UNIVERSITY OF GHANA

SCHOOL OF PUBLIC HEALTH

CONTROL OF YAWS IN THE ASUOGYAMAN DISTRICT. CAN COMMUNITY INVOLVEMENT MAKE THE DIFFERENCE?

A DISSERTATION SUBMITTED
IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
AWARD OF MASTER OF PUBLIC HEALTH (MPH) DEGREE
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BY

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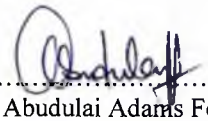
DECLARATION

This dissertation is the result of independent investigation. Where my work is indebted to the work of others, I have made acknowledgement.

I declare that, it has neither been accepted in substance for any other degree nor is it concurrently being submitted in candidature for any other degree.



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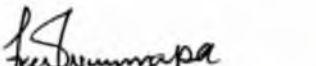

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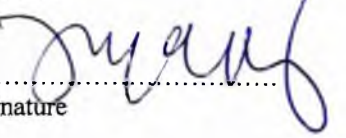

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DEDICATION

This piece of work is dedicated to my only daughter Gifty Adjara Forgor who escaped death on 5th December 2000.

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LIST OF ABBREVIATIONS.

Ann.	Annual
Asuog.	Asuogyaman
BARIDEP	Brong Ahafo Rural Integrated Development Project
BC	Before Christ
BMJ	British Medical Journal
CP	Community participation
DCU	Disease Control Unit
DDHS	District Director of Health Services
DHA	District Health Administration
DHMT	District Health Management Team
Dist.	District
Ed.	Editor
e.g	For example
EPI	Expanded Programme on Immunization
E/R	Eastern Region
FA	Field Assistant
FGD	Focus Group Discussion
FM	Frequency Modulation
FP	Family Planning
GHS	Ghana Health Service
GPRTU	Ghana Private Road Transport Union
IDI	In-depth Interview

MCH	Maternal and Child Health
MOH	Ministry Of Health
NADMO	National Disaster Management Organization
NID	National Immunization Day
PAHO	Pan America Health Organization
PAM	Penicillin aluminium monostearate
PHD	Public Health Division
PI	Principal investigator
PNDC	Provisional National Defense Council
Ref.	Refer
TBA	Traditional Birth Attendant
T&T	Travel and transport
UG/SPH	University of Ghana/School of Public Health
UNICEF	United Nation Children's Fund
USA	United States of America
VHC	Village Health Committee
VHV	Village Health Volunteer
VRA	Volta River Authority
WHO	World Health Organization

ABSTRACT

Community involvement in the control of yaws is a participatory approach to healthcare that is organized from the perspective of the recipient. This study was prompted by the fact that, in 1998 Addo found that community participation in the control of yaws was poor, 3.4% of the population is infected with yaws, yaws now ranking 3rd (1997-2000) from 6th position in 1996. This study looked at how a rural district (Asuogyaman) in the Eastern region of Ghana perceive and manage yaws and the extent to which the communities are involved in the control of the disease. It also looked at the health service and community factors, which affect community participation in the district.

Focus group discussions, in-depth interviews, observations (participatory and non-participatory) involving 172 participants/respondents (key informants, level B health workers, herbalists and victims of yaws). Yaws was mainly perceived by the community (121 out of 153) to be caused by poor personal and environmental hygiene and sanitation. The disease was perceived by the community (74 out of 95 respondents) to be transmitted mainly by the sharing of toiletries, clothing and direct contact.

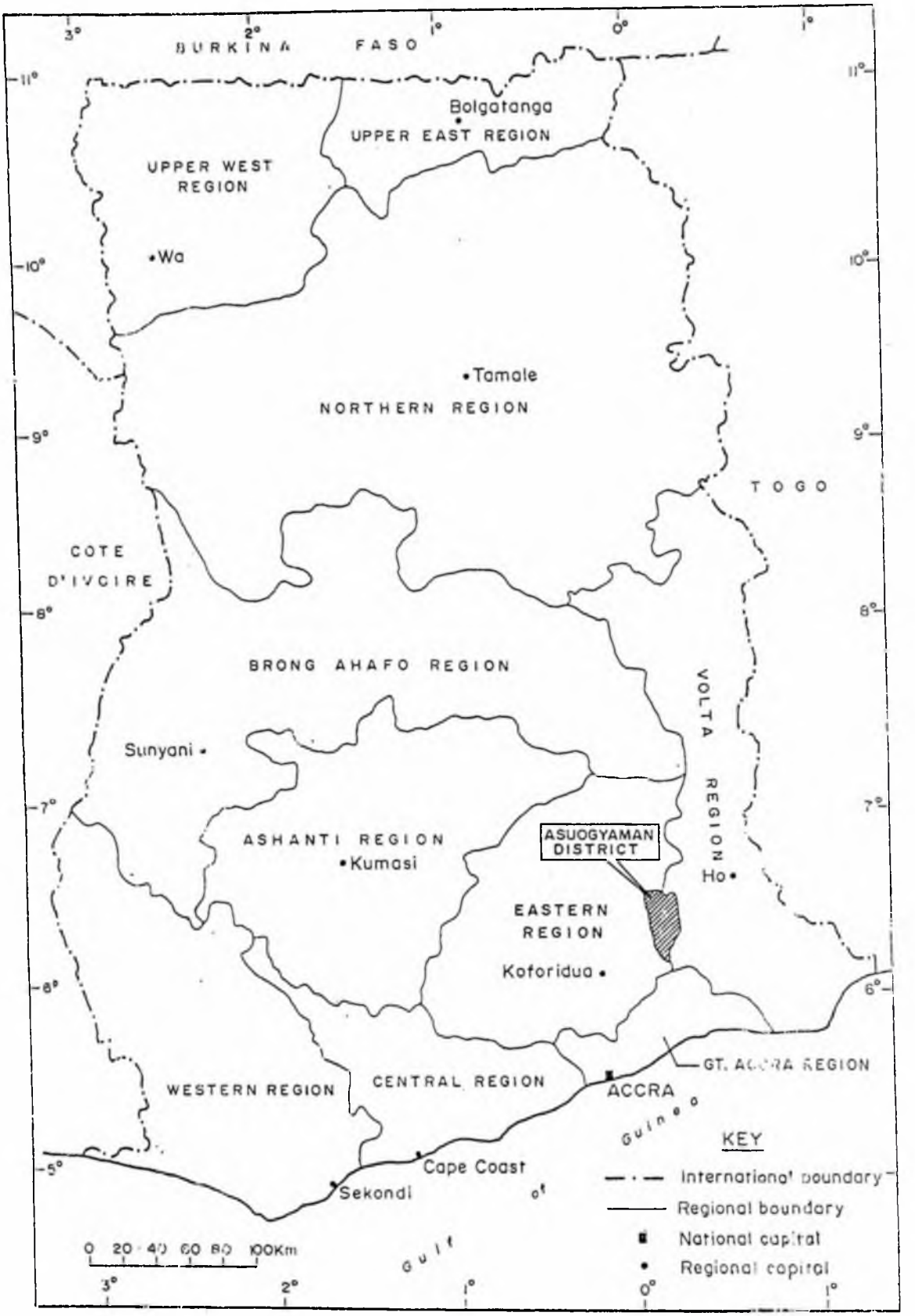
The prevention of yaws was found to be by health education, avoidance of direct contact with the lesions of the affected person and observation of personal and environmental hygiene and sanitation. Though these perceptions about yaws are true, this knowledge was not reflected in their practices or treatment of the disease.

The two main forms of treatment were traditional and modern. "Blue-stone" (copper sulphate) was found to be the most popular form of traditional treatment of the disease by some communities. Of the 153 respondents, 90 did not know that treatment of the disease was available/possible at the hospitals/clinics; 63 knew, 11 had no idea and 48 gave various

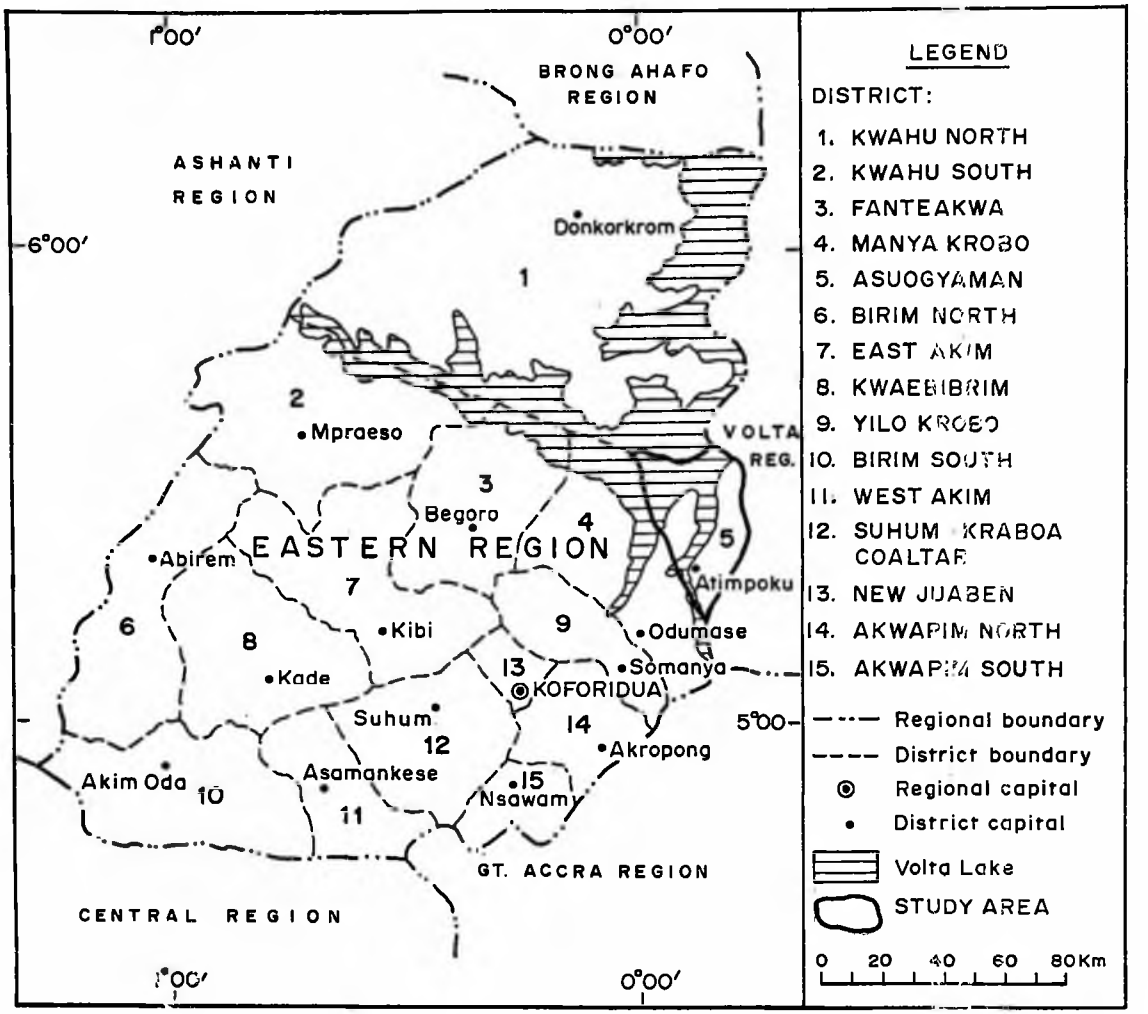
answers. Health education on yaws was found to be inadequate. Yaws was perceived to have been eradicated and accorded least importance.

The participation of the communities in the control of yaws was assessed by using Rifkin's method based on 5 factors- needs assessment, management, resource mobilization, leadership and organization. The participation of the communities was small. Presence of community health structures and their orientation, incentives to community health agents, free treatment, prompt response (by health workers) to reports made by community health agents and frequent interaction between health workers and the communities promoted participation. Knowledge about the disease enhanced participation. Conflicts, embezzlement of funds, failure to act on /respond to complaints made by community health agents, failure to complement community initiatives inhibited community participation. The response rate of the study was 91.5% (172 out of 188). Lack of time, funds and personnel, poor road net work, conflicts, rains, limited the study. The Rifkin method itself had limitations. Health education and house-to-house treatment of yaws should be intensified. The study concluded that yaws, which is endemic in the district, could be effectively controlled with community involvement.

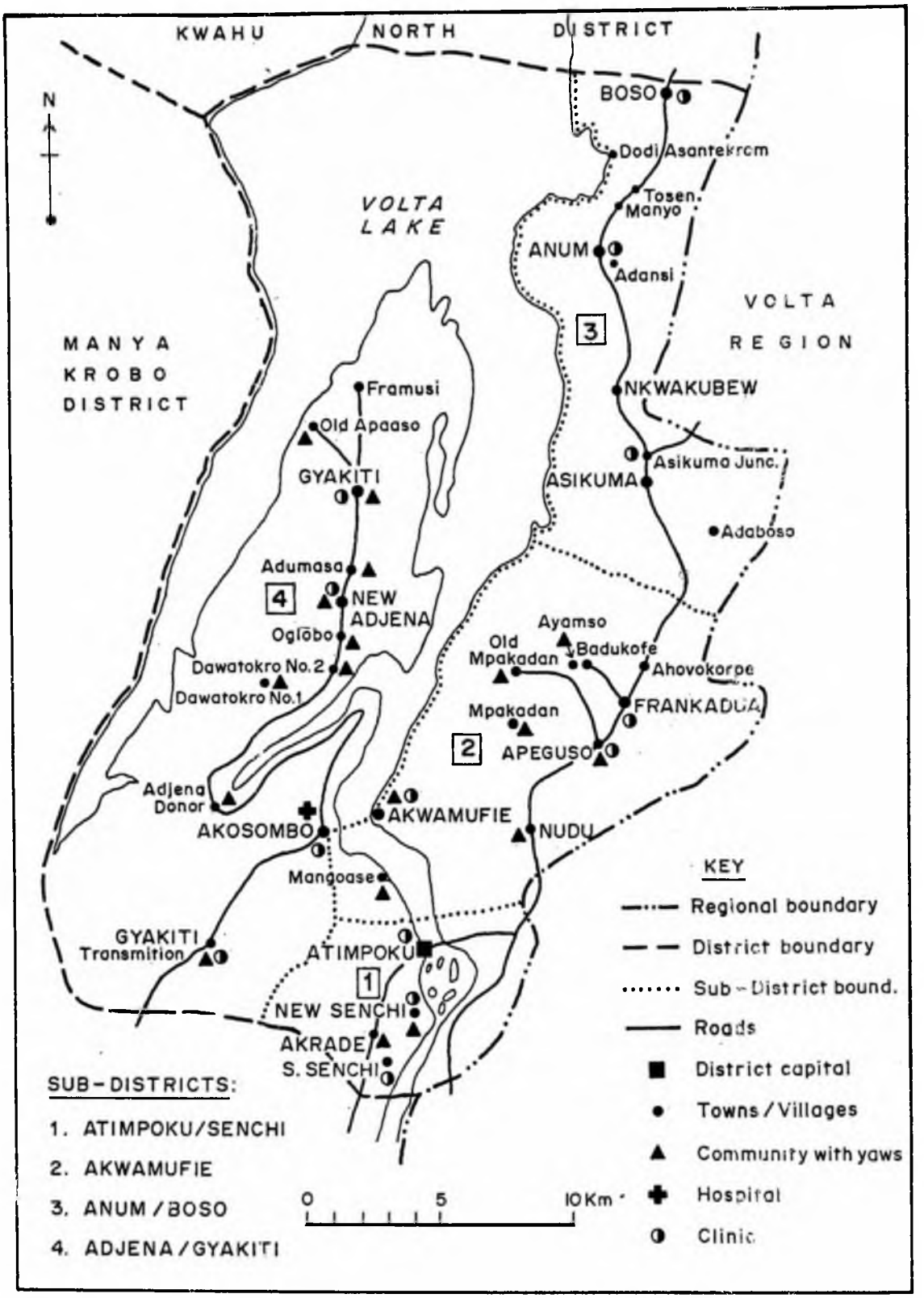
Key words: yaws control, community, community participation/involvement, community health structure/agents.



Map of Ghana showing Asuogyaman District the Study Area



Study Area in Regional context.



Map of Asuogyaman District.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Most health programs in developing countries (Ghana not being an exception), are often unsuccessful or unsustainable due to the missing link between health planners or health service providers and the community. This missing link is community participation (CP) which has been identified as the key to Primary Healthcare and a people's right and duty (WHO, 1979).

The success or failure of a health program depends on the extent to which the community (beneficiary) participates in the program. CP therefore, is very useful to health planners and program managers.

The control and prevention of yaws requires the joint efforts of community members and health personnel.

Yaws is an ancient disease. Hackett (1963) considers progenitor of treponematoses to be pinta and that it probably arose from an animal infection about 1500 BC. According to him yaws arose from mutants of the pinta treponeme and by 1000 BC had spread throughout much of the world. He recognizes Treponema pertenue as the causative agent of yaws. Hudson (1958), however, recognizes Treponema palladium as the causative agent for all treponematoses. He thinks they originated in Africa from spirochetes living on decaying vegetable matter and in the course of time became parasitic to man.

