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FACTORS CONTRIBUTING TO LOW TUBERCULOSIS CASE DETECTION RATE IN EJISU-JUABEN DISTRICT

BY

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A DISSERTATION

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DECLARATION

I hereby declare that this dissertation was prepared by me under supervision and submitted as part of the requirements for the Masters in Public Health Degree of the School of Public Health, University of Ghana. Legon.

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DEDICATIONS

I dedicate this work to Mark and the kids

Suzzie, Tracy, and Sharon

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List of Abbreviations

1. AFB	Acid Fast Bacilli
2. CBSV	Community Based Surveillance Volunteer
3. CDC	Center for Disease Control
4. DDHS	District Director Of Health Services
5. DDHS	District Director of Health Services
6. DHA	District Health Administration
7. DHMT	District Health Management Team
8. DOTS	Directly Observed Treatment, Short Course
9. FGD	Focus Group Discussion
10. HIV	Human Immunodeficiency Virus
11. IEC	Information Education Communication
12. KAP	Knowledge Attitude Practices
13. MOH	Ministry Of Health
14. MSLC	Middle School Leaving Certificate
15. NTP	National Tuberculosis Programme
16. OPD	Outpatient Department
17. PHC	Primary Health Care
18. RCH	Reproductive And Child Health
19. RTI	Respiratory Tract Infection
20. SDHT	Sub district Health Team
21. TB	Tuberculosis
22. TB/HIV	TB and HIV Co-infection
23. VHC	Village Health Committee
24. WHO	World Health Organization

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ABSTRACT

Tuberculosis (TB) remains a disease of serious public health consequence in Ejisu-Juaben District. TB case detection has remained low in the district, despite the implementation of the National Tuberculosis Programme (NTP) services through the primary health care infrastructure since 1994.

This study therefore sets out to find the factors leading to low TB case detection rate in Ejisu-Juaben district.

The specific objectives were;

1. To identify community related factors contributing to low TB case detection rate.
2. To identify service related factors contributing to low TB case detection rate.
3. To make recommendations for improving TB case detection in Ejisu-Juaben district.

The study was a cross- sectional descriptive study conducted in July 2003.

Quantitative information was obtained through a review of medical records, questionnaire administration to 38 TB patients and 28 prescribers from government, mission, and private institutions in the district. Qualitative data were obtained through in depth interviews with four health managers and two unorthodox practitioners. Data were also obtained from seven focus group discussions (FGDs) conducted in three communities. Participants for FGDs included opinion leaders, TB patients, VHC members, and middle-aged women. - Caregivers.

Out of 38 respondents, (94.7%) agreed TB was a disease. Most of the TB patients 92.1 % and majority of participants in FGDs know that the main symptom of TB was persistent cough. Majority of respondents (52.4%) and most participants from the FGDS do not seek medical care from orthodox practitioners. Many factors, including the strong stigma associated with the disease, make many sufferers seek medical care from unorthodox sources such as such as chemical sellers, quack doctors, traditional and faith healers and private medical practitioners. Despite this state of affairs, there is lack of collaboration among government institutions, private institutions, mission institutions, and unorthodox health providers.

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Another important finding is that many community members were not aware that treatment of TB was free.

Practices of health prescribers leave much to be desired. Out of 282 cards reviewed with respiratory tract infection, 216 (76.6%) could not be analyzed because of lack of adequate information due to poor history taking practices.

From the study, factors found to be associated with low TB case detection in the district include, practices of health seeking behaviour of the people, lack of collaboration among government institutions, private institutions, mission institutions, traditional healers and community members.

In order to increase case detection in the district, the problems in these important areas need to be addressed by all key stakeholders.

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Chapter One: Introduction

Background Information

Tuberculosis (TB) is a very old disease known to communities of early ages. Skeletal remains dating back to Neolithic, pre-Columbian and old kingdom Egyptian persons show evidence of the disease. [1]

In 1993,the World Health Organization (WHO) declared TB a global emergency because of the magnitude of the disease and its potential threat to health. [2] The WHO reports for 1995 and 2001 showed that one third of the world population is infected with the tubercle bacilli and 9 million new tuberculosis cases occur yearly in developing countries. It is estimated that between the years 2000 and 2020, nearly one billion people will be newly infected and 200 million will get sick of which three million will die annually.

Ninety-eight percent of the world's TB deaths occur in developing countries. Statistics show that 75% of people affected by the disease are in the economically productive age group of 15-50 years in developing countries. [3] Tuberculosis is responsible for 18.5% of all deaths of adults of this age group. It is estimated that world-wide, nearly two billion people are infected with TB, 16 million are HIV infected and five to six million are dually infected. Of the dually infected population 70% live in sub-Saharan Africa, 20% in Asia, and 8% in Latin America the risk of developing TB is about 50%. [4] TB is the most important opportunistic disease observed among HIV infected people and because 80% of HIV/AIDS patients are in Africa, it is very common, transmissible to everyone and life threatening. Tackling TB means tackling HIV as the most potent force driving the TB epidemic.

