial barrier has been found in various studies to influence the health seeking behaviour of patients and the reporting time to health facilities for care.

One hundred and sixty nine (89.9%) of the referred patients were referred for treatment or operations whilst nineteen of them were referred for various investigations. Coulter et al (1989) in their study into patient referral found that 34.9% of referred patients were for specific investigations or diagnosis.

Review of available records showed that the patient referral rate from the primary health care levels to the secondary levels was eight per thousand patients seen (0.8%). Most published studies in developing countries indicate very low referral rates. Patient referral in Pakistan by Siddiqi et al in 1996 found 0.2% referral rate. A study of referral care in Kilombero district in Tanzania found a referral rate of 2.3% (Nordberg et al, 1996). Studies in developed countries like United Kingdom and France have demonstrated referral rates varying between 1 and 28% with an average of 8%. (Metcalfe, 1991)

Inter-facilities patient referral communications was found to be poor. There was little interaction between referring health facilities and referral hospital. Whilst most referred patients (72.3%) were given referral notes to the referral hospitals, there was little feedback information from the referral hospitals to the referring health facilities.

160 (85.1%) out of 188 referred patients were not given feedback note to the referring health facilities. The insured referred patients were properly referred than non-insured patients. More insured patients were given referral notes than non-insured patients and this difference in use of referral notes was found to be statistically significant.

Patient referrals from the community level to the primary care level were delayed. Referrals from traditional birth attendants to primary care level were considered delayed by the service providers at these primary care levels. Reasons for such referral delays from level (A) to level B health facilities, according to level B health workers were that, the TBA practitioners lack adequate skills to recognize early danger signs for referrals and also do not want to lose confidence of their clients, thus delay in referring patients to level B health facilities. From the perspectives of level A health practitioners (TBA) most patients refuse referral to level B because of the high cost of

services and the unfriendly attitude of staffs at level B health facilities. From the referring facilities (level B) to referrals hospitals (level C), the delays in patient referrals were due to long distance traveled by patients and lack of readily available means of transport to the referral hospitals.

Information on referred patients was scanty at both referring health facilities and referral hospitals. The few available referral records on referred patients were improperly kept. These referral records did not indicate the diagnosis, referral hospital, and time and date of referral. At the referral hospitals, review of referral records on referred patients showed that none of the referral hospitals had outpatient referral registers or records on patients referred to these hospitals at the outpatient records office. At these referral hospitals the referred patients were given new patients' identity without indicating if they were referred patients.

This made it difficult to obtain information on patients referred to these referral hospitals. For those referred patients who were insured in the Dangme-West health Insurance Scheme, records on such patients were rather kept at the accounts office of the referral hospitals. The purpose was for easy financial transaction with the insurance office at Dodowa Health Centre.

At the referring health facilities level, review of records of seven public health facilities and one private health facility in the district showed that none of the seven public health facilities kept copies of referral notes given to referred patients while the only private health facility kept copies of referral notes in duplicate forms in a referral book. From key informant interviews of referring health facilities' managers in the public health sector, they did not have referral books or forms for patient referrals but used plain sheets or prescription forms to write referral notes for referred patients. For

referred patients insured in health insurance scheme they used referral cards in addition to the handwritten referral notes as part of the referral requirement before such insured patients were referred. At the referral hospitals, service providers said these referral notes were poor in quality and were therefore not filed or kept in In-patients folders. Review of thirty in-patient folders of referred patients in six wards of these referral hospitals showed that only eight in-patients' folders had referral notes properly filed. However referral notes on referred patients insured in the Dangme-West health insurance scheme were rather kept in a special file in the accounts' office rather than in the patients' folders. The reason for such arrangement is to facilitate financial transactions between the referral hospitals and health insurance scheme office.