Captain Don Gonzalas Fernandez de Oviedo Valdez was the first to give a clinical description of yaws in 1510. He wrote:

"The (American) Indian naturally had the entire or major portion of the skin ulcerated with the skin lifted up in a hardened scar. They appear ugly but more commonly are robust with considerable strength until they became shriveled and this wrinkling caused by the itching or disease has changed the whole skin of the person. It is confirmed that this disease is contagious and is taken in many ways such as a healthy person using the clothes of the sick, as in eating and drinking in the company, or using plates and cups which the sick have used for eating and drinking. The truth is that it is a true plague of this land and as common to the Indians as other diseases are common in other people" (Handy, 1985).

Treponema pertenue has been generally recognized as the causative agent of yaws.

Since 1900 there has been great reduction in the incidence of yaws but no eradication has been achieved. There was a global control programme of yaws in 1948 involving many governments with assistance from WHO and UNICEF. In many of these countries, eradication appeared to have been achieved. Since the 1970s and 1980s there has been a resurgence of the disease in sub-Saharan Africa, western pacific, south-east Asia and other parts of the world (Ed. Lancet, 1983; BMJ, 1980; Agadzi et. al, 1983).

This resurgence according to Richens (1993) can be attributed to the continuing or increasing poverty of many rural and urban slum populations with attendant lack of personal hygiene and the neglect of well-established principles of yaws control such as active case finding and treatment of contacts. Yaws has been endemic in Ghana for generations. It was among the first diseases for which western treatment was available in the Gold Coast. Salvarsan (potassium Iodide) was used to treat the disease in the 1920s. Yaws was the first

disease to be researched on by Gold Coast doctor. Dr. Charles Elias Reindorf, the Medical Officer of health in the Akwapim District of Eastern region, in 1927 presented a thesis on yaws to the Durham University in UK to obtain a Doctorate in medicine, (Ashitey, 1994). Yaws was an important public health problem and an obstacle to socio-economic development. The secondary and tertiary forms of the disease especially plantar yaws were a serious impediment to farmers as well as a high rate of absenteeism among school children. This was due to pain and disfigurement. Efforts have been made to control the disease without success. The incidence drops after each successful mass campaign. Shortly afterwards the incidence increases again.

In 1944 – Yaws Campaign was constituted for the control of yaws in Ghana.

In 1946, the Trypanosomiasis Campaign was merged with the Yaws Campaign – Trypanosomiasis/Yaws Campaign. In 1951 this Trypanosomiasis/Yaws Campaign became the Medical Field Unit. Ghana was well known to be hyperendemic. In 1956, the anti-Yaws Mass Campaign was decided upon.

WHO and UNICEF assisted 1957 – 1961, the Anti-Yaws Mass Campaign. This reduced the prevalence rate from 10 – 15% in some places to 0.5% in almost all parts of the country except central and Western Regions which were the last to start the campaign (GHS/MOH [DCU], 2000).

In 1979, another mass yaws campaign was launched involving the combined control of yaws and yellow fever. This was discontinued in less than a year because of financial constraints.

From January 1981 to December 1983, a three-year campaign was embarked upon. This was to reduce the then high prevalence of yaws to 0.062%.

Since 1983, there was a shift in health priorities, focusing on EPI. Surveillance of yaws was neglected. Yaws has re-emerged with a current prevalence rate of 1% (GHS/MOH [DCU], 2000). It is now highly endemic in many parts of the country.

In 1993, a survey carried out in 83 out of 110 districts in Ghana, the prevalence of yaws was found to be approaching that of pre-intervention 1979/80. Eastern region was among the most affected regions before the MOH campaign in 1987, (MOH, 1993). The 1993 survey confirmed under reporting of yaws. It showed that about 30% of cases are notified through the routine reporting system (MOH, 1993). The rest of the 70% of cases and their contacts remain in the communities. Disease transmission therefore continues.

In 1993, a national plan for yaws control was drawn up as part of the onchocerchiasis control programme. Table 1 and chart 1 (in appendix C) show the reported cases of yaws from 1970 to 2000 in Ghana. From the wavelike graph there is likely to be an epidemic of yaws in Ghana from 2003 if nothing is done about it now.

The prevalence of yaws is still high because a basic community health principle was not taken into consideration during all these campaigns. According to the principle, diseases whose origin, maintenance and spread in the community are essentially due to defects in the social, economic and cultural structures of that community cannot be eradicated or controlled unless the social economic and cultural defects are themselves corrected, (Sai, 1974; Ashitey, 1994). This study is based on this above principle.

In 1994 Eastern Region reported 22,710 cases of yaws representing 38.3% of the total number of cases reported nationwide. In 1995, the highest reported cases of yaws (20,092) were in the Eastern region representing 39% of the cases reported nationally. Table 2 and chart 2 (in appendix C) show the reported cases of yaws in the Eastern region.

The number of reported cases of yaws in the Asuogyaman district are shown in table 3 and chart 3 (in appendix C).

Based on the low rates of yaws recorded after the mass campaign especially the records of 1969, it was concluded that the disease no more posed a public health threat. It was then assumed that the general health service would be able to continue with the control of the disease. Some countries prematurely delegated surveillance activities to the static rural health services. Deteriorating economies of African countries led to the shift of health care resources to the control of other diseases with higher morbidity and mortality eg. Malaria and cholera, and the expanded program on immunization (EPI).

The growth and increasing mobility of populations have placed severe limitations on the control method that was employed in the past. The delegation of surveillance activities to the static rural services also resulted in passive case finding as against the successfully used active case finding during the Mass Treatments in the 1950s and 1960s. These factors are said to be responsible for the re-emergence of yaws in West Africa, Central Africa and Southeast Asia (WHO, 1982). Though these may be genuine reasons or factors, this writer feel the failure to find out the community or traditional perception about yaws, the failure to involve the communities in the control and surveillance of the disease right from the beginning of the control programme resulted in the lack of participation on their part in the control of yaws.

In 1952, the first International Symposium on Yaws Control was held at Bangkok. In 1955, the second International Conference on Yaws Control was held at Enugu, Nigeria. Here the dosage of PAM was proposed.

The methods of control of yaws include:

A) Preventive measures

1. General health promotion measures

-Health education of the public about yaws

-Better sanitation, including liberal use of soap and water

-Improvement of social and economic conditions

2. Organization of intensive control activities on a community basis suitable to the local problem, clinical examination of entire populations and mass treatment of patients with active or latent disease. Treatment of contacts is justified. Periodic clinical surveys and continuous surveillance are essential for successful results.
3. Treatment of disfiguring and incapacitating late manifestations. Serological surveys for latent cases, particularly in children, to prevent relapse and development of ineffective lesions, which maintain the disease in the community.
4. Provision of facilities for early diagnosis and treatment as a part of the plan in which the mass control campaign is eventually consolidated into permanent local health services.

B) Control of patients, contacts and the immediate environment

-Report to local health authority

-Avoid intimate contact and contamination of the environment until lesions are healed

-Concurrent disinfection: Care in disposal of discharges and articles contaminated therewith.

-Investigation of contacts: All familial contacts should be treated; those with no active disease should be regarded as latent cases. In areas of low prevalence, treat all active cases, all children, and close contacts of infectious cases.

-Specific treatment: Penicillin.

10 years and above-i.m benzathine penicillin G 1.2million units single dose or penicillin aluminum monostearate (PAM) 2.4 million units single dose.

Half doses for children under 10 years, latent cases and contacts.

C) *Epidemic measures:*

-Active mass treatment programs in areas of high prevalence.

Essential features:

i) A high percentage of the population be examined through field surveys

ii) Treatment of active cases is extended to the family and community contacts based on the demonstrated prevalence of active yaws.

iii) Periodic surveys be made at yearly intervals for 1 to 3 years.

D) *International measures*

-Adjacent countries in the endemic area should institute measures against yaws.

-Movement of infected persons across borders may need supervision.

Total Mass Treatment- here all persons receive some treatment either as active yaws cases or as latent cases and contacts. This is done when the prevalence of the disease is greater than 10%.

Juvenile Mass Treatment. With this approach, in addition to all active yaws cases, all persons aged between five and fifteen years together with all obvious contacts of infectious cases are treated. This is done when the prevalence of active yaws is 5-10% (mesoendemic).

Selective Mass treatment approach is the one in which in addition to all active cases, household and other obvious contacts of infectious yaws cases are also treated. This is done when the prevalence is less than 5% (hypoendemic).

The Disease Control Unit of the DHA undertakes the control of yaws in the Asuogyaman District.

1.2 THE ASUOGYAMAN DISTRICT

The Asuogyaman District, situated in the southeastern part of the Eastern Region of Ghana, was established on the 18th of April, 1988 by the PNDC government under the Legislative Instrument 1431 in compliance with the government's decentralization policy. Asuogyaman is made up of two Akan words-"Asuogya" which means river bank and "man" which means state. Thus "river bank state". This is because all the major towns lie on the banks of the Volta River.

The District has an area of 1507 square kilometres and about 120 metres above mean sea level. It is bordered on the north by the Afram Plains District, on the south by the North Tongu District, on the east by the Ho District and the west by the Manya Krobo District. The climate is tropical with average temperatures between 21-32 ^{0}C throughout the year. There are two rainy seasons (major and minor) in a year interspersed with dry weather. The major rainy season starts in March, peaks in June/July with August break followed by a dry spell. The minor rains start in September and stops in November and followed by the dry harmattan season. The average annual rainfall is about 2030mm. The relative humidity is 81%, 62% and 90% at 9^{00}, 15^{00} and 21^{00} respectively. The District has a population of 74142 (2000 census) with an annual growth rate of 1.7 %. It has 140 communities with only 4 being urban. The inhabitants are mainly Akwamus, the Anum and Boso. These are interspersed with scattered settlements of Ewes and Krobos. Politically, the District is divided into 5 administrative zones with Atimpoku the district capital. The highest political and administrative body in the district is the District Assembly headed by the District Chief Executive. The social services subcommittee of the Assembly acts as the intersectoral committee on health matters in the Assembly.

The main economic activities of the Asuogyaman people are farming and fishing. About 95% of the population earn their livelihood from full-time farming. The district is endowed with many tourist sites and four national assets. They are: the Akosombo hydroelectric dam, the Adomi bridge at Atimpoku, the Volta Lake Transport Company at Akosombo and the fuel storage depot at Adome.

The creation of the dam in 1961 led to the resettlement of the inhabitants in eight communities. The resettlement has led to social, economic and health problems. Inadequate land has led to the low socioeconomic status. Malaria, schistosomiasis and yaws are endemic in the district. The District Health Administration (DHA) is responsible for health delivery in the district. The District Health Management Team (DHMT) oversees the health services of the district. The District Director of Health Services is the chairman of the DHMT and head of the DHA.

The DHA has 4 health sub-districts. The Sub-District Health Management Team oversees the health services at the sub-district level. The district has 1 hospital (owned by VRA), 2 health centres, 4 maternity homes, 1 community initiated clinic, 6 MCH/FP centres, 26 outreach centres and 1 mission clinic run by the Salvation Army. There are 51 TBAs and 220 trained village health volunteers (they organize the community for service deliveries such as immunization, health education campaign, reporting unusual disease cases to the sub-district team leaders or the disease control officer. The VRA Health and Safety Department is deeply involved in schistosomiasis control in the district as well as mass health education campaigns. The health development activities currently being undertaken in the district include healthy housing (especially in the VRA township at Akosombo), adolescent health promotion, guineaworm eradication, accident prevention, leprosy elimination and community

onchocerciasis control. The DHMT has very good intersectoral collaboration in planning and implementation of health programs or projects like EPI, NID, curative and epidemic management. The agencies involved are the VRA, GPRTU, schoolteachers, the Salvation Army, District Assembly, chiefs and elders, the Rotary Club of Ghana, the environmental health and UNICEF. The district has an epidemic management team with members from VRA, NADMO, DHMT, District Assembly and environmental health unit.

The district has 98 schools with a literacy level of 32%.

With the exception of Adjena all the other sub-district capitals are linked to Atimpoku by tarred roads. Atimpoku is linked to Koforidua (the regional capital) and Accra (the national capital) by tarred roads. Boat transport is used on the Volta Lake.

Only 20% of the communities have access to safe/potable water, 40% have safe toilet facilities and 10% with safe refuse disposal.

1.3 PROBLEM DEFINITION

The campaign against yaws worldwide has been on going since the 1950's. In Ghana there has been a series of mass campaigns and treatments since then. The treatment of yaws is free throughout the country. One would have expected full CP in the control of the disease: formation of community health structures, identify and report cases to health personnel, encourage people to go for treatment, observe personal hygiene and environmental sanitation, disseminate health education, mobilize funds for yaws control activities etc. However, this is not so. The purpose of this study is to find out why the communities in the Asuogyaman District poorly participate in the control of the disease. One explanation may be that there are no organized community structures to facilitate CP. Another explanation could be that the

control of yaws is not a priority to them. The lack of participation could also be due to the community's perception about yaws. Could the lack of participation be due to a problem of resource mobilization or due to lack of good/strong leadership? One may wonder whether the lack of participation is due to some health service factors. Could the lack of participation be due to some other community factors?

In a study conducted in 1998 to determine the factors contributing to the persistence of yaws in the Asuogyaman District, it was found (among other reasons) that there was poor CP in the control of the disease (Addo, 1998). Considering:

1) the shift in position of the disease (among the top ten communicable diseases) from the sixth position in 1996 to the third position after malaria and diarrhea in 1997 and 2000 (MOH, Asuog. Dist. Ann. report 1993-2000)

2) the fact that 3.4% of the district population is infected with yaws.

3) CP being a people's right and duty (WHO/UNICEF, 1978)

4) the fact that most health programmes fail to succeed or to be sustained when the communities don't participate in such programmes,

5) the fact that in 1994 38.3%(22,710) of the yaws cases reported nationwide came from the Eastern Region. In 1995 39%(20,092) of the yaws cases reported nationwide came from the Eastern Region.

6) the findings of the study to serve as a baseline for future evaluation of CP in health programs especially control of yaws in the District, it has become necessary to conduct this research to find out the factors contributing to the poor CP in the district and make recommendations to encourage CP

CHAPTER 2

LITERATURE REVIEW

There has probably, been no study on CP in the control of yaws as none was found during the literature search. Though evidence of community perception (which affects CP) about yaws was gained during the course of the Mass Campaign against Yaws in the 1950's and 60's which helped partly in the control (Onori, 1961.), no studies were done on CP in the control of the disease. The studies done so far are on CP in health-related activities (like maternal and child health/family planning), rural/community developments, effects of donor assistance on communities and so on.

2.1 THE CONCEPT OF COMMUNITY PARTICIPATION/INVOLVEMENT

According to WHO (1991) there is no single working interpretation of the concept of participation that has universally been accepted in development programmes. CP perhaps is the most ambiguous concept, meaning different things to different people. There are a variety of different interpretations each giving rise to a different form of practice. For example, to elected officials it means controlling the affairs of their fellow human beings, to the public administrators, it means an access to the decision-making process while to the ordinary community members it is the right to select their representatives. To some, it is communal labour, contribution (levy) of money, giving artisan support and being informed about projects. To others it is being a part of the initiating process of a project (programme) or coming up with the original idea themselves, do the planning to the evaluation of the programme with minimal support from outside, providing their own funding and supervision of the project/programme. For this last category of people, participation is being a part

of having ownership and control as well as maintenance of their personal integrity, identity and dignity. The application of CP extends generally, from consultation to a minor or major role in decision-making. It is important to become aware of this variety of interpretations because each in its way has profound implications for the development practice including health. Although there would appear to be a common agreement on the importance of participation, there are fewer consensuses on the content of the participation process. Terms like self-help, self-reliance and co-operation adds to the confusion (Rifkin et al. 1988).

The term "community" in this study is taken to mean a group of people who can be identified as living with and having a sense of belonging to a geographic area. Depending on the settlement pattern and population density, a community may consist of a village or town, a part of a village or town or several non-continuous settlements. The groups of people who make up a community have the innate collective capacity to make decisions, commit resources and responsibility for the conduct of activities they carry out. Though difficult to date precisely, the notion that cooperative self-help could be stimulated and promoted by outside agencies is fairly recent. The idea that members of communities can identify common problems and work towards solving them through co-operative efforts on the other hand is as old as community living. Most societies have a tradition of participation at local level through village and ethnic councils and various kinds of group meetings; and agrarian communities usually have a history of economic co-operation.

Participation has been defined as 'a total commitment of both the initiators and beneficiaries in carrying out a mutually planned project/programme to its completion through the involvement of participating agencies and recipients using a multisectoral approach in which the rural people take part in decision-making (Bruce, 1964). The concept of CP has three requirements:

1) Consultation with the masses who are supposed to be the beneficiaries of development to ascertain their needs and priorities.

2) it requires their having access to and taking part in the decision-making process of these programmes, which affect their lives.

3) it means sharing the cost and benefits of development equitably.

For the purpose of this study, CP may be defined as the active involvement of the rural people in the identification of their needs, the mobilization of local resources and local implementation of plans to eradicate yaws from their community. The success of the yaws control programme would depend on the extent to which local people are involved in planning the control programme and taking decisions on matters affecting their welfare. Presently, the control of yaws relies heavily on the health care providers to the disadvantage of the communities -the target group. The rural population is not only alienated but also isolated from the conception, formulation and implementation of the various yaws control programmes. The effect is that the people don't see such a programme as in their interest but rather to satisfy government.

Although some people regard the whole concept of CP in development as costly, time-consuming and frustrating, its merits outweigh the demerits (WHO, 1991). CP benefits health care. It can facilitate:

1) education and involvement of the community in the analysis of its health problems and consultation with the community about what its members feel are the main health needs.