In Ghana, a study done in 1981 by The Ministry of Health (MOH) as quoted in the National Tuberculosis Manual, described TB as the most common cause of losing healthy days of life due to premature deaths in Ghana. Estimates made suggested 20,000 cases and 10,000 deaths annually were due to TB. Consequently, in 1994, the National Tuberculosis Programme (NTP) was launched with the aim of

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reducing the transmission of the disease until it no longer became a public health problem. [4] Specifically by increasing the level of case finding from 36% of the total estimated incidence of smear-positive cases to at least 70% and cure rate of 85% by the end of 2005. A 70% case detection and 85% cure rate reduces TB incidence, prevalence, rate of transmission and there is less acquired drug resistance. [5]

The objective of the NTP is to reduce mortality, morbidity, TB transmission, and prevent drug resistance. The program is countrywide, adapted to people 's needs, and free. The main strategy adopted for TB control in Ghana is based on the application of the Directly Observed Treatment Short Course Chemotherapy (DOTS) as per World Health Organization (WHO) recommendation initiated in 1994. The DOTS strategy has the following characteristics:

- Political commitment ensuring adequate funding
- Education for people with TB and their communities
- Reliable case detection using sputum smear microscopy to identify people with active TB
- Standardised short course treatment for all people with smear positive TB for six to eight months
- Direct observation and support for people taking drug treatment
- A regular and reliable supply of free drugs
- Accurate record keeping to identify people who do not complete treatment
- Effective monitoring both of people who are receiving treatment and of the performance of the DOTS programme as a whole [3]

The basis of a TB control programme is case finding and treatment but accurate case detection is the priority of the DOTS strategy because efforts to stop TB depends on the ability to detect patients early enough to institute curative therapy and interrupt the cycle of transmission. The consequences of low case finding is transmission of the disease to many more people since the period of infectivity is usually prolonged and a patient may infect 10-20 people every year.

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Chapter Two: Problem Statement

2.1 Global

In March 2000, Ministers of Health and Finance from countries that have 80% of the world's TB cases met in Amsterdam and issued the Amsterdam Declaration. It stated that action against TB should be accelerated through expansion of coverage of population with the WHO recommended strategy to combat TB by achieving a case detection rate of at least 70% by the year 2005 through Directly Observed Treatment short course.

Since 1994, DOTS programmes have been reporting an average of 133,000 additional smear positive cases each year worldwide. The global case detection rate for 2002 was 40%. To reach the global target of 70% case detection by 2005, Nations need to find 330,000 extra smear-positive cases annually. To achieve this, national TB control programmes must collectively find a way to recruit patients from among the 60% that are not detected [(6)]

In most countries, case detection is below 50%. In Ghana for instance, case detection for 2001 was 36% but for effective TB control, case detection should be at least 70%. [(5)]

2.2 Ghana

According to WHO, the point prevalence of TB, i.e. the proportion of persons with a disease or condition in a population at a single point in time is 0.2%. Therefore, a prevalence rate of 281 per 100,000 cases is expected annually. With an estimated population of 18,800,000 in Ghana in year 2000, 52,828 cases are expected annually.

The total number of new cases notified has gradually increased from 1,935 in 1984, 8251 in 1996,10,995 in 1997 to 11,838 in 2001. This corresponds to a notification rate of 62 cases per100, 000 population in 1984, 1997 and 61 cases per 100,000 population in 2001compared to the expected incidence of 281 per

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100,000. This means that the case detection coverage in 2001 was about 40%, which is low compared to the set target of 70%. [6]

2.2 Ejisu- Juaben District

Similarly, for any given district it is expected that 0.2% of the population would become new cases every year. Consequently, Ejisu-Juaben district with a population of 130,721 in 2002 was expected to have 261 new cases. Table 1 shows the trend of reported cases in Ejisu- Juaben District from 1998-2002

Table 1: Trend of TB Cases Reported in Ejisu-Juaben District

	Year 1998	Year 1999	Year 2000	Year 2001	Year 2002
Population	137,165	141,425	124,113	127,464	130,721
Expected number of cases	274	283	248	254	261
Observed number of cases	33	44	47	67	72
Case detection rate	12%	15.5%	19.0%	36.4%	27.6%

As evident in table 1, case detection over the last five years in Ejisu-Juaben has been low between 12% and 36.4% compared with the national rate of 40%. The District Health Director of Health Services (DDHS) expressed concerns about the low TB case detection and hypothesized that the cases in the communities are either not reporting to the health facilities or the cases are not being detected at the facilities. *

This study therefore seeks to answer the following question;

Why are TB cases not being detected in Ejisu-Juaben District?

* The 1998 and 1999 population figures were projected from the 1984 census figure. [7] The 2001 and 2002 figures were projected from the 2000 census population figure at 2.7% growth rate.

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2.3 Rationale

The rationale for this study is to gain a deeper understanding of the reasons for persistently low TB case detection rates in Ejisu-Juaben District. Generalizing from this, the study is to develop recommendations for strengthening the District TB Programme to effectively combat tuberculosis.

2.4 Main Objective

The objective of the study is to determine the factors leading to low TB case detection in Ejisu-Juaben district and make appropriate recommendations.

2.5 Specific Objectives

1. To identify community related factors contributing to the low TB case detection rate in the district.
2. To identify service related factors contributing to low TB case detection rate in the district.
3. To make recommendations for improving TB case detection in Ejisu-Juaben.