From the findings of the study, referred patients who were registered in the health insurance scheme were properly referred than those who were not insured in the health insurance scheme. Referral guidelines requirements for patient referral were more adhered to for the insured patients than non-insured patients. Patient referral records on the insured patients were kept properly and were up to date as compared to the records on non-insured referred patients. At the referral hospitals all referral notes given to insured referred patients can be traced to a special file in the account offices but none could be traced to the inpatients folders. For the non-insured only few referral notes could be traced to the inpatients folders. Self-referrals and inappropriate referrals were discouraged among the insured patients. Only four out of one hundred and four insured referred patients were refused referral and they self-referred to referral hospitals and paid for the treatment themselves. None of the non-insured referred patients was refused referral to hospital.

The introduction of health insurance scheme in the district besides removing the financial barrier to health care had positive influence on health seeking behaviour of insured patients. The reporting time to health facilities for care was found to be earlier for the insured than the non-insured patients. Whilst most insured patients report to clinic the same day of illness, the non-insured patients report to clinic after 2-3 days of illness. This difference in reporting time to clinic for health care was however found to be statistically non-significant.

The results of the survey of referred patients showed that more insured patients used the health centers and community clinics in the district as their first point of contact for health care as compared to the non-insured patients who used the drug stores as the first point of contact. This difference was however found to be statistically non-significant.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

A functioning referral system is a critical part of an appropriate health care system. Referral system have been given particular emphasis in the context of the health sector reforms movement in developing countries especially with the introduction of primary health care concept. An effective referral process play essential roles in supporting health programmes like integrated management of childhood illness and essential obstetric care where prompt referrals are necessary to save lives of critically ill patients. Accessibility is one of the key features of a well functioning system of primary health care.

From the study the following conclusions can be drawn.

- (1) The patient referral rate was eight per thousand patients seen (0.8%).
- (2) The commercial transport, which is not readily available, was the major means of transport. 93.1% of referred patients used commercial transport whilst an Ambulance transported 6.9% of patients to referral hospitals.
- (3) Inter-facility communication on patient referral was found to be non-existent. There is little feedback information on referred patients. None of the health facilities involved in patient referral undertakes "referral audit" to assess referral situations to give the necessary feedback information to referring health facilities.
- (4) Patient referral records were inadequate and improperly kept. None of the referral hospitals had patients' referral registers. Referral records on the insured

patients were properly kept and readily available than records of non-insured patients. Patient referral records for the insured patients can easily be assessed for analysis than the non-insured referred patients. Patient referrals for insured referred patients were properly undertaken and documented as compared to the non-insured referred patients. The insured patients were given referral notes than the non-insured patients. This difference in use of referral notes was found to be statistically significant.

- (5) Duplicate of referring notes were not kept at referring health facilities except one private clinic. At the referral hospitals referring notes were not filed in inpatients folders.
- (6) Patient referrals from level "A" health care practitioners to primary care clinics were delayed especially referrals from traditional birth attendants. Referral delays from level B health facilities to level "C" or referral hospitals were attributed to long distance traveled and lack of transport.
- (7) The referred patients experienced little waiting time at referral hospitals. There was no significant difference in waiting time for the insured and non-insured patients.
- (8) Service providers' attitude was declared friendly. There was no significant difference in perception on staff attitude towards the insured and non-insured patients.
- (9) The physical access to referral hospitals was considered far with average travel time of 1-2 hours and average travel cost of ₵20,000.00.
- (10) The cost of service at the referral hospitals was perceived as expensive. There was significant difference in perception of cost of service between the

insured and non-insured patients. The non-insured patients considered the cost as expensive whilst the insured perceived the cost as affordable.

From the study, identified factors that influence patient referral in the district include, physical accessibility of referral hospitals, longer traveling time, inadequate referral records, weak referral communications, high travel cost, non-availability of means of transport. Service providers' attitude was found to be good but there is a need to improve the relationship between patients and service providers. These identified factors could be addressed through good patient information on patient referral, effective referral records, good inter-facility communication, availability of means of transport and community sensitization and involvement in the referral process. In addition training of service providers in timely referrals of patients is needed to avoid delays in patient management. In conclusion, an effective and operational referral system plays an important role at the interface of primary and secondary health care. It provides good linkage that facilitates an exchange of patient information and also ensures that patient receives the best health care that is not readily available at the primary health care level.