2) organization of the community so that group decisions may be taken on priorities in resource allocation, service delivery and quality of services, and the community may become self reliant and accept responsibility for health measures.

3) development of the organization of services on a community basis and

4) giving the community social control of the planning and implementation of health services.

CP can improve communication between health workers and the people the are meant to serve. Intersectoral collaboration can benefit from CP because it can reduce the predominance in decision-making of health professionals and thus contribute to demedicalisation. Participation enhances the community's motivation to accept and use the services.

Despite all these benefits CP has many hindrances. The major hindrance is the lack of communication and information for stakeholders to grasp the conceptual framework of the programme. According to Okafer (1982), people like to be involved rather than informed about matters affecting their welfare, and especially, their health. They would rather take decisions concerning themselves because they know best their situation and what they want. Outsiders may see other priorities but they have no right to impose their ideas. They can act as facilitators or just guide.

Fear and uncertainty about negative impacts of health programmes that are brought to communities by 'outsiders' (government, donors, and international agents) will hinder

CP. Negative attitudes of health professionals towards CP will inhibit community participation (PAHO, 1984; Matomora, 1989). The community's view of health as a province of experts and sole responsibility of the government is a factor, which also hinder CP (PAHO, 1984). The lack of a clear understanding of CP objectives and the role of the community hinders CP (PAHO, 1984; Kaseje et al, 1989; Chowdhury, 1991). The unwillingness on the part of the ruling elite to allow authority to be exercise outside the existing village hierarchy also inhibits CP According to Mabogunje (1972), unless the local residents are sure that government (donors/planners) know their local aspirations/desires and will be careful to take them into account in development planning, communities never felt part of the decision-making of

government planning. Monopoly of the health professionals in the health care sector acts as a hindrance to CP in health intervention. According to Oakley (1989), a) the fact that in the formal (western) health services decisions are taken by professional health staff and communities are not allowed to be involved in decision-making (b) the assumption that health staff have a monopoly of health knowledge and that knowledge of the community on health is inappropriate and insufficient, are aspects of professional monopoly which hinder CP.

The most important factors that hinder CP are community conflicts, frequent creation of political structures and the inadequate involvement of locals in all stages of a development programme.

Policy documents of various international organizations and governments today all cite the importance and the need to engender CP in all programmes of assistance throughout the third world (Woelk, 1992). According to Tanner and Vlassoff (1998), current approaches to disease control should rethink the rather vague concept of "CP" and recognize that communities are composed of women and men who relate to each other in ways that impact on their understanding of health, their health related behaviour and ultimately their health.

CP in health care programmes is considered by some writers to be axiomatic health developments. Morgan (1990) in a case study of CP in Costa Rica stated that "participation" was a concept introduced by the USA and promoted by foreign aid agencies to promote a western democratic political ideology.

Among health workers a clash of interests and therefore perspectives exist: the failure of the Mandawu Project in India (an experiment in community participation) was attributed in part to a perception by the professional health workers that the project was threatening their position (Antia, 1988). At the community level, a variety of interest groups exist whose interest do not

always converge for example, in the above mentioned Mandawu Project, local leaders became less supportive when it became apparent that the project was not going to provide the curative services that they desired. Women and the poor in rural communities in Kenya were not always included in leadership positions and therefore excluded from structures facilitating CP (Kaseje, 1987).

2.2 COMMUNITY PARTICIPATION (CP) IN GHANA

In Ghana, attempts have been made at promoting community involvement and participation in Primary Health Care. These include; the Danfa Rural Health Project (DANFA, 1979), the Brong Ahafo Rural Integrated Development Programme (BARIDEP, 1978), the Ashanti Akim Rural Health Programme (1979), The Guineaworm Eradication Project, Nkoranza Community Health Insurance Scheme, Akyemfo Sanitation Project, Mobole Community Clinic and others. All these projects concluded that the active involvement of the communities in the provision of essential health care led to the solution of several health problems at the local level.

The MOH in Ghana sees CP in health as a process of initiating and sustaining dialogue with various members of a particular community in a structured manner with the view to genuinely consulting them as equals in a programme of activities that aim at building a team between programme managers and community members to jointly understand health problems in the community, to find common solutions to such problems and to act together to solve these problems using as much human and material resources as possible from the community (MOH,Ghana, 1997).

In 1992 a recommendation for the MOH of Ghana was made which reads under the heading "Community Based Development Committees": "Wherever possible, the MOH should work

through existing community structures and rely on already functioning committees...rather than create new ones...."(Akosombo 1992).

2.3 OBJECTIVES

The general objective is to assess CP and its contribution to the control of yaws in the Asuogyaman District.

Specific objectives are:

1. To determine the extent of CP in the control of yaws in the District using the following factors: needs assessment, resource mobilization, management, leadership and organization.
2. To determine the community perception about yaws
3. To identify health service factors which promote or inhibit CP in the control of yaws in the District
4. To identify community factors which promote or inhibit CP in the control of yaws in the District.
5. To make recommendations that would improve the CP in the control of yaws.

CHAPTER 3

METHODOLGY

3.1 STUDY DESIGN

The study, which was a descriptive cross-sectional one, used qualitative methods of data collection.

The study was conducted in sixteen communities in two sub-districts (the Adjena/Gyakiti herein referred to as Adjena sub-district, and Atimpoku/Senchi/Akosombo herein referred to as Atimpoku sub-district) – eight communities in each sub-district.

3.2 SAMPLING

A multistage simple random sampling (by lottery method) was used.

Simple random sampling was used to select the two sub-districts as well as all the communities.

The 4 sub-districts were grouped into better endowed (Atimpoku and Akwamufie) and deprived (Adjena and Anum/Boso).

The names of the four sub-districts were written on pieces of papers (equally cut) folded (the same way) and put on a table. A member of staff of the DHA (who was not present at the time of the writing and folding) was asked to pick two of them at random (one from each group).

The communities in the two selected sub-districts were stratified by the following criteria:

presence of clinic (clinic present/absent)

Orientation of VHC (trained/untrained)

State of roads to community (Good/Bad)

Nearness of community to the Volta River (Inland/Bank)

- By population (urban, rural)
- Reported cases of yaws.

Presence of a VHC

Where only one community fell under a criterion it was picked automatically. Where two or more communities fell under a particular criterion, one was picked through simple random sampling by lottery method as described above for the sub-district.

With the Adjena/Gyakiti sub-district, none of the VHC is trained and all roads are bad. The highest number of yaws cases was reported from the sub-district. "Reported cases of yaws" was therefore used as a criterion to stratify some of the communities.

In the Atimpoku sub-district not all the communities have VHC. Therefore presence of the VHC was used as a criterion in the stratification. Find in appendix B the stratification of the communities. Where there was no VHC, the unit committee was used for the FGD.

Sub-districts Chosen

1. Adjena/Gyakiti sub-district.

Communities chosen

- Gyakiti
- Adumasa/Fiefie
- Manya Yoyim

2. Atimpoku/Senchi/Akosombo

Communities chosen

New Akrade

- Atimpoku
- Senchi Ferry

Donor	Kpadom
Survey-line	Punpuni
Old Apaaso	Ghanakpe
Ganyor	South Senchi
Akwenor	New Senchi

3.3 STUDY POPULATION

Data was collected both at the sub-district and community levels. At the sub-district level, in-depth interviews were carried out with SDHT members (level B health workers). At the community level, individual in-depth interviews were carried out with VHV, herbalists and a yaws patient. Key informant interviews with chiefs, headmen, landlords/ladies assemblymembers, unit committee members and women leaders. There were FGDs for VHC and some unit committees. FGD could not be conducted at Kpadom because the community has neither a VHC nor a unit committee. All level B prescribers in the chosen sub-districts were selected for individual in-depth interviews.

In all 172 respondents and participants were interviewed of the 188-target set representing a 91.5% success. 16 (8.5%) could not turn up for the interviews.

SUMMARY

1. 2 sub-districts were selected
2. 16 communities were selected
3. 15 FGD sessions were held
4. 3 traditional/herbalist were interviewed

5. 1 yaws patient was interviewed.

6. 85 key informants (Chiefs, Unit committee members, landlords/ladies assembly members and women leaders) were interviewed.

7. 12 VHV were interviewed.

3.4 COMMUNITY ENTRY/ETHICAL CLEARANCE

Verbal consent was sought from the regional health authorities, the district co-ordinating director, the assembly members, of the communities chosen and the Chief (if only one heads the community) a community leader or head (if only one) after briefing. Individual consent was sought from the key informants, VHV traditional healers and the yaws patient. Verbal consent was sought from the VHC and unit committee before the FGD. For the FGD and IDI, the participants decided on the time and venue for the discussion. The FGD for Adjena/Gyakiti sub-district were held at the Adjena and Gyakiti clinics because the roads are not motorable beyond these communities. Some respondents and non-respondents who were found to have yaws were referred to the Atimpoku clinic for treatment. The findings of the study were made known to the DHMT/DHA, DA and the VRA hospital.

3.5 DATA COLLECTION

Collection of data was by the principal investigator (P.I) assisted by 10 field assistants (FA). The PI conducted the FGD, the interviews for level B Health workers and some of the key informants. The FAs conducted the interviews for the key informants in the communities. The data collection took one month. The research team was made up of 5 community health

nurses, 1 Senior Technical Officer, 1 Technical officer, 1 field technician, 1 National Service Personnel, 1 Nursing Officer and the PI.

For the collection of data, FGD guide, in-depth interview guides, semi-structured questionnaire, observations (participatory and non-participatory), checklist and a tape recorder were used.

The data collection tools were tested in 2 communities in the Atimpoku Sub-district before the sub-districts were selected for the main study. The questions were modified appropriately before the final questionnaire and guides were produced for the main study.

The field assistants were trained in anthropological data collection. The interviewer checked all data. Collected to ascertain whether the questionnaire is properly filled before the interview is terminated. The PI made on the spot checks on some of the days of the interviews to ensure that the questionnaire is properly filled. Issues arising or encountered were discussed and solved with the interviewer. The FAs and P1 at the end of the days field work ensured that data collected for that day are complete, accurate and consistent by going through the questionnaires filled.

The FGD and IDI (with traditional healers and yaws patient) were recorded onto audiocassettes using the tape recorder. The PI transcribed the recordings as the FGD and IDI were conducted in Twi and English with Ewe translated. The FGD and IDI (with the traditional healers and yaws patient) were also recorded by note taking.

3.6 DATA PROCESSING AND ANALYSIS

Data was analyzed manually. Data on CP were analyzed using the modified matrix/scale designed by Rifkin et al (1988) and the pentagram based on five factors – management, leadership, resource mobilization, needs assessment and organization.

Routine identification codes were given to all questionnaires before they were given to the research assistants. This was to enable easy detection of missing questionnaires. It was also to ensure quick identification of Field Assistants who have made improper recordings. At the end of each interview or discussion, the tapes were played back and transcribed together with the notes to prepare a report.

The pentagram model:

The model involves the development of a continuum on each of the five factors (needs assessment, management, leadership, organization and resource mobilization). The continuum has a wide participation at one end (+5), thus the community carries out the planning, implementation, monitoring and evaluation of the program with the health personnel as resource persons. At the other end is narrow participation (+1) thus every decision is made by professionals without involving the people. Between these two ends are various graduations: +2, +3, +4 giving various levels of participation. Marks were then put on the point that best describes the nature of participation that is obtained. The five continua thus obtained (using the five factors) are placed equidistant from each other and from a central point as shown in diagram 1. The continua meet at this point not because there is nil participation but because it is a turning point where all the factors have a common influence. Factors influencing CP do not stand in isolation. This gives a basis for linking up different points (coordinates) of the 5

continua. This gives a pentagram. This pentagram shows that at any given time there is some form of CP.

A modified Rifkin et. al (1988) and Bichmann et al(1989) matrix/scale for each factor is shown in table 5 (in appendix C). It was used to determine the scores and ranks assigned to describe each always interacting with each other.

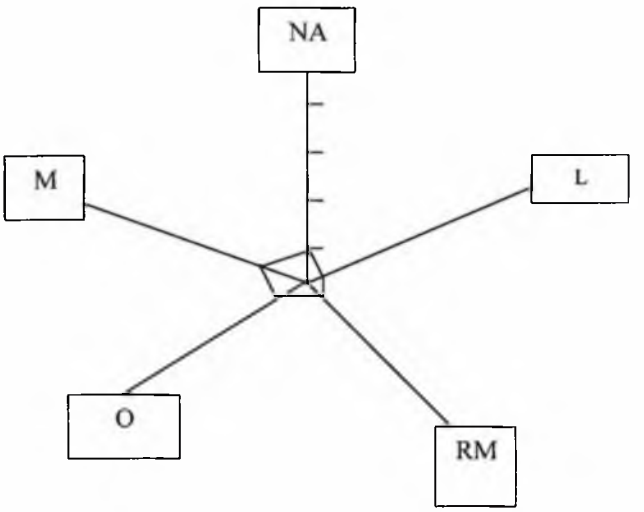


Diagram 1. The pentagram.

3.7 LIMITATIONS

Due to lack of time and funds the study could not cover the 20 communities as proposed earlier.

The respondents and participants were male dominated. This is due to the leadership role men play in the communities.

Personnel were a problem as the PI had to train different people almost every week. The DHA has just a few staff making it difficult to assign any particular people to the PI.

Due to the bad nature of the roads in the Adjena sub-district, the PI could not get into all the communities to observe for himself or verify some information gathered.

Conflicts in some of the communities prevented their inclusion in the sampling, as such communities are declared "no go zones" though they have recorded cases of yaws. These include Television and Anyamasu in the Atimpoku sub-district.

Not all the communities have VHC. Unit committees had to be used for the FGD in such cases this does not put them in an exact comparison with the VHC.

Migration affected the study in that some of the participants could not tend up for the FGD or have the key informant interviews because they had traveled.

The study was conducted during the rainy season and some people could not tend up for the FGD due to rains. The presence of the health workers could make the respondents not expose certain things affecting their participation. The same way the presence of the PI would make the respondents not expose the weaknesses of the health workers to a stranger. One yaws patient was interviewed due to shortage of drugs.

Despite these set backs the results were not significantly affected and therefore make the results valid and acceptable considering the response rate of 91.5%.

3.8 VARIABLES

The dependent variable was poor CP in yaws control all other variables were independent.

The variables of the study (knowledge, attitude and practices, identification of need for community health agents, mode of selection of these agents, planning, implementation, monitoring and evaluation, mode of financing and community support to these agents as well

as yaws control, importance of yaws control and duration/number of health education contacts) with their definitions are in table 4 (in appendix C).

CHAPTER 4

RESULTS

4.1. BASIC CHARACTERISTICS OF RESPONDENTS/PARTICIPANTS

Of the 172 respondents and participants who were interviewed or participated in the FGDs, 124 (72.1%) were males and 48 (27.9%) females while 135 (78.5%) of the said number was educated, 34 (19.8%) had no formal education and 3 (1.7%) had their educational status not determined.

There were 16 (8 from each sub-district) level B health workers from 5 government health facilities in the 2 sub-districts interviewed. There were 4 respondents each from the Adjena, Gyakiti, and Atimpoku MCH/FP clinics and 2 each from the New Senchi and South Senchi MCH/FP clinics. Of these health workers 13 were females and 3 males. One was a nursing officer, 5 senior community health nurses, 1 senior enrolled nurse, 1 senior staff midwife, 4 were community health nurses, 1 senior technical officer, 1 senior field technician and 1 field technician.

Of the 68 participants for the FGDs, 55 (80.9%) were males and 13 (19.1%) females. Of the 40 participants from the Atimpoku sub-district 33 were males and 7 females. The 28 participants for the FGD from the Adjena sub-district were made up of 22 males and 6 females.

The 68 participants of the FGD were aged between 19 years and 79 years.

Farmers constituted 30 (44.1%) of the FGD participants, 11 (16.2%) traders and another 11 (16.2%) fishermen while 16 (23.5%) were from other occupational groups. Of the 40 participants from the Atimpoku sub-district 12 (30%) were farmers, 9 (22.5%) traders and 5 (12.5%) fishermen while 14 (35%) were from other occupational groups. The 28 participants from the Adjena sub-district were made up of 18 (45%) farmers, 6 (15%) fishermen 2 (5%) traders and 2 (5%) from other occupational groups.

Of the participants for the FGD, 57 (83.8%) had basic education while 11 (16.2%) had no education. The 40 participants from the Atimpoku sub-district had 9 (22.5%) not having formal education while 31 (77.5%) had basic education. Of the 28 participants from the Adjena sub-district 26 (92.9%) had basic education and 2 (7.1%) had no formal education.

Of the 85 key informants interviewed 63 (74.1%) were males and 22 (25.9%) females. The 48 key informants from Atimpoku sub-district had 35 (72.9%) males and 13 (27.1%) females while 28 (75.7%) of the 37 key informants from the Adjena sub-district were males and 9 (24.3%) females.

The key informants were aged between 20 and 89 years with most of them 27 (31.76%) in the 40-49 age group. Ethnically, 39 (45.9%) were Ewes, 26(30.6%) Akans, 16 (18.8%) Krobos and 4 (4.7%) from other ethnic groups. Farmers constituted 42 (49.4%), fishermen 4 (4.7%), traders 14 (16.5%) and other occupational groups 25 (29.4%). Of the 85 key informants 61 (71.8%) had formal education of which 38 (44.7%) is basic and 8 (9.41) tertiary while 21 (24.7%) had no formal education.