2.6 Dependent Variables

2.6.1 Community related factors

Knowledge Attitude and Practices (KAP) of community members regarding TB: The knowledge attitude and practices of the community members is very important in informing the health seeking behavior of patients thus may contribute to an increase in case detection. This variable is measured using the following indicators:

- Knowledge of signs and symptoms of TB
- Causes of TB
- Attitude towards TB patients

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- Treatment or cure for TB
- Availability of services

Access to TB services: This took into consideration the geographical and financial accessibility. Geographical accessibility is defined as the distance of clients from service points. The distance of the client to the delivery point is very important in accessing health care. The client could be motivated to seek help but may not be able to due to the distance that needs traveling. This variable is measured in terms of travel cost and time. These indicators were assessed through a combination of questionnare and focus group discussions.

2.6.2. Service related factors

Health Providers' Knowledge: This variable measured the knowledge of the health providers in detecting TB cases. The knowledge is measured in terms of the following indicators, which are derived from the National TB programme manual

- Comprehensive medical history (weight loss, night sweats, cough for three weeks or more, loss of appetite)
- Client education (signs of TB, causes of TB, need to seek treatment)

These indicators were measured through a combination of techniques such as interviews with service providers and record reviews.

Health facility's readiness to detect TB cases: The knowledge alone is not sufficient to improve case detection. The overall clinic environment needs to be ready to offer services. The definition of clinics readiness is defined in terms of the following indicators:

- Equipment and supply (sputum containers, slides, TB forms, microscope)

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- References, registers, form
- Behavioral Change Communication materials
- Supervisory and management systems
- Opening hour

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Chapter Three: Literature Review

Tuberculosis (TB) is an infectious disease caused by mycobacterium tuberculosis and occasionally by mycobacterium bovis and mycobacterium africanum, the latter is mostly seen in West Africa. TB is an airborne disease transmitted from person to person by droplet infection through sneezing, coughing, and spitting. The bovine type is transmitted mostly through drinking of unpasteurised milk from infected cow. The disease can affect almost every organ of the body but over 85% of the cases are present in the lungs. The clinical manifestation depends on the organ affected and some general symptoms.

In 1882, Robert Koch reported the discovery of the causative agent. [8] In 1885, Ehrlich developed the acid-fast staining method for identifying the bacilli in specimen and Roentgen discovered the x-rays in 1895 and in the 1940s, scientists discovered the first several drugs now used for TB treatment. All these made possible, facilitated early, and diagnosis that is more accurate. Despite all the advancement, case detection and cure rate for TB is very low.

In 1991, the Government of Ghana recognized the poor TB situation in the country and concluded that important measures were required to rectify it. In 1992, National TB Control programme was designed and DANIDA was approached for financial support. In November1993, DANIDA and the Government of Ghana signed an agreement based on a Project Document and the programme implementation started in 1994. [4,5]

Some factors that several studies have indicated could account for low case detection rate include:

- Poverty
- Beliefs and Health Seeking Behaviour
- Stigma And Ignorance

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- Working Hour Of Health Staff
- Distance To Treatment Centers
- Inadequate Provider Competence
- Lack of Private Sector Participation
- Lack of Patients Participation
- Lack of Community Participation

3.1 Poverty

More people live below the poverty line in developing countries. These poor people are unable to afford adequate nutrition, there is overcrowding and inadequate housing systems that prevents good ventilation in the homes. They are also unable to afford health service cost and therefore report to hospital late. Even though anti tuberculosis drugs are given free to the patients in most countries, patients still need some economic support to enable then obtain these free drugs. In Ghana Van der Werf, 1991 found that travel cost to the treatment center was a hindrance to case detection and treatment completion. This is because patients provide the money for transport. These result in delay of diagnosis and continuous infection of the community [(3)]

3.2 Beliefs and Health Seeking Behaviour

Health seeking behaviour of clients greatly affects case detection. In Kenya, one study done showed that many beliefs concerning the causes of TB and health-seeking behaviour greatly affects case detection. TB treatment is considered long and difficult, so health-seeking behaviour was put off for several months to a year. Prolonged self – treatment and consultation with traditional healers increases a patients' delay in seeking treatment. The community's attitude towards TB was to avoid patients and their families.

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3.3 Stigma and Ignorance

Stigma is a contributing factor to case detection. Different perceptions exist in the community about TB. In a study done in Kenya, it was found that the community perception of TB was that of a painful and difficult disease to treat. Because it is contagious, patients and their families were avoided. [9]

In another study in Pakistan, TB was perceived to be hereditary where stigma posses a real threat to women with TB for losing economic productivity, risking divorce or reduced chance of marriage as well as passing it on as a legacy to her children. Other studies done in Bangladesh, revealed that, women preferred consulting local healers whom they say maintain patient confidentiality than health workers. Again in the Philippines, TB patients will only accept they have weak lungs disease not TB. In Uganda and Zambia, the fear of being infected from a TB patient is so high that patients are isolated; they eat and drink alone and when a patient dies, all the patient's belongings and clothes are buried with the patient. [10]

The stigma associated with TB and HIV/AIDS forms a synergism that makes it difficult for people suspected of suffering from TB to come for early diagnosis and treatment. They therefore stay in the communities and each year with a smear positive patient not on treatment, 10-15 persons are infected. This increases the pool of infected people and potential patients.