6.2 RECOMMENDATIONS

Based on the findings of the study the following recommendations are being made.

To Referring primary clinics and Referral Hospitals

- **Improve Patient Referral Records at referring health facilities and Referral Hospitals**

Proper records should be kept on patient referrals in the health facilities. At the referring health facilities, most records on referred patients are improperly kept. Special patients referral registers should be kept indicating the referral hospital, the time of referral, date of referral and the health conditions of the referred patients. A proper referral notebook should be kept for all patient referrals from the referring facilities. Duplicate of referral notes or forms should be kept at the referring health facilities to help improve patient referral statistics in these health facilities. The use of prescription forms and plain sheets for referral should be discouraged. The referral note should be properly designed and part of it could be used as referral feed back note from the referral hospitals. Periodic referral audit should be done to assess the state of patient referral in these health facilities.

At referral hospitals special outpatient registers on patient referral should be kept to capture all information on patients referred to these referral hospitals. Referral notes given to referral patients should also be properly documented. For those patients who are admitted, their referral notes should be kept in the patients' folders. All staff who handle patients records should be given in-service training on management of patients referral information. Periodic "referral audit" should be encouraged to assess patients' referral situation for proper feedback communication with referring health facilities.

- **Improve Inter-facility communication on patient referral**

Inter-facility communication on patient referrals is very poor. Feedback communication from referral hospitals to referring health facilities is non-existent. Referring facilities need information on the condition and outcome of referred patients to help them improve on their performance and efficiency. The referring health facility and the referral hospital should develop mechanism of exchanging information on patient referral. Inter-facility information exchange through the use of telecommunication should be encouraged to facilitate exchange of ideas and information on patient referrals. Periodic ‘referral audit’ meetings between the referring health facilities and referral hospitals should be encouraged to share information on patient referral.

- **Training of health workers at both level “A” and “B” health facilities** to promote timely referrals. Capacity building through training of all staffs on patient referral system especially levels “A” health providers to recognise the importance of timely referral of patients and to avoid undue delays of patients who will need further management at the higher level of care. The district should develop and implement referral guidelines or protocols and the service providers must be trained in its use and application to ensure effective functionality of the referral system in the district.
- **“Verbal referrals”** by service providers should be discouraged. Proper patient referrals must be done and well documented.
- **Improve on health worker and patients relationship.** Health workers attitude to patients must be improved to maintain trust and confidence of patients.

Various forms of interactions between health workers and patients must be developed and maintained.

- **Good patient information** on patient referral to encourage early reporting to clinic and also to discourage self-referrals.

To DHMT

- ❖ **Provision of designated transport** like ambulance for the other sub-districts to facilitate prompt transfer of patients to the referral hospitals. Effort should be made to increase the number of patients transported by an ambulance. In addition the sensitisation and involvement of private transport operators in the communities on the transfer of referred patients to referral hospitals should be pursued. Through a good health education package on patient referral for this large sector of transport operators, transport availability and travel cost will improve in the district.
- ❖ **Expansion of the health insurance coverage** for patients through education and awareness creation to remove the financial barrier to health care and also improve health seeking behaviour of patients.
- ❖ **Exemption policy** should be extended to cover the needy referred patients.
- ❖ **Upgrading of health centre to hospital status** and getting medical officers to manage these cases that are referred .The district needs a referral hospital to manage complicated medical conditions that are frequently referred to reduce travel cost and other inconveniences to patients.
- ❖ **Develop service providers referring profile** to monitor referral practice of health care practitioners to evaluate variations in referral patterns and rates to avoid inappropriate and improper referrals.