The respondents were made up of 20 (23.53%) landlords/ladies, 12 (14.12%) chiefs and 16 (18.82%) women leaders.

4.2 COMMUNITY PERCEPTION ABOUT YAWS

There are two terms used to describe yaws. In Akan and Krobo it is termed *jator* while in Ewe *dzorbu*. Dzorbu in full is 'dzordzormorbu' meaning deformer or destroyer, as it is believed that when one gets the disease he or she would never be as he/she was born.

Of the 153 respondents/participants 121 (79.1%) as shown in Table 13 (see also Table 6, appendix C), perceived the cause of yaws to be poor personal and environmental hygiene and sanitation (dirt). It is believed that when one is not neat or is dirty then the disease affects him. Some had this to say about the cause of yaws.

This happens if the children don't bath well and are always dirty.

When one is very dirty he/she can get the disease

If you don't take your bath when you return from farm you will get the yaws

The rest of the respondents, 32 (20.9%) perceive yaws to be caused by other factors such as:

Air

One of those who think it is possible to get yaws from the air had this to say:

It is air, which causes yaws. The air brings it so if you breathe in that air containing the disease you would get it.

Fly

Some feel a fly causes yaws. A respondent said:

A fly called 'gyega' can give yaws.

Witchcraft

Only one respondent said yaws was brought by witchcraft. He said:

Wizards normally infect people with the yaws.

Totems

Some respondents believed that totems cause yaws and had this to say:

You can get yaws if you eat food that is not accepted in your clan.

The community assumes that if you eat rat, snails and pork you can be affected by dzorbu.

What I believe causes yaws in our community here is that, there is a particular leaf, which we are not suppose to eat. When one eats it these rashes appear on the body.

Curse

Yaws is believed to be caused by curses according to some of the participants. One said:

Some say it's a curse but those of us who know the cause think it's dirt. Those who do not bath regularly get yaws.

Parasite

Some of the respondents believe yaws is caused by a parasite. Some of them explained:

I think that disease is caused by a parasite.

We can get it from pigs if the pigs are not injected. The worm from the pig is called 'dorsu'

- *There are some small, small red organisms on pig's skin if they get into contact with human skin, they lay eggs and cause yaws on the body.*

Table 13. Community perception about yaws

INDICATOR	No. OF RESPONSES	TOTAL NUMBER PER CAUSE			
		Poor personal and environmental hygiene and sanitation	Others-fly, curse, totem, witchcraft, air etc		
PERCEIVED CAUSE	153	121(79%)	32(20.9%)		
PERCEIVED MODE OF TRANSMISSION	95	Direct contact	Use of common towel, sponge, clothing etc	Others	
		33 (34.7%)	41 (43.2%)	21 (22.1%)	
PREVENTION	108	Observation of good personal & environmental hygiene and sanitation	Avoid direct contact with lesions of patient	Health education	Others
		59 (54.6%)	31 (28.7%)	16 (14.8%)	2 (1.9%)
PRACTICE/ TREATMENT	153	Sponging of lesion + dressing with "blue stone" (copper sulphate)	Treatment at hospital	Others	No idea
		31 (20.26%)	63 (41.18%)	48 (31.37%)	11 (7.9%)
ATTITUDE	98	Separation of patients	Interaction with others		
			Not easily	Easily/Normal	
		35 (35.7%)	40 (40.8%)	23 (23.5%)	
RELATIVE IMPORTANCE OF YAWS TO SCHISTOSOMIASIS, MALARIA AND ONHOCERCIASIS.	147	1	2	3	4
		4 (2.7%)	17 (11.6%)	34 (23.1%)	92 (62.6%)

Author's own. Relative importance: 1=most important, 2=very important 3=important 4=least important

Focus group discussions and interviews as shown in Table 13 (see also Table 7, appendix C) revealed that the communities have some knowledge about the mode of transmission of yaws. Of 95 responses received on the transmission of the disease 33 (34.7%) said it was transmitted through direct contact (the main mode of transmission known in modern medicine) and 41 (43.2%) said through sharing of sponges, towels clothing. Thus 74 (77.9%) new the mode of transmission. Of this figure 28 (48.3%) were from the Adjena sub-district while 5 (13.5%) from the Atimpoku sub-district. Some had this to say:

You get yaws when you come in contact with the affected person.

When one comes in contact with the affected person he would get yaws.

From interviews and discussions there were 3 main methods of preventing the disease notably: avoidance of direct contact with the lesion of the affected person, health education and observation of personal and environmental hygiene and sanitation. These three constituted 106 (98.1%) of 108 responses received as shown in Table 13 above (see also Table 8 in appendix C). This finding agrees with the scientific method of prevention of yaws. The knowledge on the prevention of yaws is thus high. Some said this:

Bath at least twice a day and sleep in good environment and you would not get yaws.

I think with education and availability of drugs we can stop the spreading of the disease.

If you don't want the disease you need to have your bath at least twice a day and wash your dirty cloth.

Unless he/she is neat, clean his/her environment - sleeping place must be tidy and well ventilated.

The two main forms of treatment of yaws in the sub-districts as revealed by the study are traditional and modern medicine as shown in Table 13 above (see also Table 9, appendix C). Interviews and observations on the communities revealed that most yaws patients have adapted to living with the tertiary stage of the disease especially plantar yaws. The most popular traditional method of treatment which is used by some communities (it is no more in use by those with access to modern health facilities) is the 'blue stone' (copper sulphate) 20.26% (31 out of 153 respondents/participants). Other traditional forms of treatment constitute 48 (31.37%). A respondent had this to say:

> *The sore is washed with soap and sponge till it bleeds then they apply blue stone on it which is very painful.*

Others treat yaws with herbs. Some of them said:

> *The fruits of 'awukye' are cooked and taken orally after grinding, while 'yisa' mixed with palm kernel are applied on the lesion.*
>
> *'clor', 'fefe' and 'ehe' are used to treat yaws.*
>
> *When someone has yaws we treat the person with 'dzorbugwe' or 'jator amie'*

Others use goat feces in treating yaws.

Modern Medicine

From the interviews and discussions, 11 (7.19%) of the 153 respondents and participants have no idea of the treatment of yaws. It was found that 63 (41.18%) mentioned the availability of treatment at hospitals or clinics. From observations I found that most people coming for treatment at the Atimpoku clinic are referred or advised by peers, relatives or community agents.

Self Medication

From focus group discussions it was found that patients with plantar yaws buy analgesics from the chemical sellers to alleviate pain. A respondent had this to say:

They buy 'who dey you' from the drug store for the pain.

Focus group discussions, interviews and observations revealed that the communities 'accepted' people with the chronic disease. This I observed to be true. Plantar yaws patient can be seen moving about with people. I saw a patient with gangosa playing with the other children and the parents of these children said nothing, Plantar yaws patients can be found at funerals and other gatherings, involved in communal labour with other people. A plantar yaws patient said:

I can cope with other people. They don't drive me away from them.

Those with the early stages are shun away. It was found that of 98 responses 40 (40.8%) said yaws patients cannot easily interact with people while 35 (35.7%) said they are restricted or separated from the rest of the family as shown in Table 13 (see also Table 10, appendix C). Sometimes victims with the tertiary stage of the disease discussed their extreme discomfort. A plantar yaws patient has this to say:

- *When I remove my sandals, I cannot walk. I remember I went to the riverside to fish and my sandals got drowned. I sent for one from the house before I was able to come home.*

Generally the knowledge about the association of yaws with poor personal and environmental hygiene and sanitation is high 121 (79.1%) for the two sub-districts. The knowledge about the

transmission 74 (77.9%) and prevention 106 (98.1%) is also very high in the sub-districts. This association about yaws is correct. However, these findings do not reflect in the practices or knowledge on treatment 63 (41.18% of the 153 interviewed); a high percentage of the people interviewed 90 (58.82%) don't know there is treatment for yaws by modern medicine at the clinic or hospital. This has a great negative effect on the CP in the control of yaws. Patients who would have been referred for treatment would resort to the crude methods of treatment. The low level of knowledge about the possibility of treatment of yaws at hospital/clinic has made some of the community health agents not to report yaws cases. Some respondents said:

> *We scrub the wounds thoroughly with sponge and water till it bleeds then we apply blue stone. It is very painful and the patient would think you hate him. If you have the medicine please bring it and treat our people.*
>
> *The treatment is so painful that we boil an egg for the patient after the treatment to show that we like him.*

– *If we had known the clinic could treat, we would have brought some of the patients.*

Through the FGD and key informant interviews, it is found that yaws is perceived as relatively of least importance by the respondents 92 (62.6%), as shown in Table 13. This perception is more in the Atimpoku sub-district 64 (77.11%) than the Adjena sub-district 28 (43.75%). This has influence on the treatment seeking behaviour of the people and hence the control of the disease. This low importance attached to yaws could be due to the misperception that the disease has been eradicated. The less importance attached to the disease in the Atimpoku sub-district could be due to the fact that the sub-district is better endowed with health facilities and

water, and also socio-economically, than the Adjena sub-district. The tendency therefore is to ignore the disease and feel apathetic to participate in its control in the Atimpoku sub-district. Of the total number of respondents/participants 92 (62.59%) placed yaws in the 4th position, i.e. least important in the community compared to malaria, onchocerciasis and schistosomiasis.

A respondent had this to ask:

- *But is yaws still in this area? It's a long time I have seen some. It was common when we were children.*

The relevance attached to the disease by the Adjena sub-district, (56.25%, ranked yaws second and third), can encourage the people to seek treatment at modern health facilities.

- *Jator is dreadful disease. When it attacks you it would not kill you but it would destroy you and make you useless. It is very important to eradicate it.*

Of the 85 key informants 3 (3.5%) had their source of information on yaws from health personnel. This shows that the health education on yaws by the health personnel has not gone down well to the people. Health education on yaws was carried out (by the health personnel) once in 3 months lasting 42.5min. Though the health personnel saw it to be adequate the education on yaws is inadequate and therefore has not created the awareness that yaws is endemic or re-emerging. This inadequate health education explains why only 41.18% said treatment is at hospital or the clinic. This 3.5% also shows that priority is not given to yaws in the two sub-districts by the health authorities. Low health education on yaws can have a negative effect on CP. Education on yaws (27%) was identified as very important in CP by the 100 responses received on the recommendation to promote CP. Some respondents said:

- *To be frank we don't discuss yaws but we discuss other diseases.*

- *Health education is lacking in yaws control.*
- *Yaws as a subject is not tackled but we hope they would come on that issue.*
- *The people need education. This will help us detect all the cases and eradicate them.*
- *It can be stopped by education talk on personal hygiene to the schools, churches and members in the community.*

The low publicity on yaws is also due to the fact that 11 (68.73%) of the level B personnel did not see yaws as a problem in their sub-districts mainly because they did not have anything to do with the data they collect. On whether health education is carried out on yaws some respondents said

- *No because yaws is not a problem in our sub-district.*

The attitude of community members towards yaws patients can discourage the patients from reporting early. This has an adverse effect on the control of the disease. 25 (40.8%) respondents indicated yaws patients cannot easily interact with people and 35 (35.7%) said they are separated. This shows the stigma associated with the disease. The patients would therefore hide the disease until it becomes obvious before they would seek medical treatment. Some respondents said:

- *He was not allowed to play together with the other children and use their articles.*
- *We stay together in the same house but he was not allowed to use our articles or sleep together with us.*

The knowledge on the association of yaws with poor personal and environmental hygiene, on transmission and prevention of yaws is more prevalent in the communities in the Adjena sub-district than the Atimpoku sub-district. This could be due to the fact that the former is deprived and has more yaws cases (87 cases, Asuog. Ann. Report, 2000) than the Atimpoku

sub-district (50 cases). This knowledge about the disease enhances CP, which is reflected in the communities in the Adjena sub-district participating better than those in the Atimpoku sub-district.

Communities with a higher level of knowledge about the disease participated better – New Senchi 9 (75%), New Akrade 8 (80%).

4.3 COMMUNITY PARTICIPATION (CP)

CP was understood differently by different people but generally taken as communal labour. Some defined CP as:

> *It means communal labour.*
>
> *Anything you would do to enhance community welfare*
>
> *It involves engaging in clearing exercise to keep our environments neat means that when you live in a community and something is going on wrongly, there is need for you people to come together and take steps to correct the situation.*

4.3.1 Needs Assessment

Needs assessment was strained (1) in the Atimpoku sub-district. The strained needs assessment in the findings could be explained by the fact that most of the communities (9) were told by the health workers to form the community health structures. This though useful by the assessment of the method used is narrow applying the Rifkin method. The communities in which needs assessment was much strained are Atimpoku, New Senchi, New Akrade, Ghanakpe, Senchi Ferry, South Senchi Kpadom, Pumpuni and Adjena Donor.

These communities from the stratification (ref. 3.2 or appendix B) are all in the Atimpoku sub-district with the exception of Adjena Donor, which shares border with the Atimpoku sub-

district, but in Adjena sub-district. The Atimpoku sub-district is better endowed with infrastructure, social and economic activities. The Atimpoku sub-district, which has a hospital and 5 clinics (2 private clinics), gave the community members better geographical access to health care. This could be the underlying factor why the formation of the community structures was not seen as important and necessary. The economic activities in these communities also put them in a better financial state to access healthcare compared with the communities in the Adjena sub-district.

The less endowed Adjena sub-district had its communities (Akwenor, Manya Yoyim, Ganyor, Old Apaaso, Survey-Line and Adumasa) identifying these community health structures to assist them access healthcare. The sub-district has only two clinics with almost all its roads unmotorable. The communities therefore found the need to get these agents that can facilitate healthcare delivery in their communities. The deprived nature of the sub-district could be the reason for the high number of cases of yaws recorded in 2000 though, the latter could also be due to the active work done by the community agents in the sub-district. All communities in the Adjena sub-district have VHC and VHV but in the Atimpoku sub-district only 4 communities have these structures. Some respondents from the Adjena sub-district said:

> *There was difficulty in getting in touch with the health workers so at a meeting with the whole community I was informed to take up the duty of VHV.*
>
> *We had someone reporting our health problems to the nurses before the name volunteer came.*
>
> *We took the decision to organize ourselves to fight diseases especially malaria. We set off before the district came in.*

The finding by this study that inland communities with bad roads participate better than those with good roads in the control of yaws buttresses the saying that "necessity is the inventor of needs".

Social cohesion and unity in the community could also account for the needs assessment obtained by the communities in the Adjena sub-district. The communities there are smaller and more rural, with more homogenous inhabitants. They have a tradition of meeting weekly after communal labour, to discuss health and development issues.

4.3.2 Organization

The organization in almost all the communities was generally good. This high score (4) by the communities can be explained by the fact that most of the communities selected the community structures themselves. The entire communities were involved in creating the committees in all but Kpadom, Ghanakpe and Old Apaaso.

At Ghanakpe a respondent said:

-The assemblyman asked me to be the volunteer.

All the communities have unit committees except Kpadom, which has only a VHV who volunteered and is active.

The communal spirit in their community development activities could explain the finding on the organization. The community health structures are financially dependable. Though regular meetings were held by the village health structures during communal labour days (varied from community to community), minutes of most of them were either not complete or unavailable. For example, minutes at New Senchi were incomplete while Old Apaaso had no minutes book. The communites in the Atimpoku sub-district with the exception of New Akrade, New Senchi, Senchi Ferry and South Senchi have their unit committees playing the role of

community health agents. They had minutes with good attendance. However, their meetings were on community development and not health.

The communities from the Adjena area have the community health structures but not all discuss yaws; some said this:

- *Anyway we don't discuss yaws but other diseases.*

  Sometimes the VHV gives talk on sanitation and malaria control.

  Suppose the VHV and the VHC detect any disease, we meet together and discuss what to do and how to carry the information to Adjena clinic.

  At the end of every month, the town committee holds a meeting with all committees in the town and at this meeting we assess their performance.

On financial dependence a respondent said:

Sometimes when they are attending meetings the community gives them money but not always, when they come back they come and narrate what went on there.

4.3.3 Resource Mobilization

The communities in the Adjena sub-district have periodic fund raising part of which is used to finance the village health structures. A respondent from that sub-district has this to say:

- *We give them their lorry fare sometimes when they are to go to Atimpoku for meeting.*

  We have money to give anyone who needs help.

The community health agents through FGD said no expenses are incurred during local meetings. The health personnel finance meetings held outside their communities (organized

by the health personnel). Support for community health agents is in diverse ways. During focus group discussion, some participants claimed they were not given any incentives by the communities neither were they financed. However, key informant interviews revealed that some community agents received rewards for their work. One respondent said.

Because of my good work they have made me the queen mother.

- *She is our mother most of the time the community fetches her water.*
- *We have asked them to collect T & T for any meeting they attend outside the community.*

Labour and time are the most common forms of resources from the communities. Time is spent organizing the venue for outreach programmes. They sweep the premise and maintain order. Some respondents said:

We see to the sitting arrangements of the nurses and the queuing of the people to ensure orderliness.

The community health agents spend time on health education:

Sometimes the VHV give talk on some diseases.

It was observed that most of the community health agents put emphasis on environmental sanitation than personal hygiene. This could be due to the low education or lack of training on yaws by the health authorities. Almost all respondents in the Atimpoku sub-district said no support is given to the community health structures:

We bear our own cost except meetings held at Atimpoku with the health personnel.