3.4 Working Hour of Health Staff

Working hour of health staff is implicated in low case detection in certain communities. Some patients avoiding identification as TB patients by their communities will prefer especially early hours treatment. In farming communities, studies showed that patients will prefer early treatment to enable them go to their field and work.

In Ethiopia and San Francisco studies done to find reasons for low case detection, showed that patients referred to inconvenient working hours and place.

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3.5 Distance to Treatment Centers

Geographical accessibility was defined as living within one-hour travel or five kilometer radius from the health facility. Since case detection is passive, patients are supposed to come to the health centers for diagnosis and treatment. This could be a problem for those who cannot get the means or are not well enough to walk the distance, so they would shop around for alternative medicine. It is important to involve the community in the networking. Direct observation of swallowing medication can be delegated to responsible community members.

Studies done in Bangladesh, Malawi, Maldives, Philippines, Nepal, Thailand, Haiti, Ethiopia and South Africa indicate that providing the option of community DOTS can contribute to NTP activities in ways which are effective, cost-effective affordable and acceptable, under the conditions in developing countries. [11]

3.6 Inadequate Provider Competence

Despite the WHO Standardised guidelines for diagnosis and treatment, some health personnel do not update themselves and hence do not send patients with respiratory symptoms for sputum microscopy early leading to late diagnosis thereby increasing the number of patients chronically excreting the bacilli, enhancing the transmission pool of infectious cases. [12]

3.7 Lack of Private Sector Participation

The TB Control programme targets of 70% case detection and 85% cure rates cannot be achieved if the private sector is left out of the programme.

Several studies done in India and other places indicate that private health providers have considerable role to play in improving TB case detection and treatment. Fifty percent of TB diagnosis is done in private institutions. [12,13,] They should therefore be encouraged to notify cases, follow the national guidelines on case management and report treatment outcomes.

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3.8 Lack of Patients Participation

In Ethiopia, to increase case detection, TB clubs were formed. The organization of patients into the clubs lead to patients maintaining friendly ties among themselves and continuing TB club activities even when they had finished their treatment. They develop anti-TB associations that meet once a week to support each other, refer patients to clinic for investigation and link other members of the community for help and support. With the increase in the number of the TB clubs, case detection increased from 181 per 100,000 in 1997 to 218 per 100,000 in 1999. [(9))]

In Myanmar, to strengthen case detection, peers are mobilized to promote seeking care. Individual treatment cards include a photograph of the patient at the beginning and completion of the treatment. The photographs serve as proof of the success of the treatment so it is used as a social mobilization tool to encourage other patients to seek treatment. [(14)]

In Maldives and Bangladesh, cured TB patients act as mobilizers. They educate and persuade people with TB to get treatment and convincing sick people about the effectiveness of DOTS treatment. By talking about their experience, cured TB patients help to reduce the stigma and discrimination associated with TB. [(14)]

3.9 Lack of Community Participation in TB Programmes

Studies done in many countries have shown that community involvement is essential for a successful DOTS programme. DOTS committees are formed which serve as link between health services and local communities. The committees include people with TB, health service managers, civic leaders, and representatives of local organization. These committees help in increasing the publics' awareness about TB in the community through advocacy and education. They identify patients in the communities and refer them to the health centers for diagnosis. They also supervise patients on treatment, identify local problems in DOTS implementation, and propose solutions at community level. [(15)]

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In Nepal, community based DOTS programmes provide opportunity for health services to become more patient friendly. Specific locations for TB patients have been created for them to obtain their treatment and share their problems thereby reducing feelings of isolation and stigma.

In South Africa (Hlabisa), a study done showed that traditional healers were highly acceptable among patients as TB supporters because of proximity, short waiting time and confidentiality. Their involvement in TB cares significantly enhanced case finding. These traditional healers are organized into associations that facilitate case detection and treatment by referring patients with respiratory symptoms and observing those undergoing treatment. [16]

In Malawi, one study showed that over 40% of smear-positive TB patients spent at least one month with a traditional healer before seeking orthodox medical care. Because of this finding, the NTP has trained over 3000 traditional healers in 15 districts to assist in case detection, treatment, and supervision. [6]

In the Maldives, it was realized that community education is the key to motivating people with TB to go for treatment. In view of this, talk shows are conducted on the radio and television and workshops on TB are held for school children. On World TB Days, school children write about TB in the country's newspapers. [14]

In Kampala Uganda, evaluation of the AIDS support organization to decentralized TB care, it was realized that TB case detection increased from 269 per 100,000 in 1997, 352 in 1998, and 381 in 1999. [17]

In Kiboga Uganda, parish development committee is used to support TB patients on treatment, educating the congregation about TB and referring patients to health facilities. This also increased the case detection rate. [9]

In Machakos Kenya, limited accessibility to care, high case load and poor TB performance led to the use of Primary Health Care (PHC) volunteers and community –based distributors of contraceptives as educators in the communities about symptoms of TB. In Viet Nam, Cuba, Malaysia, The Maldives, Peru, and Nicaragua, the WHO target of 70% case detection was met in 2000 because of community participation. [13]

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In Ghana, Joe Haizel observed that stigma, ignorance, difficulty in accessing health facilities and lack of commitment to TB programmes in most regions and districts contribute to low case detection. [18]

In all the countries, community based care are effective, feasible affordable and more cost –effective than previous systems based on health facilities. Extension of treatment beyond hospital wards and clinics has the advantage of abolishing the mystery surrounding the disease in the eyes of those who are hesitating to seek advice and therefore lead to their being more rapidly diagnosed and cured.