REFERENCES

1. Adjei, S., Owusu, G., Adamafo J., Akyeh S. (1988). *Primary Health Care Review Ghana*.
2. Henderson, G. E., Cohen, M. S. (1982). *Health Care in the People's Republic of China. A view from inside the system*. American Journal of Public Health. Vol. 77, issue 11: 1238 – 1248.
3. Siddiqi, S., Kiel Mann A. A., Khan M. S., Ali N., Ghaffer, A., Unaiza S., Zubya Mumtax. (2001). *The effectiveness of patient referral in Pakistan. Health policy and planning*: 16 (2): 193 – 198.
4. World Health Organization/UNICEF: Primary Health Care. "Health for all" World Health Organization, 1978, 1, 64.
5. WHO (1979), Alma-Ata 1998 Report of the International Conference on PHC, Alma-Ata, USSR, 6-12 September 1998.
6. Tawfik, A.M., Khofa, M., Al Shehri A.M., Abdul-Azziz, A. F., Aziz, K.M.S. *Patterns of referral from health centres to hospital in Riyadh region*. *la revue de Sante de la Mediterranean Oriental* 1997: 3:236-43.
7. Meehan, T. P., Fine, M. J., Krunhoiz, H. M. (1997). *Quality of care, process and outcomes in elderly patients with pneumonia*. *JAMA* : 75: 205-12.
8. Mwabu, G.M. (1989) *Referral system and health seeking behaviour of patients: an economic analysis*. *World Development*, 17:85-92.
9. Gbangbade, S., Reinke, W.A. (1998) *Quality of Emergency Obstetric at the First and Secondary Referral Hospital Level in the Republic of Benin*. Website http://www.isi.com/intl/mothercare/RHF/Issue21_benin.PDF

10. Sanders, D., Kravitz, J., Lewin, S., Mckee, M. (1998) *Zimbabwe's hospital referral system: Does it work. Health Policy and Planning*,; 13: 359 – 70
11. Ohara, K., Melendez V., Naruo, U., Ohi, G. (1998) *Study of a patient referral system in the Republic of Honduras. Health Policy and Planning*,; 13: 433 – 45
12. Nordberg, E., Holmberg, S., Kiugu, S. (1996). Exploring the interface between first and second level of care: referrals in rural Africa. *Tropical Medicine and international Health*, 1, no 1: 101-111.
13. Wilkin, D., Smith, A. G. (1987). *Variations in general practitioners' referral rates to consultants. Jr. Coll Gen Pract*; 37, 350-3.
- 14 .WHO, managerial process for network health development guiding principles for use in support of strategies for all by the Year 2000. *Health for all Serial No. 5. Geneva: World Health Organisation, 1981.*
15. O'Donnel, C. A. (2000). *Variation in GP referral rates: What can we learn from the literature?* Department of General Practice. University of Glasgow, 4 Lancaster Crescent Glasgow G12 ORR, U.K.
16. Wilkin, D., Metcalfe, D.H., Marinker, M. The meaning of information on general practitioner referral rates to hospital.
17. Lawler, F.H., Hosokawa, M.C., (1987). The relationship between utilisation and referral for family physician. *Pract. Res J*; 7(1). 22-8.
18. Franks, D., Zwanziger, J., Mooney, C., Sorbero, M. (1999) – *Variations in Primary Care Physician Referral Rates. Health Services Research* 34 (1), pp 323-329.
website: www.ahcpr.gov/research/jun99/ra9.htm
19. Salem-Shartz, S., Moore, G., Rucker, M., Pearson, S. D. (1994) – *The Case for case adjustment in practice profiling. JAMA*; 272:871-4
20. Calman, N. S., Hyman R. B., Licht, W. (1992) *Variability in consultation rates and practitioner level of certainty. J. Fam Pract*; 35:31-8