A lot of time is however spent on environmental sanitation. Due to the absence of community health structures in the Atimpoku sub-district most of the activities carried out are indirectly related to health. It was observed that some (e.g. New Senchi) organized for a health

education talk (by the nurses) to be given in the community. Financial contributions are made occasionally to support development projects like schools and churches. Labour and time are spent on the putting up of clinics (e.g. Senchi Ferry) by the communities with assistance from NGOs.

The community's failure to finance the community health structures could be explained by the fact that the VHC and the VHV are seen as representatives of the government. A respondent had this to say:

- *As for the VHV, they have taken them as government representatives.*

The failure on the part of the health authorities to complement the efforts of community initiative accounted in part for the low score in resource mobilization by Senchi Ferry.

> *Our clinic has been standing here for years now and they have refused to send us a nurse.*

This statement which was echoed during FGD, was as a result of a non-functional clinic which the VHC spearheaded to build but cannot staff it. This has dampened the spirits of the VHC and hence affected CP.

Financial embezzlement explained the low score by New Senchi. There was a case involving the village health committee chairman who failed to account for proceeds accrued from the arrest of stray animals three years ago. This was found to inhibit CP, as no one is willing to contribute any money.

4.3.4 Leadership.

The committees in the Adjena sub-district are very active but there is gender bias. Some, for example Akwenor have no females in the VHC while others like Survey-Line have only one female out of the five participants. With the exception of Adjena Donor, none of the VHC in

that sub-district had two female participants. The committees in the Atimpoku sub-district have the same trend. It was observed that with the exception of New Senchi and Senchi Ferry, (which have two females in their committees) none of the VHC interviewed had more than two females. Atimpoku unit committee had only two females out of 9 members, Ghanakpe had only one female out of the seven member committee interviewed.

The unit committees were elected while the VHC were voluntary, elected or imposed. The unit committees were acting as VHC in all but four communities (New Senchi, South Senchi, Senchi Ferry and New Akrade) in the Atimpoku sub-district. The communities in the Adjena sub-district have VHC specifically dealing with health issues apart from the unit committees. Not all the communities in the Atimpoku Sub-district are represented in the sub-district health team (SDHT). For example, Punpuni is not represented. All communities in the Adjena sub-district are represented in the SDHT. With the exception of Adjena Donor, all the communities mostly informed the community heads before and after meetings. This was found not to be regular especially when meetings are impromptu. A respondent said this:

I selected them but they don't tell me any thing.

In the Atimpoku sub-district most of the communities consult the communities only after meetings e.g. South Senchi. Some of the VHV were imposed. One said:

The assemblyman asked me to be the volunteer.

4.3.5 Management.

It was found that the management of yaws control activities was done independently by the health staff with some involvement of the committees in the implementation of an activity like a survey or mass treatment. The communities are only informed about the activity (in the

Atimpoku sub-district e.g the treatment that was given at New Senchi three years ago). Some respondents on involvement in yaws control activities said:

> *Not at all. Before we realize anything at all they are often here with their people.*
>
> *We are not involved in those planning activities. Even when it gets to the implementation stage it is not all of us who are invited.*
>
> *We have no problem with any body, only the health personnel don't involve us in their activities the way we wished.*

At the Adjena sub-district the communities are involved in the planning and implementation (during the surveys in 1998 and 2000). The extent of involvement in the planning was minimal as the health personnel took all the decisions. It was observed that in both sub-districts the communities, through the SDHT, were involved in the planning, implementation and monitoring of other health activities like child health, HIV and malaria control activities, health education and immunization.

Using the matrix or ranking scale in Table 5 (appendix C) the extent of community participation by the communities and the sub-districts have been quantified and summarized into Tables 14 and 15. From these tables and the stratification in appendix B and the pentagrams in diagram 2, the following observations can be made:

1. Generally, CP is better in the Adjena/Gyakiti sub-district than the Atimpoku sub-district.
2. Communities without clinic tend to participate better than those with clinics.
3. Communities with VHC participate better than those without VHC.
4. Communities with both VHC and VHV participate better than those with only VHV.
5. Inland communities with bad roads tend to participate better than those with good roads

6. No significant difference in the level of participation between inland communities and those on bank in the Ajena/Gyakiti sub-district.
7. Rural communities on bank participate better than urban communities on bank in the Atimpoku sub-district. (Ghanakpe participate better than Atimpoku).
8. Communities which reported no cases participated better than those which reported cases in the Adjena sub-district did (Manya Yoyim participate better than Donor; Survey-line participate better than Old Apaaso).
9. Orientation of VHC made some difference in CP.

Table 14

RESULTS OF ASSESSMENT OF COMMUNITY PARTICIPATION BY COMMUNITIES

FACTOR	COMMUNITY															
	Atimpoku	New Senchi	New Akrade	Ghana kpe	Senchi Ferry	South Senchi	Kpadom	Punpuni	Adjena Donor	Akwenor	Gyakiti	Adumasa	Manya Yoyim	Ganyor	Survey-Line	Old Apaaso
LEADERSHIP	2	2	2	2	2	2	1	2	2	3	3	3	3	3	3	3
NEEDS ASSESSMENT	1	1	1	1	1	1	1	1	1	4	3	3	4	4	4	3.5
MANAGEMENT	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
ORGANISATION	4	4	4	3	4	4	2.5	4	4	4	4	4	4	4	4	3.5
RESOURCE MOBILISATION	2	2	2	2	2	2	2	2	3	3.5	3.5	3	3.5	3.5	3.5	3.5

Table. 15. COMMUNITY PARTICIPATION BY SUBDISTRICT

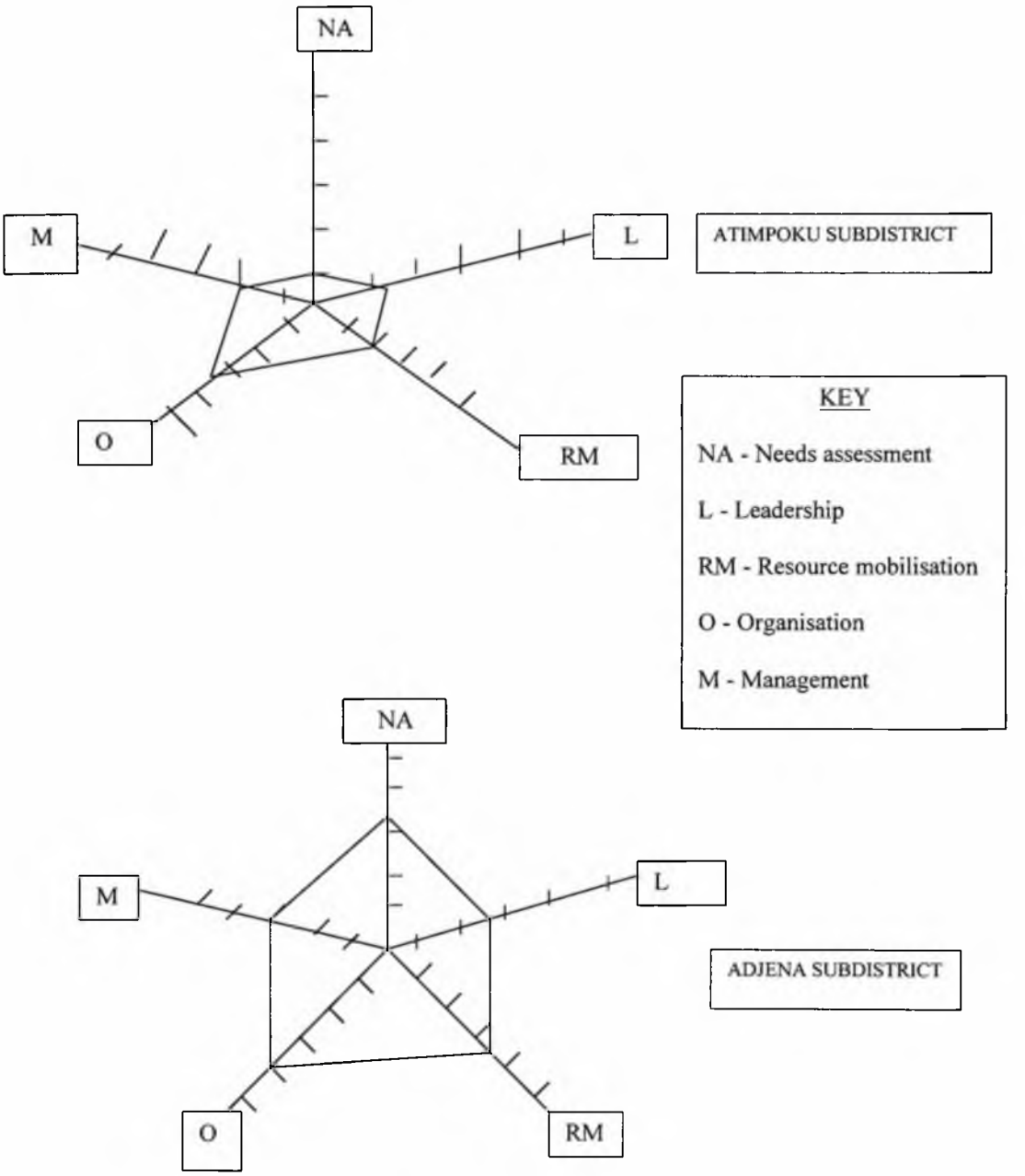
SUBDISTRICT	FACTOR				
	LEADERSHIP	NEEDS ASSESSMENT	ORGANISATION	RESOURCE MOBILISATION	MANAGEMENT
ATIMPOKU	1.8	1	3.7	2	2
ADJENA	2.9	3.3	3.9	3.4	3

PARTICIPATION OF ATIMPOKU SUBDISTRICT = 2.1 [RESTRICTED (SMALL)]

PARTICIPATION OF ADJENA SUBDISTRICT = 3.3 [MEAN (FAIR)]

PARTICIPATION OF BOTH SUBDISTRICTS TOGETHER = 2.7 [RESTRICTED (SMALL)]

Diagram 2. Pentagrams. Pictoral view of community participation of Adjena and Atimpoku sub-districts (diagrams not to scale).



4.4 FACTORS AFFECTING CP

4.4.1 Health Service factors

Factors inhibiting CP

There were infrequent interactions between the health workers and the communities and their health structures – VHV, VHC. This inhibited the participation of the communities in the control of yaws. The infrequent interactions resulted in a low degree of consultation of the health workers with the communities. To promote CP, there is the need for the health workers to have frequent meetings/interactions with the communities on yaws and other health issues. Some respondents said

> *The health officers don't draw near us at all*
>
> *Apart from we reporting such cases, I also feel that if the officers pay us regular visits it would help.*
>
> *Regular visits can help.*
>
> *We realized that because our activities are not money fetching to the MOH, that is why we seem not to matter to them. So we too are playing it loose now.*

The study found that incentives to community health structures VHV, VHC played a very important role in CP. Lack of incentives made most of the VHC members dormant and not interested in the work, as they did not know how long they could continue to volunteer. To promote CP some form of incentives should be given to the community health structures.

The study found the lack of drugs to inhibit CP in the control of yaws. It is frustrating when the health workers detect cases and are unable to treat them immediately. These missed opportunities tend to increase the spread of the disease as well as inhibit CP. A patient who

pays the cost of transportation from say Kudi or Akwenor (in the Adjena sub-district) to Atimpoku for treatment only to be told no drugs would never come the second time. Cases of yaws (23) detected at Adumasa could not be treated due to shortage of drugs. The availability of drugs and decentralization of treatment can save the yaws patients some money and also promote CP through peer influence. Some respondents said:

They easily run short of drugs

Some times they run short of medicine and some people feel bored to wait.

The supply of more drugs would help.

The study revealed that there was lack of training of the community health structures, on yaws. This makes them feel yaws is less important and buttresses the effect of shift in health priorities on the control of yaws. This inhibits CP as the community health agents fail to report cases for treatment. Since the inauguration of the VHC, most of the members have not been given recognition as channels between the communities and health workers. This inhibited CP. Giving the community health agents the due recognition as bridges or entrepreneurs between health personnel and the communities would promote CP. By not giving them that recognition, they lose interest in what they are supposed to do thus breaking the bridge and restoring the gap between health workers and the communities. Some respondents said this with regards to recognition:

In-fact, our role is not being recognized by the health personnel at all. This has even led to the community's disrespect for us.

Because of the degrading attitude of the health personnel our recognition is even fading.

The centralization of treatment in only two centers serves as a disincentive to CP, in the control of yaws. This makes treatment of yaws inaccessible geographically. A respondent said:

The treatment centers are too far.

Some patients may like to come for treatment but due to poverty would stay back and thus keep spreading the disease. The treatment if decentralized would promote CP. Treatment of yaws should be geographically accessible for effective control.

The study found that there is passive case finding on yaws. This inhibits CP. Some respondents expressed their feelings at a FGD as below:

What I don't like is how the activities are not house – to – house based. This would be very useful if the nurses move from house- to- house.

What would please me most is the house- to- house idea. There is the need for we the committee members to move from house –to- house identifying such patients.

The failure to act on or respond to complaints lodged by VHC as revealed by the study inhibited CP. The VHC felt their concerns were not addressed and therefore became discouraged. To promote CP, there should be follow up on complaints made by community agents. This gives them some moral support.

We reported the conduct of our chairman to the health authorities but they said nothing up to date. This actually, discouraged us. They did not even come to find out or call us to settle the case.

The failure of health authorities to complement community initiative also inhibits CP as revealed by the study. Where communities have taken the initiative in health projects health authorities should support them as it encourages them to take more initiatives.

The misperception by health workers that yaws has been eradicated inhibits CP in the control of yaws. It diverts attention to other diseases and makes the health workers less familiar with the disease as revealed by the study.

Factors promoting CP.

The prompt response by health workers to cases reported by community agents, promoted CP in the control of the disease. This encouraged the VHV, VHC and TBA to refer more cases they see. It should be encouraged. A respondent said

> *We like the promptness with which they go about the reports we make to them on the disease.*

Free treatment of yaws patients promotes community participation. Since the disease is associated with the poor. It does enhance financial accessibility of the rural folk and saves them some income. Some respondents said:

> *I like the way the gong-gong was beaten and people gathered and received free treatment.*
>
> *Since the free "immunization" exercise 3 years ago yaws has been totally out of sight.*
>
> *The means we can adopt is by government letting us beat gong-gong inviting all victims for free injection.*

The study revealed that good interpersonal relation between health workers and the communities promoted CP. Community members feel at ease to discuss issues when they

have a good relationship with health personnel. Training health personnel in communication skills would go a long way to promote CP. Some respondents said

We have nothing wrong with the community. As for the health personnel due to their snobbish attitude, we didn't even know until today that we are still recognized.

As for the community we are in good terms but it is the health officers who don't draw near us at all.

4.4.2 Community factors.

Knowledge about yaws in the community promoted CP as revealed by the study. Education of the communities on yaws is therefore important for CP in the control of yaws. Presence of community health structures VHC, VHV and TBA promoted CP as revealed by the study. The community health structures bridge the gap between health workers and the communities. Their absence therefore creates a gap and inhibits CP. The community health structures continue with activities in the communities after the flashy appearances of health workers. The rest of the communities without the community structures should be encouraged to form them to promote CP and the control of yaws.

Since the community health agents cannot continue to be volunteers forever, communities should be encouraged to give them some incentives. This promotes CP as reveal by the study.

I was made a queen mother because of the hard work I do for the community said a respondent.

There were some community factors which inhibited CP

Conflicts as revealed by this study inhibit CP. Conflicts divide the people and prevent them from working together for a common goal. By inhabiting CP conflicts also inhibit the control

of yaws. In some of the areas like Television, Anyamasu and some parts of the Adjena sub-district health workers are unable to gain access despite the presence of yaws in such communities. Conflicts within the community health structures hamper their effective work and thus affect CP as was found in New Senchi and Senchi Ferry. Some communities forbid their inhabitants to seek treatment in particular communities. This inhibits CP in that, community agents are unable to refer cases to the health authorities.

Embezzlement of funds inhibited CP as was observed at New Senchi when the VHC chairman failed to account for funds accrued from the arrest of stray animals. This conduct by heads of community health committee discourages the communities from lending them the needed support. They lose their credibility in the community and this has negative effect on their role as community health agents. To promote CP VHC members and other community health agents must conduct themselves well. By inhibiting CP, embezzlement of fund inhibits the control of yaws.

Focus groups discussions, interviews and observations revealed that the communities are participating effectively in other health activities but not yaws. This could be due in part to the misconception that the disease has been eradicated, as the health workers lay emphasis on other diseases and not yaws. This could also be due to the less importance attached to the disease and inadequate health education activities on yaws.

CHAPTER 5

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 DISCUSSION

Orphaned as it is, yaws is one of the endemic diseases people have forgotten about, after the successes in its control in the 1950s and 1960s (ref.1.1). Control of the disease, since then, has been pulsatile with the misperception that it has been eradicated. Apart from the erratic drug supply and little political commitment, the involvement of the communities in its control has been very minimal. For the control methods outlined in chapter 1.1 to be successful the current attitude towards yaws must change to forestall an impending epidemic/outbreak of yaws in Ghana from 2003 (ref. chart 1, appendix C).

Since the community is a very important unit for disease control especially when the participatory approach is desired, the factors identified in this study as responsible for the low CP could form the basis for formulating potential health education messages.

The finding by this study that conflicts, embezzlement and lack of incentives for village health structures inhibit CP agree with earlier finding by Letsa et al, (in their study on factors influencing CP in health related programs in 1992 in Ghana) and Asibuo et al in their work on approaches to CP in 1998 and Chowdhury, (1991). Lack of incentives made most of the VHC members dormant and not interested in the work.