From the above literature review, it is appreciated that there are identified factors, which affect case detection of TB. Increasing case detection to 70% will reduce the incidence and prevalence of TB and reduce acquired drug resistance. Research to improve case detection is a cardinal point to TB control. There is the need to find all cases of TB and treat them to enhance the control activities.

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Chapter Four: Methodology

4.1 Study Area

Ejisu-Juaben District is one of the eighteen Administrative Districts in the Ashanti Region. With an annual growth rate of 2.7%, the district has a projected census population of 124,113 for the year 2001. The district is located in the southeastern part of the Region and shares boundaries with Kwabre, Afigya-Sekyere, Sekyere East and West Districts to the North, Asante Akim North and South Districts to the East, Bosomtwe-Atwima-Kwanwoma District to the South and Kumasi to the West. The distance from North to South and from East to West is approximately 56km and 25 km respectively. The total land area is 1,635sq.km.

4.1.1 Demography

The district, which has 76 communities, is divided into 5 sub districts namely: Achiase, Bomfa, Ejisu, Juaben, Kwaso.

Table 2: Sub District Population for Specific Groups

Sub-district	Achiase	Bomfa	Ejisu	Juaben	Kwaso	Total
Population	12411	18617	43440	22340	27305	124113
0-11mths	246	744	1737	893	1092	4965
Under 5	2482	3723	8688	4468	5461	24824
WIFA	2482	3723	8688	4468	5461	24823

4.1.2 District Health Delivery System

The district health system is based on a 3-tier Primary Health Care. These are the district, the sub-district, and the community. The activities at the district level are run by the DHMT while the Sub-District Health

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Team (SDHT) oversees health activities in the sub-district. The Village Health Committee (VHC) manages the community level. There is also a community volunteer network for surveillance activities.

District Hospital

The Juaben government Hospital is the district hospital and the referral hospital in the district. A Senior Medical Officer mans it. There is 1 Medical Assistant, 1 pharmacist, and 18 nurses among others. The services rendered here are curative (medical, surgical, and obstetric) and other emergency services as well as laboratory services. There is a public health unit where health prevention and promotion are undertaken. Trained medical assistants who also undertake basic curative and preventive services as well as disease surveillance man the health centers. Table 3 shows the health staff distribution in the district.

Table 3: Health Staff Distribution in the District

Category	DHA	Achiase	Bomfa	Ejisu	Juaben	Kwaso	Total
Doctors	1	0	0	0	1	0	2
Pharmacist	0	0	0	0	1	0	1
Med. Assistants	0	1	0	1	1	2	5
Nurses/Midwives	0	1	1	5	45	3	55
Public/Community Health Nurses	1	2	3	6	4	3	19
Dispensary Technician/ Principal	0	0	1	2	3	1	7
Lab. Technologist/technician	0	0	0	1	2	0	3
Ward Asst./Maids	0	4	4	5	7	4	24
Technical Officers (Nut. / Epidemiology)	3	0	1	0	0	1	5
Other Staff	11	3	3	4	6	3	30
Total	13	11	13	24	69	15	143

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Table 4: Health Providers and Facilities in the District

1	District Hospital	-	Juaben
4	Health Centers	-	Achiase
			Bomfa
			Kwaso
			•Ejisu
3	RCH Clinics	-	Apromase (under Ejisu)
			Tikrom (under Ejisu)
			Peminase (under Achiase)
5	Mission Clinics		Onwe S D A
			Boamadumasi-Presbyterian
			Donyina-St.Anne's Catholic
			EP Clinic Krapa
11	Private Clinics/Midwives		Hwereso
1	Homeopathic clinic		Juaben

• To be upgraded to a hospital

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4.2 Study Design

The study was a descriptive cross-sectional one to assess the factors leading to low TB case detection in Ejisu-Juaben district.

4.2.1 Techniques

Both primary and secondary data collection techniques were used. Primary data collection techniques used were questionnaire administration, focus group discussions, and interviews. Secondary data collection involved the review of facility records.

4.2.2 Tools

The main research instruments were semi-structured questionnaires, in- depth interview, focus group discussion guides, and checklists. Review of hospital and facility records was also used.

The principal investigator interviewed all prescribers who were at post during the data collection period and were not taking part in a three-day TB workshop that was organized during the data collection period in the district to determine the health providers' knowledge of the National TB programme. Twenty-four prescribers took part in the workshop so were excluded from the study.

In depth, interviews were conducted with two unorthodox prescribers in the district. The facility records were reviewed to determine the knowledge of providers in terms of case detection. Information was obtained from the record department of Juaben hospital, Ejisu, and Kwaso health centers.