21. Chao, J., Galazka, S., Stange, K., Fedirko, T. (1993) *A prospective review system of non-urgent consultation request in a family medicine residency practice*. *Family Med*; 25:570-5.
22. Grace, J. F., Armstrong, D. (1986). *Reasons for referral to hospital: extent of agreement between the perceptions of patients, general practitioners and consultants*. *Fam Pract*; 3 (3): 143-7.
23. Donohoe, M. T., Krevitz, R. L. (1999) – *Reasons for outpatient referrals from general practitioner to specialists*. *J. Gen Intern Med*; 14 (5): 281-6.
24. Wu Ch, Kao, J. C., Chang, C. J. (1996) – *Analysis of outpatient referral failures*. *J. Fam Pract*: 42 (5): 498-502. Dept of Family medicine, National Chenq Kuwq University Hospital, Taiwan.
25. Gilson, L., Kintange, H., Teucher, T. (1993) *Assessment of process quality in Tanzania Primary Care*. *Health Policy and planning*, 26: 119-139.
26. Dale, N., Godsman, J., (2000). *Factors influencing general practitioner referrals to a tertiary paediatric neurodisability service*. *Br J Gen Pract* ; 50 (451): 131-2
27. Reynolds, G. A., Chitnis, J. G., Roland, M. O. (1991). *General practitioner outpatient referrals: do good doctors refer more patients to hospital?* *BMJ*; 302 (6787): 1250-2
28. Fertig, A., Roland, M., King, H., Moore, T. (1993). *Understanding variation in rates of referral among general practitioners: are inappropriate referrals important and would guidelines help to reduce rates*. *BMJ*; 307 (6917): 1467-70
29. Coulter, A., Noone, A., Goldacre, M. (1989). *General practitioners referrals to specialist outpatient clinics. Why general practitioners refer patients to specialist outpatient clinics*. *BMJ*; 299 (6694): 304-6
30. Kulu-Glasgow, I., D. Deluoij., de Bakhew, D. (1998). *Self-referral in a gate keeping system: patients' reasons for skipping the general practitioner*. *Health policy*; 45 (3): 221-38
31. Monekosso, M.D., (1992) – *District Health Management Planning Implementing and Monitoring a minimum health for all package for mediocrity to excellence in health care*. WHO Regional Office for Africa,. WHO 1992.

32. Kyei-Faried,.(1997). *Essential Obstetric Care: A Comprehensive Coverage Evaluation in Adansi-East District*, Ghana. Dissertation for M.P.H Programme.
33. Phillips, D.R. (1981b) *Contemporary issues in the geography of health care*. Norwich, Norfolk, Geography Books.
34. Stock, R. (1987). *Understanding health care behaviour : a model, together with evidence from Nigeria*. In Akhtar, R. (ed) *Health and diseases in tropical Africa*. London, Harwood: 279-92.
35. Aniteye, P.A, (1998). *Utilization of Health Services: The case of Assin District*. Dissertation for MPH programme.
36. Metcalfe, M.H.H. *Referrals.(1991) Could we do better? Update: 1093-96*.
37. McPhee, S.J., Lo, B., Saika, G.Y et al. (1984). *How good is communication between primary care and subspecialty consultants? Archives of Internal Medicine: 144:1256-8*

APPENDIX I Questionnaire for Referred Patients**Patient Referral in Dangme-West District: Patients and Service Providers Perspective**

Date: _____ Time: started..... Ended.....

Interview Guide no:.....

Name of interviewer..... Interviewee :.....

Introduction : We are undertaking this research for us to know your perception and experience in a referral process. This will help us to improve upon the patient referral process in the district.

Background Information.Age..... Sex: male[] female []**Educational Level:**

- (a) PRIMARY []
- (b) JSS []
- (c) SSS []
- (d) TERTIARY []
- (e) Nil []

Occupation

- (a) Farmer []
- (b) Fisherman []
- (c) Civil Servant []
- (d) Trader []
- (e) Other specify []

Religion

- (a) Christianity []
- (b) Islam []
- (c) Traditional []
- (d) Other specify []

Marital Status

- (a) Married []
- (b) Single []
- (c) Divorced []
- (d) Separated []

1. Have you been insured in the community based Insurance Scheme ?

Yes [] No [] If No. Why

2. What do you think about cost of service at referral hospitals?.

- (a) Very expensive []
- (b) Moderate / Affordable []
- (c) Cheap []