Yaws is associated with poverty, as reported by Richens (1993) in his article "whatever that happens to yaws eradication" therefore the lack of drugs and centralisation of treatment at Atimpoku and Akosombo (as found by this study to inhibit CP), agrees with the earlier

findings in 1998 by Addo, during his work on the persistence of yaws in the Asuogyaman district. Patients become disappointed when they come to find that there are no drugs. Considering the cost of transport, time lost, inconvenience and the fact that yaws is perceived relatively less important in the district, such patients would never come again and would resort to the alternative method of treatment. This patient would therefore infect a lot of people with the disease before going into the chronic stage.

The inadequate health education on yaws found by this study prevented the communities from improving on what they know about yaws. This inhibited CP and hence the control of yaws, as their perceptions about the disease could have changed. This inadequate health education could be due to the low importance the health personnel attach to yaws and the erroneous perception that yaws has been eradicated, since the perceptions about yaws do not fully agree with modern medicine.

The control of yaws requires health education, active case finding, availability of drugs, free treatment, geographical and financial accessibility and CP. Active case finding ensures geographical accessibility and this can be achieved without verticallising yaws control. An integrated geographically accessible yaws control services involve house – to – house treatment during home visiting by community health nurses. The community health nurses should therefore be trained to identify and treat yaws, during home visits, while the community agents identify and report cases. The health personnel and community agents have to also embank on intensive health education on personal and environmental hygiene and sanitation. It is felt this would go a long way to promote CP and the control of yaws.

5.2 CONCLUSIONS

From the study the following conclusions can be drawn.

(1) Communities with a higher knowledge about yaws participated better – New Akrade 8 (80%), New Senchi 9 (75%), Atimpoku 11 (73.3%), South Senchi 8 (72.7%) and Senchi Ferry 72.2%(8) participated better than Kpadom (33.3%-2), Ghanakpe (58.3%-7) and Punpuni (54.5%-6).

(2) There was no difference in knowledge between communities with clinics and those without clinics – South Senchi has clinic (72.7%-8), and Senchi Ferry (72.7%-8) no clinic, Gyakiti (100%-9) has clinic and Adumasa (100%-6) has no clinic. New Senchi (75%-9) has clinic and New Akrade (80%-8).

(3) Inland communities with trained VHC have a higher level of knowledge about the disease than those without VHC. New Senchi and New Akrade have trained VHC have a higher knowledge on yaws than Punpuni and Kpadom (without VHC)

(4) Urban communities on bank have a higher level of knowledge on yaws than rural communities on bank. Atimpoku (urban on bank) has a higher level of knowledge on yaws than respondents from Ghanakpe (rural on bank).

(5) Communities in the Adjena sub-district participated better than those in the Atimpoku sub-district.

(6) Communities without clinic tend to participate better than those with clinics.

(7) Communities with VHC participate better than those without VHC.

(8) Communities with both VHC and VHV participate better than those with only VHV.

(9) Inland communities with bad roads participate better than those with good roads.

(10) No Significant difference in participation between inland communities and those on bank in the Adjena/Gyakiti sub-district.

(11) Nine (9) of the communities had their needs assessed by the health workers.

(12) All the communities had good organization with the exception of Kpadom (2.5) and Old Apaaso (3.5).

The study has consolidated the usefulness of the 'pentagram model' for assessing community participation (Rifkin et al, 1988, Bichmann, 1989), using the five (5) factors (needs assessment, management, leadership, organization and resource mobilization) and the ranking matrix. From the pentagram, needs assessment suffered most. This was due to the influence of the health professionals who determined the need for the community structures in the Atimpoku sub-district. The results of this study would serve as a baseline for the evaluation of community participation in yaws control, in the district.

The pentagram has displayed the extent of community participation in the two sub-districts, pictorially. The extent of community participation is above restricted (small) but below mean (fair). Since the 16 communities were representative of other communities in the two sub-districts, which intern were representative of the other sub-districts in the district, and with the 91.5% response rate, it can be inferred that the extent of community participation in the control of yaws in the Asuogyaman district is below mean (almost at mean 2.82). This confirms what was found earlier (Addo, 1988), that there is poor community participation in the control of yaws in the district.

Finally, the study found that there is a high level of knowledge about the mode of transmission, prevention and association of yaws with poor personal and environmental hygiene and sanitation. It also found that there is a low level of knowledge about the availability of treatment for yaws by modern medicine. This low knowledge as revealed by the study is due to inadequate health education on yaws. This knowledge, the study also found among other factors identified, has influence on CP, which was found to be small (restricted). Since the findings of this study on the factors which adversely affect CP are correctable, the answer to the question posed by the study is:

Yes, community participation can make the difference in the control of yaws in the Asuogyaman district.

5.3. RECOMMENDATIONS

The following recommendations are made, to promote CP in the control of yaws. The suggestions made by respondents are shown in Tables 12 and 13 in appendix C.

Recommendations to the DHMT and DHA:

Health education should be repackaged, intensified and targeted.

To create a healthy relationship between health workers and communities, there should be frequent interactions between the two groups. The DDHS should try to attend VHC meetings, once in a year, to have direct interaction with the community health structures on "their soil". This gives them some moral support. The sub-district leader should attend VHC meetings, once every 3 months, to interact with the community health agents on "their soil"

The DDHS should take steps to ensure the availability of drugs throughout the year and at all the treatment centres/clinics in the district. The DDHS should also ensure that the policy on free treatment for yaws is fully operational.

To ensure geographical accessibility of treatment and encourage CP, treatment of yaws should be decentralized and fully integrated into the regular health delivery system. In line with this, community health nurses and all prescribers should be retrained in the identification and management of yaws. Community health nurses could administer treatment during home visits, to make the treatment of yaws integrated and geographically accessible.

The DHMT should consider an incentive package for the community health agents – VHC, VHV and TBAs.

The community health agents should be trained on the control of yaws. They should also be supervised, monthly.

The DHMT/DHA should act or follow up on reports or complaints made by communities.

The district health authorities should complement the efforts of community health initiatives.

The DDHS of corresponding districts of imported cases should be informed accordingly.

House-to-house surveys and re-survey on yaws should be carried out instead of school surveys. This is because not all the children are in school.

A serological study on yaws in the district should be carried out to get a baseline for the evaluation of the progress of the control of yaws.

Assessment of the extent of CP should be carried out from time to time after the implementation of these recommendations.

Recommendations to the communities:

Communities without community health structure – VHC, VHV and TBA should do well to set up some. Communities should also get some incentives for the community health agents. Communities should take interest in the work of the community health agents and monitor their activities. This would make these agents accountable to the communities. It would also enable the communities solve any conflicts between members of these agents.

Recommendations to the District Assembly:

To facilitate the activities of the control of yaws, the District Assembly should get its agents on the ground trained in the control of yaws. The District assembly should take steps to improve the infrastructure and sanitation in the district. The unmotorable roads hampered service delivery by the health workers.

Since yaws is associated with poverty (Richens, 1993), the District Assembly should intensify its poverty alleviation programmes in the rural communities of the district. The socioeconomic level of the communities should be improved. This is because diseases whose origin, maintenance and spread in the community are essentially due to defects in the social, economic and cultural structures of that community, cannot be eradicated or controlled unless the social, economic and cultural defects are themselves corrected (Sai, 1974)

The District Assembly should intensify its environmental hygiene and sanitation activities. This can be done through he collaborative efforts of the community health structures and the District Assembly's community structures with the supervision of the environmental health unit. The District Assembly should take steps to resolve community conflicts in the district.

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APPENDICES

APPENDIX A. FGD AND INTERVIEW GUIDES

INDIVIDUAL IN-DEPTH INTERVIEW GUIDE FOR LEVEL B HEALTH WORKERS.

NUMBER……..

Name of interviewer……

Date of interview……..

Name of community……

Rank/status of healthworker……

Station……

1. How do you think the following ideas were arrived at?
   i) Forming a Village Health Committee (VHC)?……
   ……
   ……
   ……
   ii) Choosing Village Health Volunteers?……
   ……
   ……
   ……
   iii) Training Traditional Birth Attendants?……
   ……
   ……
   ……..
2. How are the following normally selected?
   i)VHC……
   ……
   ……

ii)VHVs.....

.....

.....

iii)TBAs.....

.....

.....

3. Is yaws a problem in your District/Subdistrict?

   YES

   NO.

4. If Yes, what are you doing about it in the District?.....

.....

.....

.....

.....

.....

5. Are you assisted by the communities during yaws control activities (disease surveillance)?

I. Outreach services?

All communities		4
Most	"	3
Some	"	2
Few	"	1
No	"	0

II. Static services?

All communities		4
Most	"	3
Some	"	2
Few	"	1
No	"	0

6. Which people from the communities assist you?[probe VHC, VHV, TBAs, TDC etc]……
……
……
……

7. What sort of assistance do you receive from the communities, VHC, VHV, TDC, TBAs etc?……
……
……
……
……

8. Who plans for yaws control activities (disease surveillance) at the
   a) District level
   ……
   ……
   b) Subdistrict level?
   ……
   ……

9. a) Are the communities involved in the planning?
   Yes
   No
   If Yes to (a) how do you involve them?……
……
……
……

   b) Are the communities involved in the implementation?
   Yes
   No
   If Yes, how are they involved?……...

.....

.....

c) Who does the monitoring of the yaws control activities (disease surveillance?

.....

.....

.....

d) Are the communities involved in the evaluation of the yaws control (disease surveillance)?

Yes

No

If Yes, how are they involved?.....

.....

.....

.....

10 . At which meeting(s) do you discuss yaws control activities (disease surveillance)?

.....

.....

.....

11 . Are communities represented at these meetings?

Yes

No

12 In what form are they represented?.....

.....

.....

.....

.....

13 Do the communities come with suggestions?

Yes

No

14 How often do you monitor/supervise the activities of:

a) VHV

.....

b) VHC.....

c)TBAs .....

15. Do you involve the community members in this monitoring/supervision?

Yes

No

If Yes, which category of people do you involve?.....

.....

.....

16. What do you understand by community participation?.....

.....

.....

.....

..... 17. Are you satisfied with how the communities are participating in the control of yaws (disease surveillance)?

a) Yes, give reasons.....

.....

.....

.....

.....

b) No, what do you think is lacking most.....

.....

.....

.....

.....

18. Do you think community participation is working effectively in your subdistrict?

Yes, in which area(s).....

……

……

……

No, give reasons……..

……

……

……..

19.Are the communities utilizing your services/facility

i) Clinic/maternity home/MCH/FP?

Yes

No

If Yes, how did you encourage them?……

……

……

……

If No, why are they not utilizing them?……..

……

……

……

ii) Yaws control services(disease surveillance)? Yes/No

If Yes, how did you entice them?……

……

……

……..

If No, why are they not utilizing them?……

……

……

……

20. How can you motivate the community to help you improve on the control of yaws (disease surveillance)?

Give suggestions……

……

……

……

21. Name any category of people from the community you think can help in the control of yaws(disease surveillance)……

……

……

……

……

In which way can they help?……..

……

……

……

……

22. How are messages sent to the community (ies) concerning an impending yaws control activity (disease surveillance)?……

……

……

……

……..

23. How do you rate the performance of the following categories of people in supporting yaws control(disease surveillance)? 1). Poor. 2). Fair. 3). Good. 4). Very good. 5). Excellent

i) VHC……..

ii) VHV……..

iii) TBA……

24. Do you carry out health education activities on yaws separately in the communities?

Yes. How many times in three months?……

No, (Reasons)……

.....

.....

.....

.....

25. If health education is done alongside the yaws control activities (disease surveillance), what time do you allocate for it each time?.....

Is the allocated time adequate?.....

26. What problems do you encounter in the control of yaws (disease surveillance)?

List them.....

.....

.....

.....

.....

.....

27. What is your staff strength?.....Give categories.....

.....

.....

.....

.....

28. How many are you supposed to be?.....

29. How many of you are involved in the control of yaws (disease surveillance)?

.....

30. Are there any conflicts in the community, which affect your activities? Religious, political, ethnic, clan (specify).....

.....

.....

.....

.....

31. What are the beliefs in the community about yaws?……..

……

……

……

……

32. Who treats yaws cases in the community?……

……

……..

33. What is done in the community when one has yaws?……

……

……

……

……..

34. Do you think it is important to report when one has yaws?

1) Yes

2) No

3) Don't know.

35. If Yes, to whom should they report?……

……

……

……

KEY INFORMANT INTERVIEW GUIDE FOR:

1. CHIEFS
2. ASSEMBLY MEMBERS
3. UNIT COMMITTEE MEMBERS
4. LANDLORDS/LADIES
5. WOMEN LEADERS

NUMBER……..

Name of interviewer……

Date of interview……

Name of community……

Status of respondent……

Tribe of respondent……Religion……

Age of respondent…… Sex……..

Level of education……No Ed.: Prim. Sch : Sec. Sch.: JSS: SSS: Techn: Tertiary. Vocat.:

Occupation……

SECTION A. COMMUNITY PERCEPTION

1. Have you heard about yaws (jator)? Yes/ No [skip Q2 if No]
2. What are the local names for yaws?……

……

……

……

……..

3. What do you think causes yaws?……..

……..

……

……...

4. By what means can one get yaws?.....

5. Who is most affected by yaws?.....

6. Is it possible to get yaws from another person? Yes/No. [If No, skip Q10]

7. How does yaws spread from one person to another?.....

.....

.....

8. What is your source of information on yaws?.....

.....

.....

.....

9. How do you think this disease can be stopped from spreading?.....

.....

.....

.....

.....

10. How can one protect himself from getting yaws?.....

.....

.....

.....

.....

11. How do you relate to people who have yaws?.....

.....

.....

.....

.....

12. Has anybody got (or ever had) yaws in your house/family?

Yes

No [If No, skip Q15]

13. How does/did the family relate to him/her?.....

.....

.....

.....

.....

.....

14. Is a patient with yaws able to interact with the people easily in the community?.....

Yes

No

If No, why?.....

.....

.....

.....

.....

15. What are your taboos about yaws? in the:

a) community?.....

.....

.....

b) family?.....

.....

.....

c) house?.....

.....

.....

16. What is the treatment for yaws in your community?.....

.....

.....

And by whom?.....

.....

.....

.....

17. What are the traditional/cultural things you/people do when one has yaws in this Community?.....

.....

.....

.....

.....

18. Rank the following diseases in order of importance to your community:

a) Schistosomiasis

b) Malaria

c) yaws

d)Onchocerciasis

SECTION B. COMMUNITY PARTICIPATION

1. Do you have a VHC in your community?

Yes

No

2. Do(es) the VHC member(s) from your community consult you/community before Attending VHC meetings?

Yes

No. [If No, skip Q2]

3. If Yes, how do (es) he/she/they do it?.....

.....

.....

.....

4. Do you/community receive feedback from him/her/them after VHC meeting?

Yes

No

5. If Yes, how is it done?.....

.....

.....

……

……

6. How do you assess the performance of your VHC members?……..

……

Give reasons:……

……

……

……

7. Do you think he/she/they represent(s) your community?……

……

……

……..

……

8. Do you have VHVs in your community?

Yes

No

9 Do (es) the VHV(s) consult the community before VHVs meeting?

Yes

No

10 Do you receive feedback from him/her/them after a meeting?

Yes

No

11 If Yes, how is it done?……..

……

……

……

……

12 How would you assess the performance of the VHV(s)……

……..

Give reasons……

……

……

……

13 How would you assess the performance of the TBA(s) in your community?

……

Give reasons:……

……

……

……

……..

14 What support has the community been giving to the

a) TBA(s)……

……

b) VHC……

……

c) VHV(s)……..

……

15 Do you meet in the community to discuss issues of yaws control (disease surveillance)?

Yes

No

If Yes, what do you discuss about?……..

……

……

……

And with whom?……

……

……..

16 What role do you play during yaws control outreach Services (disease surveillance)?

.....

.....

.....

17. What do you understand by community participation?.....

.....

.....

.....

.....

18. What do you think is your role in promoting community participation in health Activities (especially in the control of yaws/disease surveillance)?.....

.....

.....

.....

.....

.....

19. What do you like about the control of yaws (disease surveillance)?.....

.....

.....

.....

.....

20. What don't you like about the control of yaws (disease surveillance)?.....

.....

.....

.....

.....

21. What do you think is lacking in the control of yaws (disease surveillance) ?.....

.....

.....

.....

.....

IN-DEPTH INTERVIEW GUIDE FOR VILLAGE HEALTH VOLUNTEERS (VHVs).

NUMBER……

NAME OF INTERVIEWER……

NAME OF COMMUNITY……DATE OF INTERVIEW……..

TRIBE OF RESPONDENT……..

AGE OF RESPONDENT…… SEX……

EDUCATIONAL STATUS……No ED.: Prim. Sch.: Sec. Sch.; JSS.; SSS.; Tertiary Techn: Vocat.:

OCCUPATION……..

SECTION A . COMMUNITY PERCEPTION

1. Have you heard about yaws (jator)?

Yes

No [skip Q2 if No]

2. What are the local names for yaws?……..

……

……

……...

3. What do you think causes yaws?……..

……

……

……

4. By what means can one get yaws?……..

……

……

……

……

5 Who (what age group) is affected by yaws most?……

……

……

……

6. Is it possible to get yaws from another person?

Yes

No. [If No, skip Q10]

7. How does yaws spread from one person to another?.....

.....

.....

.....

.....