4.3 Study Target Population

The target populations of the study were:

- TB patients
- Service providers (orthodox and others)
- Community members
- Facilities in the district that provide TB services

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4.4 Sampling Procedure

There are twenty-seven (27) facilities offering TB (case detection) services in the district. They are distributed in the five sub districts (Table 4)

These facilities comprise eight government facilities, five mission clinics, eleven private clinics, and one homeopathic clinic.

TB Patients

All TB patients seeking services in all treatment health facilities in the district within a period of two weeks were selected for questionnaire administration. The number of patients taking daily treatment at the various health facilities was very few so patients who could be traced were visited at home and questionnaire administered after seeking consent. In all, there were 38 respondents. Eight TB patients were conveniently selected from the respondents for a focus group discussion.

Service Providers

All prescribers in the facilities offering case detection service in the district who were at post during the data collection period were part of the study. They include orthodox and unorthodox prescribers. In addition, The District TB Counselor, District Disease Control Officer, and prescribers including nurses, doctors, medical assistants, and the DDHS were part of the study. In all 34 health personnel participated.

Community Members

A multi-stage sampling was done to select community members for six focus group discussions.

Three sub districts namely Ejisu, Juaben, and Kwaso were selected at random from the five sub districts and a community each randomly selected from a sub district. Kwaso community was selected from the thirteen communities in Kwaso sub district. Akyawkrom was selected from twenty-nine communities in

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Ejisu sub district and Dumakwai from twenty-one communities in Juaben sub district. Community members were purposively selected to include: Opinion leaders, family heads, traditional healers, and women aged between 25-49 years.

Facility Audit

The TB diagnostic center in the district Juaben Hospital was purposively selected for facility auditing. All logistics that aids in TB case detection such as microscope, reagents, slides, and sputum containers were physically checked for adequacy at the diagnostic center.

Record Review

Three facilities were selected for the study record review. The District hospital was purposefully selected whiles two health centers were randomly selected from four. OPD cards of patients who presented with respiratory tract infection in 2002 in all three-study facilities were reviewed. Respiratory tract infection was defined as cough and fever.

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4.5 Analysis

The exercise was a review of the NTP in terms of low TB case detection. Both qualitative and quantitative tools were used. The methods adopted were analysis of clinical records, in depth interview with prescribers, and health authorities in the district and questionnaire administration to patients. FGDs were also conducted with community members.

All completed questionnaires were edited and checked for completeness and consistency. Data from the questionnaire was analysed using EPI INFO version 6 (CDC. Atlanta. U.S.A) Statistical package. The selected variables were sex, age, occupation, level of education, marital status, and knowledge of cause, transmission, symptoms and cure for TB. Other variables selected to determine the health seeking behaviour of patients was the type of facility mostly used by community members when sick.

In assessing quality of care, variables used were diagnosis, payment for services delivered, health education and attitude of health staff. Accessibility was assessed by travel time and cost of travel. A random selection of some records was checked against the questionnaires to ensure data integrity. The findings from the seven FGDs were transcribed using the notes taken and tape recordings made at the sessions. Analysis was done manually.

4.6 Training of Research Assistants

Three research assistants assisted with the data collection. They were taken through the data collection instruments. The questionnaires were translated into Twi and an agreement as to how each question should be asked was reached. A day was used to do the pre-testing of the questionnaire in Komfo Anokye Teaching Hospital (KATH) Kumasi, which was not part of the study area. The questionnaire was then finalised, after the necessary corrections had been made.

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4.7 Ethical Considerations

Respondents were only interviewed after gaining their permission and after the objectives of the study have been explained to them. To ensure clients' privacy and confidentiality there were no names on the questionnaires. Verbal consent was sought from each respondent.

4.8 Limitations and Biases of The Study

1. Fifty traditional healers in the district, community health organisers, forty chemical sellers, faith healers and other groups of people who come into contact with sick community members were not included in the study due to financial constraint and time limit.
2. Quality checks were not carried on the stained slides because there was no technical person to carry that out.
3. Quantitative and qualitative data were collected at the same time due to time constraint. Qualitative data when collected first could have been used to refine the quantitative data. It helps in identifying appropriate ways to phrase questions and to determine which questions to ask.
4. Elements of respondent bias could not be completely ruled out, however it is hoped that with assurance of confidentiality and the intended use of the findings to improve TB case detection in the district the bias would be reduced.
5. Additionally, to reduce bias from the choices of respondents, participation in the focus group discussions were not restricted to patients' relatives only. This will hopefully give an indication of perception of the general populace.
6. Twenty-four prescribers who attended a three-day workshop on TB during the data collection period were not part of the study as a measure to reduce bias.
7. The use of the DHA office as the venue for FGD for TB patients must have biased the discussions.

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Chapter Five: Findings

The study set out to determine the factors contributing to low TB case detection rate in the district. The question posed to gain insight into this was;

'Why are TB cases not being detected in Ejisu-Juaben District?'

This discussion centres on the identification of community and service related factors contributing to the low TB case detection in the district.

5.1 Community Related Factors to Low TB Case Detection

Community related factors to low TB case detection were assessed through questionnaire administration to patients, conducting FGDs with patients and selected members in the study communities in the district. The assessment centered on knowledge, health seeking behaviour, practices and perceptions. Others were quality and accessibility of care. The findings were categorized into two areas: Community members and TB patients.