3. Physical Accessibility to referral hospitals.

- (a) Very far []
- (b) Far []
- (c) Not far []

4. What means did you get to referral hospitals?

(a) By Commercial transport []

(b) By Ambulance []

(c) Other specify

5. IF by commercial transport, how regular are these means of transport?

(a) Readily available. []

(b) Have to wait for a while. (less than 30 minutes) []

(c) Have to wait for a long time (more than 1 hour) []

6. If you are sick which health facilities do you attend first for treatment?

(a). hospital []

(b). health center []

(c). community clinic []

(d). drug/chemical store []

7. How long does it take you to get to the referral hospitals?

(a) less than 30 minutes []

(b) 1-2 hours []

(c) more than 3 hours []

(d) other specify []

8. At the referral Hospital, how long did you have to wait before seeing the doctor or nurse for treatment.

(a) short time (less than 30 minutes) []

(b) Moderate time (1-2 hours) []

(c) Long time (more than 2 hours) []

9. How much did it cost you to get to the referral hospital by transport?

- (a) less than 10,000 cedis []
- (b) 10,000 – 20,000 []
- (c) more than 20,000 []
- (d) other specify []

10. What do you think about the attitude of staffs at the referral hospitals?

- (a) friendly []
- (b) not friendly. []
- (c) other specify []

11. How did you pay for the cost of service at the referral hospital?

- (a) Through health insurance scheme []
- (b) Self-financing []
- (c) Exemption []
- (d) other specify []

12. Were you given a referral note to the referral hospital? Yes [] No []

13. After treatment at the referral hospital were you given a feedback note to the referring health facility? Yes [] No []

14. Did you have a choice of referral hospital? Yes [] No []

15. Reasons for choice of referral hospital

- (a) staffs attitude to patients []
- (b) cost of service []
- (c).distance to the referral hospital []
- (d) other specify []

16. Before reporting to health facility did you use alternative/traditional therapy?

Yes [] No []

17. Have you been refused a referral for the past one year to a referral hospital?

Yes [] No []

18. If yes to question (17), what were the reasons for such referral refusal?

19. If you are sick, what time do you report to health facility for treatment?

(a) the same day []

(b) 2-3 days []

(c) more than three days []

(d) other specify

20. What were the common problems you had when you were referred to a referral hospital?

21. What can be done to improve patient referral in the district?

22. What do you think about the attitude of health workers?

	friendly	not friendly
- Doctor	[]	[]
Nurse	[]	[]
Record staff	[]	[]
- Dispensary staff	[]	[]

APPENDIX II Focus Group Discussion Guide**Facilitator:****Recorder:** **Date**.....**Village:** **Sub-district**.....**Group:** referred patients (insured and non-insured).....**Time:** ...**started**..... **ended**.....

Purpose: To find out the experience and perceptions of referred patients or guardians on patient referral in the district.

1. For which health conditions were you referred and to which referral hospitals?
2. Are you registered in the health insurance scheme? If no, why.
3. Physical accessibility, travel time, transport cost, transport availability and means of transport to referral hospitals (your views on these).
4. What is your view about staffs attitude
 - At referral hospitals.
 - At referring health facilities.
5. Perception of cost service, waiting time at referral hospitals.
6. Referral notes, referral feedback and referral communication. (were you given referral notes and referral feedback notes?)
7. What were the challenges or problems that you had when you were referred?
8. What can be done to improve patient referrals in the district?

APPENDIX III

In-depth Interview

Health Providers (DHMT, S.M.O, MA, Nurse in-charges, private practitioners)

Purpose: To find out factors affecting patient referral in the district.

Interview Guide no:

Health Facility:.....

Respondent:(status).....

Name of Interviewer:

Date:

Started Time:

Time Ended:.....