8. How do you think this disease can be stopped from spreading?.....

.....

.....

.....

.....

9. How can one protect himself/herself from getting yaws?.....

.....

.....

.....

.....

10. How does the community relate to people who have yaws?.....

.....

.....

.....

11. What is/are your source(s) of information on yaws?.....

.....

.....

.....

.....

.....

12. Has anybody got/ever had yaws in your house/family?

Yes

No [If No, skip Q15]

13. How do (es) you/the family relate to him/her?.....

.....

.....

.....

14. Is a patient with yaws able to interact with the people easily in the community?.....

Yes

No

If No, why?.....

.....

.....

.....

.....

15. What are your taboos about yaws? In the:

d) community?.....

.....

.....

.....

e) family?.....

.....

.....

.....

f) house?.....

.....

.....

.....

16. What is the treatment for yaws in your community? And by whom?.....

.....

.....

.....

.....

17. What are the traditional/cultural things you/people do when they have yaws in this

Community?.....

.....

.....

.....

18. Rank the following diseases in order of importance to your community:

a) Schistosomiasis

b) Malaria

c) Yaws

d) Onchocerciasis

SECTION B. COMMUNITY PARTICIPATION

1. What made the community select a VHV?.....

.....

.....

.....

2. How were you selected as the VHV?.....

.....

.....

.....

.....

3. How did the community go about the selection of VHC members?.....

.....

.....

.....

.....

4. Have you ever been involved in the selection of VHC members?.....

Yes

No

5. How did the community go about the selection of TBAs for training?.....

.....

.....

.....

6 Have you ever been involved in the selection of TBAs for training?.....

Yes

No

7. Are there organized meetings for VHVs at the subdistrict level?.....

.....

.....

8 How do you organize VHVs meeting at the subdistrict level?.....

.....

9 Who organizes VHV meeting at the subdistrict level?.....

.....

.....

.....

10 Who finances the meetings?.....

.....

.....

11 [If community is not financing now]. Do you think community can finance your meetings?

Yes

No

Give reasons.....

.....

.....

.....

12 What are your functions as VHVs?.....

.....

.....

.....

.....

13 What are the main issues you discuss at VHVs meetings?.....

.....

.....

.....

.....

14 Do you discuss issues on yaws control?

Yes

No

15 If Yes, what role do you play during yaws control activities (disease surveillance)?

.....

.....

.....

.....

16 If No, why?.....

.....

.....

.....

17 Do you as a VHV take part in the decision making at VHV meetings?

Yes

No

Give reasons for your answer.....

.....

.....

.....

.....

18 What role do you play when health workers come to your community for yaws control outreach services (disease surveillance)? Explain.....

.....

.....

……

……..

19 Do you consult your community before VHV meetings?

Yes

No

a) If Yes, how do you do it?……

……

……

……

……

b) If No, why don't you?……

……

……

……

……..

20. Do you give feedback to your community after VHV meetings?

Yes

No

a) If Yes, how do you do it?……..

……

……

……

……

b) If No, why don't you?……..

……

……

……

……

21. Do you ever meet with the VHC member(s) and TBA(s) in the community to discuss issues relating to yaws control activities?

Yes

No.

If Yes, how often do you meet?.....

.....

.....

.....

If No, why?.....

22. What are some of the problems you face in the discharge of your duties as a VHV?.....

.....

.....

23. What do you understand by community participation?.....

.....

.....

.....

.....

24. What do you think can be done to improve community participation in your community?.....

.....

.....

.....

25. What do you like about the control of yaws (disease surveillance) ?.....

.....

.....

.....

.....

26. What do you dislike about the control of yaws (disease surveillance)?.....

.....

.....

.....

.....

27. What do you think is lacking in the control of yaws (disease surveillance)?.....

.....

.....

.....

.....

.....

.....

28. What role do you think you can play in the control of yaws (disease surveillance)?...

.....

.....

.....

.....

.....

.....

FOCUS GROUP DISCUSSION GUIDE FOR VILLAGE HEALTH COMMITTEE (VHC).

NUMBER.....

NAME OF COMMUNITY.....DATE.....

SECTION A. COMMUNITY PERCEPTION

1. What are the terms used in describing yaws in the community?
2. What is the community's belief about the cause and transmission of yaws?
3. What are people's attitudes towards yaws patients?
4. What do you do when one has yaws?
5. What is the family's role in the management of yaws?
6. Who manages yaws in the community and how is it managed?
7. What is the relative importance of yaws to schistosomiasis, malaria and onchocerciasis?
8. What do you like about the control of yaws? Why?
9. What do you dislike about the control of yaws? Why?
10. What do you think is lacking in the control yaws?

SECTION B. COMMUNITY PARTICIPATION

What do you understand by community participation?

A. NEEDS ASSESSMENT

1. How do you think the decision to train TBAs/ VHV and form VHC was taken?
2. Were you (communities) consulted for your opinions about the decisions to form these structures and train these functionaries?
3. To what extent were the communities' opinion consulted before the formation and training of these functionaries?

B. ORGANIZATION

1. What process was followed in selecting:
   a) VHC members?
   b) TBAs?
   c) VHVs?
2. How do you organize VHC meetings? Who organizes the meetings?[probe health professionals or community].
3. What is your role as VHC in the control of diseases (especially yaws)?

C. MANAGEMENT

i) Planning

1. Are you involved in the planning of yaws control activities (disease surveillance)?

ii) Implementation

2. What role do(es) the community (ies) play during yaws control activities (disease surveillance)?

iii) Monitoring/Evaluation

3. Are any of the community members involved in the supervision/monitoring? of the activities of TBAs, VHVs, VHC?
4 Do you discuss achievements and constraints of yaws control (disease surveillance) at your meetings?
5. Do you see yaws control as relevant to your community (ies)?
   If Yes, how? [Probe benefits of yaws control]
   If No, why?

D. RESOURCE MOBILIZATION

g) Who finances your meetings? (If the community(ies) is not financing now. Do you think you (the community(ies)) can finance your meetings?

ii) Could you briefly discuss the ways in which the community(ies) is/are supporting and/or contributing to the health service?

(Probe) communal labour
Providing food etc to health workers
Mobilizing community to utilize yaws control services
Contribute money
Provide shelter etc.

E. LEADERSHIP

i) Do you consult your community (ies) before/after VHC/TBA/VHV meetings?

ii) What has been the relationship between you and the rest of the
a) Community (ies)?
b) Health workers?

iii) What improvement/changes in health have been brought since the coming into being of
a) a VHV
b) a TBA(s)
c) the VHC

CHECKLIST (FOR VHC, VHVs & TBAs)

NUMBER.....

1. Sub-district: .....Name of community.....
2. Catchment area

   Number of communities.....

   Number of outreach centres.....

   Number of outreach services per month per community.....

   .....
3. Presence of unit committees/VHC

   Number of communities with unit committees.....

   - Number of communities with VHC.....

   Number of communities with VHVs.....

   Number of communities with TBAs.....
4. Functional VHC, VHVs, AND TBAs

Expected number of meetings/year	VHV	VHC	TBA
Number of meetings held 1998 1999 2000			
Meeting place clinic/outside clinic			
Meeting held regularly Yes/No			
Minutes book available (Yes/No)			
Minutes recorded (All, None, Some)			
Composition Males			

Females - Total			
Every community represented (Yes/No)			

5. Number of communities without:
   a) VHC
   b) VHV
   c) TBA
6. Attendance at meetings (last three meetings)
   a) VHC

      Meeting 1.....

      Meeting 2.....

      Meeting 3.....

INTERVIEW GUIDE FOR YAWS PATIENTS/CARE TAKERS OF YAWS PATIENTS.

1. What are the terms used in describing this condition (yaws)?
2. What is your belief about the cause and transmission of this disease (yaws)?
3. What are peoples attitude towards you?(Probe the family, playmates/schoolmates, community members)
4. What did your family /parents (caretaker) do when they detected you have this disease (yaws)?
5. What sort of treatment have you received (where did you go for treatment) since the disease was detected?

INDIVIDUAL DEPTH INTERVIEW GUIDE FOR TRADITIONAL HEALERS/SPIRITUAL HEALERS

1. What are the terms used in describing yaws in the community?
2. What is your belief about the cause and transmission of yaws?
3. What are people's attitudes towards yaws patients?
4. What do you do when one has yaws?
5. How do you manage yaws?
6. How can you together with orthodox health workers control yaws?

APPENDIX B. STRATIFICATION OF COMMUNITIES

STRATIFICATION CRITERIA:

- Presence of clinic (Clinic present / absent)
- Presence of VHC (Present / absent)
- Orientation of VHC (Trained / Untrained)
- State of roads to community (Good / Bad)
- Nearness of community to the Volta River (Inland / Bank)
- By population (Urban, periurban / rural)
- Reported cases of yaws

I) ATIMPOKU SUBDISTRICT

COMMUNITIES ON BANK		COMMUNITIES INLAND	
Trained VHC	**Untrained VHC**	**Trained VHC**	**Untrained VHC**
Senchi Ferry G	Atimpoku © U G	New Senchi © G	Ankyease B
South Senchi © G	Small London G	New Akrade G	Kpadom G
	Mami Water G		Tortibor B
	Ghanakpe G		Jeruselem G
	Glover G		Punpuni B
	Old Akrade G		Television* G
	Akosombo (H) U G		Anyamasu* B
	Dzidzokope G		
	Nyameben		

All communities have VHV and they are all trained.
© - Clinic present
G – Good road

B – Bad road
* - No go zone
U – Urban (the rest of the communities are rural)
H – Hospital

➢ Communities chosen

INLAND COMMUNITIES WITH TRAINED VHC

a) With clinic

- New Senchi

b) Without clinic

- New Akrade

INLAND COMMUNITIES WITH BAD ROAD

Ankyease

Tortibor

- Punpuni

INLAND COMMUNITIES WITH GOOD ROAD

- Kpadom

Jeruselem

COMMUNITIES ON BANK WITH TRAINED VHC

a) With clinic

- South Senchi

b) Without clinic

- Senchi Ferry

URBAN COMMUNITIES ON BANK WITHOUT VHC

- Atimpoku

Akosombo

RURAL COMMUNITIES ON BANK WITHOUT VHC

Small London

Mami Water

- Ghanakpe

Glover

Old Akrade

Dzidzokope

Nyameben

COMMUNITIES SELECTED.

- SENCHI FERRY
- SOUTH SENCHI

- GHANAKPE
- ATIMPOKU

- NEW SENCHI
- NEW AKRADE

- KPADOM

- PUNPUNI

II) ADJENA/GYAKITI SUBDISTRICT
PERIURBAN COMMUNITIES

a) WITH CLINIC

Adjena B

➢Gyakiti B

b) WITHOUT CLINIC

➢ Adumasa/Fiefie B

Anyaase B

RURAL COMMUNTIES

a) GYAKITI ZONE

INLAND COMMUNITIES	**COMMUNITIES ON BANK**
➢ Ganyor B	*a) Reported no yaws cases*
	Beposo B
	Konkodeka B
	➢ Survey-Line B
	Mpaproase B
	Kudikope B
	Awurahai B
	Dasaase B
	Kojo-kpo/Tankaskope/Kwametse/Kwame Della B
	b) Reported cases
	➢ Old Apaaso B

a) ADJENA ZONE

COMMUNITIES INLAND		COMMUNITIES ON BANK	
a) *Reported no yaws cases*		Mim	B
Pesse	B	Ponponya	B
Wawase	B	➢ Akwenor	B
Kwao Pown	B	Sedom	B
Adumochi	B		
Bisikrom/Akrobonsu/Oscar	B		
Awenor	B		
Yokuse	B		
➢ Manya Yoyim	B		
Dawatokro	B		
Oglobo	B		
Yeniamah	B		
Okwedom	B		
Odonnor	B		
Amatra	B		
b) Reported cases			
Sappor	B		
➢ Donor	B		

- ♦ All roads are very bad
- ♦ All VHC are not trained
- ♦ All VHV are trained
- ➢ Communities selected

COMMUNITIES SELECTED.

- GYAKITI
- ADUMASA/FIEFIE

- MANYA YOYIM
- DONOR
- AKWENOR

- GYANOR
- SURVEY-LINE
- OLD APAASO

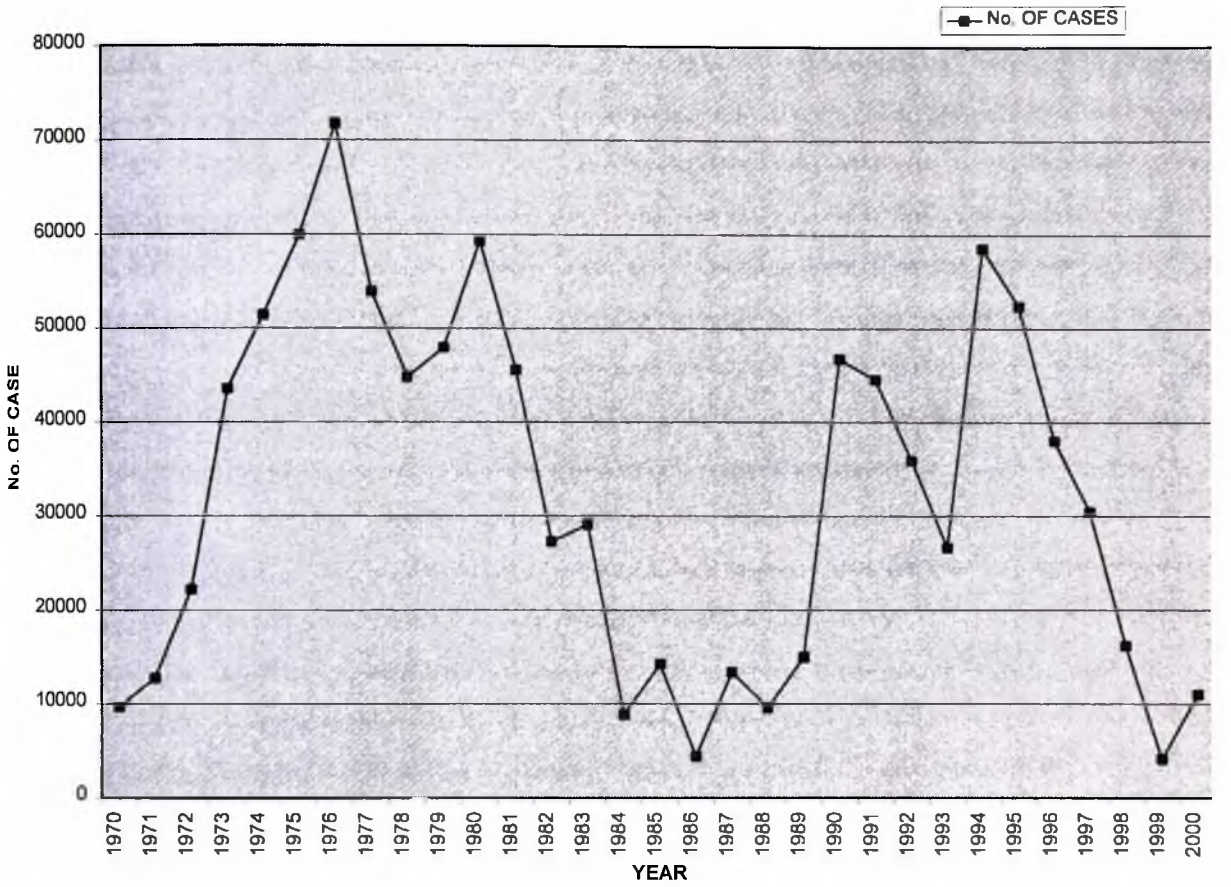
APPENDIX C. TABLES.

Table 1. Reported cases of yaws in Ghana 1970 – 2000

Year	No. of Cases	Source
1970	9676	Ashitey,1976
1971	12757	- do -
1972	22199	- do -
1973	43561	- do -
1974	51432	- do -
1975	59926	- do -
1976	71765	WHO(Ghana),1981
1977	53875	do -
1978	44836	- do -
1979	47944	- do -
1980	59317	NAT. YAWS CONT. P.2000
1981	45568	- do -
1982	27250	- do -
1983	29066	- do -
1984	8854	- do -
1985	14193	- do -
1986	4375	- do -
1987	13330	- do -
1988	9532	- do -
1989	14931	- do -
1990	46709	- do -
1991	44542	- do -
1992	35912	- do -
1993	26575	- do -
1994	58519	MOH(PHD),1994
1995	52398	MOH(PHD),1995
1996	38000	WHO(Ghana),1996
1997	30456	NAT. YAWS CONT.P. 2000
1998	16152	- do -
1999	4069	- do -
2000	10966	- do -

Source: Author's own compilation.