5.1.1 Community members

Background

Six focus group discussions were conducted in three of the five sub-districts. Participants included household heads, opinion leaders, and members of village health committee from each of the communities visited. Middle-aged women from different households were also included. The average age of participants was 41 years. Seventy percent (70%) of the participants were married and eighty percent (80%) were farmers.

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Knowledge

Majority of participants in the FGDs agreed TB was a disease. Most of them however stated that the main symptom of TB is persistent bloody cough. Participants emphasized that cough without blood cannot be TB. Though most participants agreed that TB is transmitted through the air, others believed that eating and drinking with patients was the main mode of transmission. Some participants said TB was hereditary and can be transmitted through witchcraft. Most participants did not know and could not believe treatment was free in government institutions.

One participant reasoned;

"Treatment of TB like any other treatment in any health facility should be at a cost"

Health seeking behaviour

Several factors influence health-seeking behaviour of community members. During the FGDs, it was realized that community members sought help depending on the individual's classification of the disease. If according to the individual, witches cause the disease, then divine intervention is sought. If it is classified as an ordinary disease caused by germs then they seek help from herbalists or health institution. Almost all participants in the FGDs agreed that financial constraint, poor staff attitude, stigma, long waiting time at the health facilities and ignorance were some of the reasons why patients refuse to seek orthodox care. According to them, traditional healers are a preferred choice because as one participant said, the traditional healers do not 'diagnose' stigmatized diseases such as TB or HIV/AIDS. They only give you medications for your disease or symptoms without diagnosing.

One female participant said;

"Diagnosed TB patients like HIV/AIDS patients are shunned so they don't want to go to hospital to be told they have TB or HIV."

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Attitude and perception

Most participants agreed that patients should be shunned if the spread of TB is to be reduced in the communities. They all agreed patients should be isolated both at home and in the communities. They should be given separate rooms, cups, and plates and receive as few visitors as possible.

As one participant said;

" Even in our hospitals, TB patients are isolated from other patients, which confirms the fact that patients should be isolated"

All participants perceive TB disease to be rare in their respective communities because according to them, no one coughs blood among them. Some however said they could not tell if inhabitants had TB because they were not health workers and patients hide their status.

One participant said;

"I know of only two TB patients who had been treated at health facilities after visiting herbalists for sometime without improvement."

On the quality of care, participants complained mostly about the poor staff attitude and long waiting time at our health institutions. Assessing health care in terms of proximity and travel time was however not mentioned as a barrier to seeking care in the health facilities.

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Recommendations for improving case detection in the district.

The following suggestions were made to improve case detection;

1) Staff attitude should be improved and waiting time reduced in our health institutions.
2) Active surveillance, financial support for patients and sanctions against prospective patients who refuse to seek care.
3) Continuous education on etiology, mode of transmission and free treatment at government institutions should be emphasized.

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5.2 Patients

Thirty-eight questionnaires were administered to TB patients in all five sub- districts of the Ejisu-Juaben district. A focus group discussion was also organized for TB patients at the DHA office.

Background

Table 5: Demographic Characteristics of Respondents

CHARACTERISTICS	FREQUENCY N=38	PERCENT (%)
AGE		
18-30	9	23.7
31-45	10	26.2
46-59	8	21.1
60+	11	29
EDUCATION		
None	12	31.6
Basic	3	7.9
MSLC	16	42.1
JSS	5	13.2
SSS	1	2.6
Tertiary	1	2.6
MARITAL STATUS		
Single	8	21.1
Married	22	57.9
Divorced	7	18.4
Widowed	1	2.6
OCCUPATION		
Farmer	16	42.1%
Trader	3	7.9%

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Housewife	3	7.9%
Self employed	4	10.5%
Salaried worker	2	5.3%
Unemployed	7	18.4%
Pensioner	2	5.3%
Student	1	2.6%
RELIGION		
Christian	28	73.7
Moslem	6	15.8
None	4	10.5
ETHNICITY		
Akan	30	78.9
Northerner	6	15.8
Others	2	5.3

In this study, the mean age of patients to which questionnaire were administered to was 47.8 years The minimum age was 18 years and the maximum was 90 years. The economically active age group of 18-59 years represented 71.1% of the total population. Out of the 38 respondents, 81.6% of respondent had none or little formal education up to middle school leaving certificate (MSLC). Only one person had tertiary education.

Majority of the respondents (57.9%) were married, 21.1% were single, and 18.4% were divorced.

Out of the total number of 38 respondents, 65.8% of them have a regular income (farmers, traders, self employed and salaried workers) and 34.2% are dependent on others.

Majority of those interviewed were Christians (73.7%). Moslems formed 15.8% and those who did not belong to any religious denomination formed 10.5%

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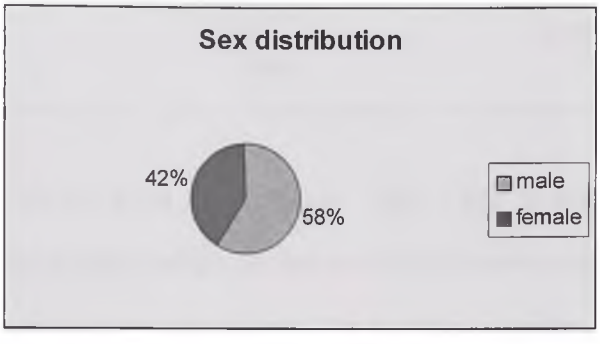
Most of the respondents 78.9% were Akans, northerners formed 15.8% and 5.3% were from other tribes.