Explore

1. **Types of health conditions referred and types referral hospitals.**
2. **What are the reasons for Patient Referrals?**
3. **What are your views on:**
 - Attitude of staffs. (to referred patients).
 - Referral Hospital Accessibility. (distance and travel time)
 - Means of transport and its availability to referral health facilities
- Skills/Competence of staff. (Levels A & B Health facilities)**
 - Availability of resources – drugs and non-drugs.
4. **Are there Referral Delays and Inappropriate patient referrals (reasons).**
5. **Feedback and communication, records on patient referral.**
6. **What are the Challenges of the patient referral in the district?**
7. **What can be done to improve patient referrals in the district?**

APPENDIX I V

CHECKLIST -1

i- Referring Primary Health Facilities

- | | | | |
|---|--------------------------------|--------|--|
| 1. Health Facility..... | Sub-district..... | | |
| 2. Community | Types of cases referred..... | | |
| 3. List of Referred Patients.... | No. of Referred Patients | | |
| 4. OPD attendance | Referral rate..... | | |
| 5. Referral Data ... Out-patient referral register | Yes [] | No [] | |
| 6. Referral book or form | Yes [] | No [] | |
| 7. Referral feedback form | Yes [] | No [] | |
| 8. Inter-facilities communication | Yes [] | No [] | |
| 9. Means of communication | | | |
| -telephone | [] | | |
| -meeting | [] | | |
| -facility visit | [] | | |
| -other specify | | | |
| 10. Keeping copies of referral note | Yes [] | No [] | |
| 11. Referral Audit | | | |
| - carry out periodic referral audit | Yes [] | No [] | |
| - periodicity ... weekly [] monthly [] quarterly [] yearly [] | | | |