CHART 1. REPORTED CASES OF YAWS IN GHANA (1970 - 2000)



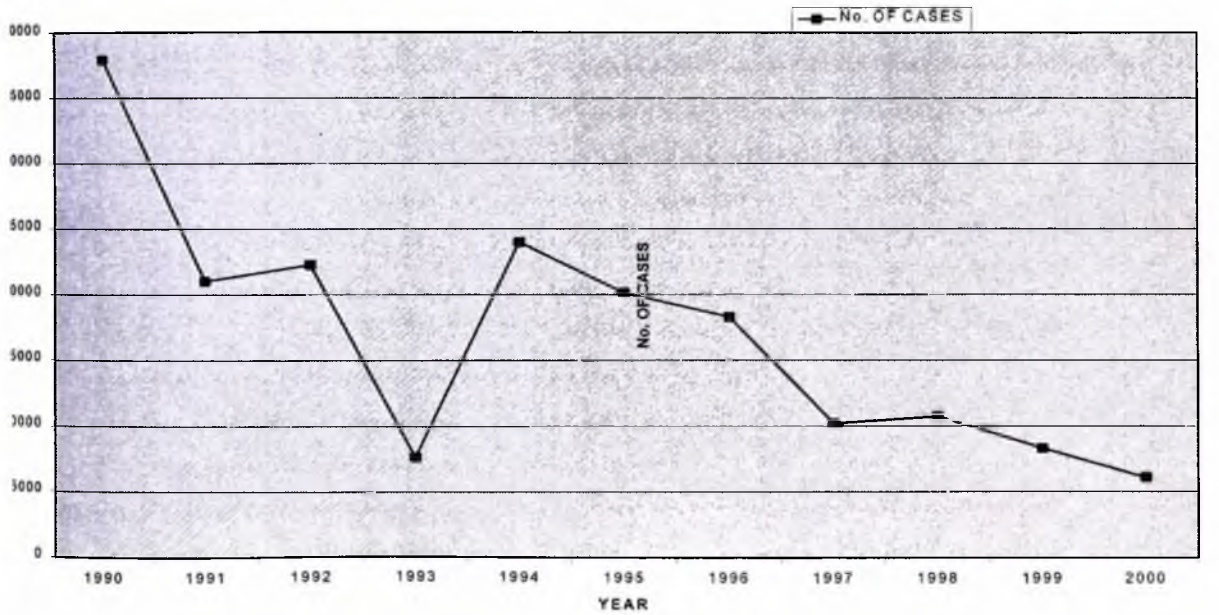
Source: Author's own.

Table 2. Reported cases of yaws in Eastern Region

Year	No. of Cases	Source
1990	337,881	MOH(E/R), 1992
1991	21,001	- do -
1992	22,261	-do-
1994	22,710	MOH(E/R), 1994
1995	20,092	MOH(PHD), 1995
1996	8,094	MOH(E/R),1996
1997	10173	MOH(E/R),1996
1998	10710	MOH(E/R),1996
1999	8281	MOH(E/R),1996
2000	6046	MOH(E/R),1996

Source: Author's own compilation

CHART 2. REPORTED CASES OF YAWS IN THE EASTERN REGION (1990 - 2000)



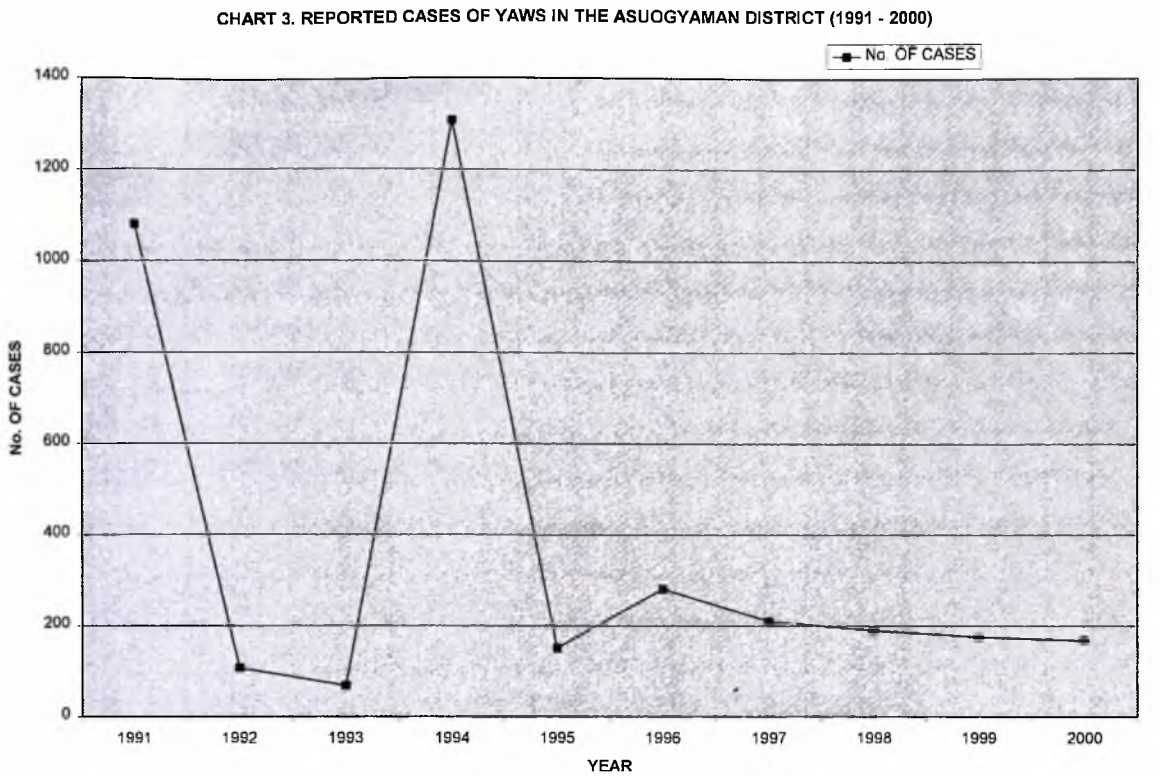


Table 3. Reported cases of yaws in the Asuogyaman District 1991-2000.

Year	No. of Cases	Source
1991	1080	DHA(Asuogy.),1991-2000
1992	108	- do -
1993	69	- do -
1994	1307	-do-
1995	151	-do-
1996	281	MOH(E/R), 1994
1997	210	DHA(Asuogy.),1999-2000
1998	190	-do-
1999	176	- do -
2000	168	- do -

Source: Author's own compilation

Table 4. Factors, variables and their definitions/indicators

FACTORS	VARIABLES	INDICATORS/DEFINITIONS
Community Perception	Knowledge Attitude Practices	Cause Transmission Prevention Treatment
Needs Assessment	i. Identification of the need for a) VHV b) VHC c) Trained TBA ii. Selection of a) VHC b)VHV b) TBA	i. Needs identified by Health professionals Community Both ii. Decision imposed on communities or not
Leadership	i) Mode of selecting VHV, VHC and TBAs. ii) Composition of the SDHT -Gender bias - All communities represented iii) SDHT's members/VHV/VHC representative of the communities/sub-districts.	i) Descriptive Imposed on the communities Not imposed (elected/volunteered) ii) Descriptive – Yes/No iii) Descriptive – Yes/No Level of consultation before and feedback after meetings. Supporting yaws control activities/VHV/VHC.
Organization	i) Mode of identification of the need for a) SDHT b) VHV c) VHC d) Trained TBA ii) Mode of selection of a) SDHT	i) SDHT/VHV/VHC/Trained TBA identified by health professionals communities Both ii) Descriptive : imposed on communities

	b) VHV c) VHC d) Trained TBA iii)Presence of unit committee/VHV/VHC iv) Organization of SDHT/VHV/VHC/TBA meetings v) Functional SDHT/VHV/VHC.	- not imposed on communities iii) Present or absent iv) Descriptive:- By health professionals By the VHV/VHC/Trained TBA themselves v) Regular meetings 4 or more meetings a year Good attendance (>70 %) Availability of minutes
Management	i. Planning of yaws control activities. ii. Implementation of yaws control iii. Monitoring/Evaluation of yaws control activities.	i. Communities involved or not and to what extent are they involved. ii. Same as (I) iii. Same as (I)
Resource mobilization	i. Mode of financing SDHT, TBA, VHV, VHC meetings ii. Community support to SDHT, TBA, VHV, and VHC members. iii. Community support to yaws control iv. Other contributions to healthcare in general.	i) Answer to who finances the meetings. ii) Descriptive:- Money Time Labour Others iii) Descriptive:- Money Time Labour Others iv) Descriptive.
Level of consultation	Duration/number of health education contacts by health personnel with communities	Descriptive/quantify
Importance of health service	Importance of yaws control	Descriptive Important Not important

Table 5. Ranking matrix for measuring extent of community participation in yaws control.

FACTOR	NARROW (NOTHING)+1	RESTRICTED (SMALL)+2	MEAN (FAIR)+3	OPEN (GOOD)+4	WIDE (VERY GOOD)+5
NEEDS ASSESSMENT	Professionally identified committees/organizations imposed on community	Dominating professional views. Community interests considered.	Community leader (e.g. chief, assemblyman) representing community views and assess needs.	Committees/opinion leaders representing the community and assess the needs.	Community members in general involved.
LEADERSHIP	Leaders are imposed. Do not represent the community's(ies) views	Committees/organizations not functioning or mildly active. Only few members are active and represent the committee/community's views	Committees/organizations very active but some communities are not represented. There is also gender bias.	Active committees well represented by most communities.	Committees/organizations fully represent variety of interest in community (ies). All communities represented.
MANAGEMENT	No active involvement of communities in planning, implementing monitoring and	Health staff manage independently with some involvement of committees in	Community plays active role in managing the yaws control program but decisions are	Co-management. There is partnership in planning, implementing, monitoring and	Self-management. Community (ies) is in control of planning,

	evaluation of the yaws control program in the district.	some aspects of management	imposed by health professionals.	evaluating the yaws control program	implementing, monitoring and evaluating the yaws control program.
ORGANIZATION	Committee/organization members imposed by planners/health professionals and are inactive.	Committees imposed by health professionals but became active.	Only committee leaders or some few individuals were involved in creating the committees or organization but are active.	Existing community organizations/entire community involved in creating the committees or organizations. Active but financially dependable.	Entire community involved in creating committees or organizations. Fully active and financially independent. Fully active and financially independent.
RESOURCE MOBILIZATION	No or meager resources raised by community. No support/ contribution of any form. No community mobilization/organization	No financial contribution. But contribute towards labour and social or community mobilization and organization. Provide no assistance to VHV, TBAs, VHC	Periodical fund raising by community (to support meetings, programs, TBAs, VHV, VHC etc) but don't control the expenditure. Organize periodic human resources to help the above groups.	Periodic fund (human resource) raising by the community. Committees control the use of funds.	Considerable amount of resources raised by community or otherwise to support health activities/to support TBAs, VHV, VHC. Committees allocate the money collected.

Table 6. Knowledge on the cause of yaws.

COMMUNITY	No. OF RESPONDENTS/PARTICIPANTS	POOR PERSONAL AND ENVIRONMENTAL HYGIENE.	OTHERS
AKWENOR	11	8	3
ADJENA DONOR	7	7	0
MANYA YOYIM	10	10	0
SURVEY- LINE	8	8	0
OLD APAASO	6	6	0
GANYOR	8	8	0
ADUMASA/FIEFIE	6	6	0
GYAKITI	9	9	0
ATIMPOKU	15	11	4
NEW AKRADE	10	8	2
NEW SENCHI	12	9	3
SENCHI FERRY	11	8	3
SOUTH SENCHI	11	8	3
GHANAKPE	12	7	5
KPADOM	6	2	4
PUNPUNI	11	6	5
TOTAL	**153**	**121 (79.1%)**	**32 (20.9%)**

Table 7. Knowledge on the transmission of yaws

COMMUNITY	No. OF RESPONSES	TOTAL		
		DIRECT CONTACT	USE OF COMMON SPONGE, TOWEL, CLOTHING ETC	OTHERS
AKWENOR	7	1	5	2
ADJENA DONOR	8	4	4	0
MANYA YOYIM	9	5	4	0
SURVEY- LINE	8	4	4	0
OLD APAASO	8	4	4	0
GANYOR	10	5	4	1
ADUMASA/FIEFIE	4	4	0	0
GYAKITI	4	1	3	0
ATIMPOKU	6	3	0	3
NEW AKRADE	7	2	5	0
NEW SENCHI	3	0	3	0
SENCHI FERRY	3	0	3	0
SOUTH SENCHI	2	0	1	1
GHANAKPE	3	0	0	3
KPADOM	6	0	1	5
PUNPUNI	6	0	0	6
TOTAL	**95**	**33 (34.7%)**	**41 (43.2%)**	**21 (22.1%)**

Table 8. Knowledge on the prevention of yaws

COMMUNITY	No. OF RESPONSES	TOTAL			
		OBSERVATION OF GOOD PERSONAL AND ENVIRONMENTAL HYGIENE AND SANITATION.	AVOID DIRECT CONTACT WITH LESIONS OF INFECTED PATIENT.	HEALTH EDUCATION	OTHERS
AKWENOR	10	3	6	0	1
ADJENA DONOR	6	4	0	2	0
MANYA YOYIM	10	5	2	3	0
SURVEY- LINE	8	4	3	0	1
OLD APAASO	8	4	3	1	0
GANYOR	10	4	4	2	0
ADUMASA/FIEFIE	11	3	3	5	0
GYAKITI	11	5	5	1	0
ATIMPOKU	4	3	1	0	0
NEW AKRADE	7	4	3	0	0
NEW SENCHI	4	3	0	1	0
SENCHI FERRY	6	4	1	1	0
SOUTH SENCHI	3	3	0	0	0
GHANAKPE	3	3	0	0	0
KPADOM	3	3	0	0	0
PUNPUNI	4	4	0	0	0
TOTAL	**108**	**59 (54.6%)**	**31 (28.7%)**	**16 (14.8%)**	**2 (1.9%)**

Table 9. Practice/treatment of yaws in the community.

COMMUNITY	No. OF RESPONDENTS	SPONGING OF LESION + DRESSING WITH 'BLUESTONE' (COPPER SULPHATE)	TREATMENT AT HOSPITAL.	OTHERS	NO IDEA
AKWENOR	11	7	0	2	2
ADJENA DONOR	7	2	4	1	0
MANYA YOYIM	10	3	6	1	0
SURVEY- LINE	8	1	4	1	0
OLD APAASO	6	1	0	5	0
GANYOR	8	2	3	3	0
ADUMASA/FIEFIE	6	2	4	0	0
GYAKITI	9	4	4	1	0
ATIMPOKU	15	0	11	0	4
NEW AKRADE	10	0	9	1	0
NEW SENCHI	11	2	5	4	1
SENCHI FERRY	11	3	5	3	0
SOUTH SENCHI	10	2	3	5	1
GHANAKPE	10	0	3	7	2
KPADOM	6	0	1	5	0
PUNPUNI	10	2	1	7	1
TOTAL	**153**	**31 (20.26%)**	**63 (41.18%)**	**48 (31.37%)**	**11 (7.19%)**

Table 10. Attitude towards yaws patients

COMMUNITY	No. OF RESPONSES	SEPARATION OF PATIENTS	INTERACTION WITH OTHERS	
			NORMAL/EASILY	NOT EASILY
AKWENOR	12	6	0	6
ADJENA DONOR	7	3	0	4
MANYA YOYIM	2	2	0	0
SURVEY- LINE	7	2	3	2
OLD APAASO	8	4	0	4
GANYOR	9	4	0	5
ADUMASA/FIEFIE	7	3	1	3
GYAKITI	10	5	0	5
ATIMPOKU	3	0	2	1
NEW AKRADE	6	1	3	2
NEW SENCHI	5	2	3	0
SENCHI FERRY	6	0	6	0
SOUTH SENCHI	7	2	3	2
GHANAKPE	0	0	0	0
KPADOM	7	1	1	5
PUNPUNI	2	0	1	1
TOTAL	**98**	**35 (35.7%)**	**23 (23.5%)**	**40 (40.8%)**

Table 11. Suggestions by level B health workers to improve community participation

SUGGESTION	TOTAL	PERCENTAGE, %
HEALTH EDUCATION	16	**30.77**
FREE TREATMENT	11	**21.15**
TRAINING OF VHV, VHC & TBAs	6	**11.54**
INCENTIVES TO VHV, VHC & TBAs	5	**9.61**
NEARNESS OF TREATMENT CENTRE	2	**3.85**
HEALTHY RELATIONSHIP BETWEEN HEALTH WORKERS AND COMMUNITIES	5	**9.61**
FREQUENT INTERACTIONS BETWEEN HEALTH WORKERS AND COMMUNITIES	3	**5.77**
PROMPT RESPONSE TO REPORTS BY COMMUNITY	2	**3.85**
TREATMENT DURING HOME VISITS	2	**3.85**
TOTAL	**52**	**100**

Table 12. Suggestions by community respondents to improve community participation in the control of yaws.

SUGGESTION	TOTAL	PERCENTAGE (%)
HEALTH EDUCATION ON YAWS	48	27.4
HEALTHY RELATIONSHIP BETWEEN HEALTH WORKERS AND COMMUNITIES	10	5.7
FREQUENT INTERACTION BETWEEN HEALTH WORKERS AND THE COMMUNITIES	11	6.2
AVAILABILITY OF DRUGS	30	17.1
INCENTIVES TO COMMUNITY HEALTH STRUCTURES – VHV, VHC & TBAs	3	1.7
FREE TREATMENT	15	8.6
PROMPT RESPONSE TO REPORTS MADE BY COMMUNITIES TO HEALTH AUTHORITIES	7	4
TRAINING OF VHV, VHC ON YAWS	3	1.7
NEARNESS OF HEALTH SERVICES (TREATMENT CENTRE, etc)	21	12
RECOGNITION OF VHC BY HEALTH WORKERS	1	0.6
PRESENCE OF COMMUNITY HEALTH STRUCTURES- VHV, VHC & TBA	15	8.6
HOUSE-TO-HOUSE TREATMENT (TREATMENT DURING HOME VISITING BY CHN)	14	8
TOTAL	**175**	**100**