APPENDIX V

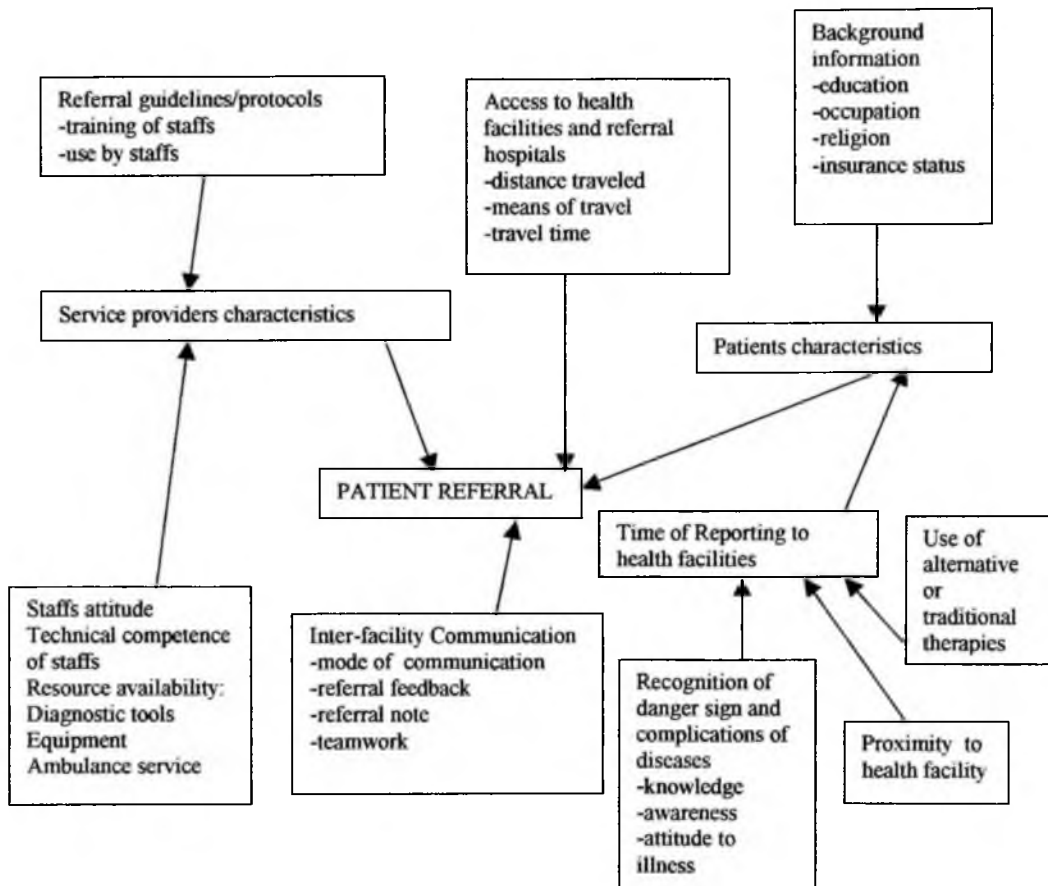
CHECKLIST - 2

ii- REFERRAL HOSPITALS

1. Referral hospital... Community...
2. No. Referred patients...
3. Referring Health Facilities.....
4. Types of cases
5. Referral Data
- | | | |
|---|---------|--------|
| outpatient referral register | Yes [] | No [] |
| inpatient referral register | Yes [] | No [] |
| keeping referral notes inpatients folders | Yes [] | No [] |
6. Referral feedback form Yes [] No []
7. Inter-facility communication Yes [] No []
8. Means of communication
- | | |
|---------------------|-----|
| telephone | [] |
| facility visits | [] |
| meetings | [] |
| other specify | |
9. Referral Audit
- | | | | | |
|-------------------------------------|------------|-------------|---------------|------------|
| - carry out periodic referral audit | Yes [] | No [] | | |
| - periodicity ... | weekly [] | monthly [] | quarterly [] | yearly [] |

APPENDIX VI

STUDY VARIABLES



APPENDIX VII Questionnaire for Health service providers(Referring facilities)**Patient Referral in Dangme-West District :****Patients and Service Providers Perspective**

Date: _____ Time :started..... Ended.....

Interview Guide no:.....

Name of interviewer.....

Interviewee :.....

Health facility :

Sub-district :

Community :

Introduction :We are undertaking this research for us to know your perception on referral and identify the factors affecting patient referral process. This will help us to improve upon the patient referral process in the district.

1 Types of cases that are referred from your facility to referral hospitals.

2.Are referral notes given to referred patients? Yes [] No []

3.Do you receive referral feedback on referred patients? Yes [] No []

4.How do you receive feedback on patient referral?

- (a) through patients []
- (b) through relatives []
- (c) by home visits []
- (d) other specify []

5.Do you have records on referral patients? Yes [] No []

6. In your opinion are these patient referrals
- (a) timely referred
 - (b) delayed
 - (c) other specify.....
7. If the answer is (b) in question 8, what are the reasons for the referral delays
- a. lack of skills of referring service providers
 - b. lack of transport
 - c. long distance
 - d. lack of funds
 - e. other specify
8. Do these referred patients come with referral notes? Yes No
9. Do you send referral feedback to the referring facility? Yes No
10. If yes to question 9, how do you send the referral feedback?
- (a) through patients
 - (b) through relatives of patients
 - (c) inter-facility communication (telephone)
 - (d) facility visits
 - (e) other specify
11. Does your facility have referral guidelines or protocols? Yes No
12. If yes to question 11, are your staffs trained in their use? Yes No
13. What are the challenges of the patient referral in the district?
14. What can be done to improve patient referral in the district?

APPENDIX VIII

SAMPLE SIZE CALCULATION

$$n = \frac{pq}{e^2}$$

n = Sample size

p = Proportion of patients referred

q = Proportion of patients not referred

e = standard error of the mean

Total population of the district = 96,015.(2001)

Total outpatient attendance = 51,788 (2001)

Total patient referrals = 409 (2001)

With 95% confidence interval, e=2.5%

$$p = 409/51788$$

$$= 0.008 \text{ (0.8\%)}$$

$$q = 1 - p$$

$$= 1 - 0.008$$

$$= 0.992$$

$$n = \frac{pq}{e^2} = 0.008 \times 0.992 / 2.5^2$$

$$= 0.00126976 \times 96,015$$

$$= 121.9$$

$$= 122$$