Figure 1: Sex Distribution of TB Respondents



There were more males than females in the study population. The sex composition was made up of 22(58%) males and 16(42%) females.

5.1.2 Knowledge of TB

Respondents' knowledge

Most respondents (94.7%) said TB was a disease and 92.1% of them knew the main symptom of TB to be persistent cough but only 65.8% of them identified the main mode of transmission as through coughing or sneezing. Two respondents stated that it was transmitted through witchcraft, whiles others mentioned that, sharing of cups, plates, and rooms with patients facilitates transmission. On the cause of TB, only 36.8% of respondents mentioned germs as the main cause of TB whiles 15.8% had no idea about the cause of TB. The rest said too much talking and drinking of hard liquor causes TB.

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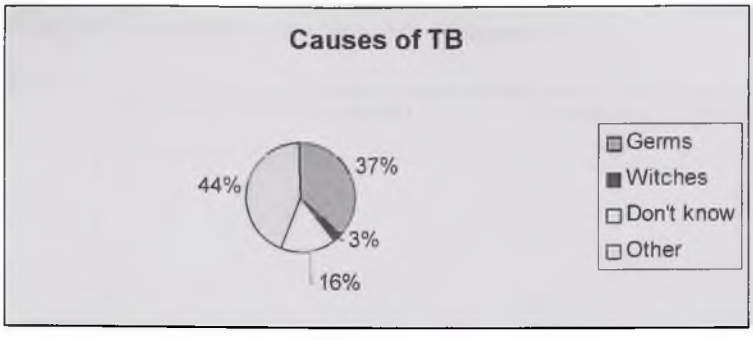
Figure 2: Respondents' Knowledge on causes of TB



Majority of respondents (94.7%) knew TB is curable. Out of this, 84.8% said cure of TB could be achieved by using orthodox medicine whiles the rest said using a combination of medications; orthodox, herbal preparations and spiritual intervention could cure it. About a quarter of the respondents (26.3%) did not know that TB treatment was free.

As one repondent said,

" I delayed in going to the hospital due to financial problems but when I was told that treatment was free, I went immediately and do not joke with my visits."

5.1.3 Health Seeking Behaviour

Patients

Respondents were asked about their health seeking behaviour and the health seeking behaviour of their community members. Table 6 shows the pattern of intent health seeking for community members and actual health seeking behaviour for patients.

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Table 6: Health Seeking for Community Members and Respondents

Provider	Community N=38(Expected)	Respondents N=38(Observed)
Traditional healer	7	1
Prayer camp	3	5
Health facility	20	18
Drug store	4	9
Homeopathic clinic	4	5

This involved finding out from participants institutions mostly patronized by community members when ill and what informs their choice and facilities actually used by respondents. The study showed that only 47.6% of respondents visited health institutions as their first point of call when sick. Majority of respondents (52.4%) visited other places such as herbalists, prayer camps, and homeopathic clinics before going to health institutions when their conditions worsened. Some purchased over the counter drugs. As one respondent said during the focus group discussion with the TB patients, initially she visited a herbalist who said she had asthma and put her on medications without improvement. She subsequently decided to seek orthodox care.

Several reasons were given why they prefer other unorthodox health institutions. Among them were poor staff attitude financial constraint and ignorance. One respondent attempted to rationalize the poor staff attitude by saying;

" If you are sick and someone is doing you a favor by treating you, the least you can do is put up with the ones rude behaviour and go by all the regulations to be healed."

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Most of the participants however disagreed with her even though 78.9% of respondents classified the attitude of health workers as good.

Almost all participants in the FGDs agreed that financial constraint, poor staff attitude, long waiting time at the health facilities and ignorance were some of the reasons why patients refuse to seek orthodox care.

5.1.4 Attitude and Perception

Most of the respondents (76.3%) said relatives knew they had TB. Out of this, 42.1% said relatives shunned them. The rest of the participants (23.7%) said relatives did not know they had TB because they feared they would be shunned if they have to know. During the FGDs with patients, they said community members who know them as patients shun them so as much as possible they do not disclose their type of disease to community members.

5.1.5 Quality of Care

Delays in the diagnosis of TB were assessed by a systematically applied questionnaire and were calculated for each respondent as the interval between the onset of symptoms till diagnosis was made. The time elapsed from the onset of symptoms to professional or medical consultation (patients' delay) and from the first medical consultation until diagnosis (health providers' delay) was calculated.

The diagnostic delay attributable to the patient was on the average 11 weeks. The delay ranged from one week to 52 weeks. The diagnostic delay attributable to the health provider was on the average 3weeks.

5.1.6 Accessibility of Care

This was assessed in terms of travel time and cost of transportation. About half of the respondents (44.7%) attended their respective facilities because of proximity. Sixty three percent and 73.7% of respondents said they traveled less than 30 minutes and up to an hour respectively to attend facilities. Majority of respondents said the transport cost was reasonable.

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Recommendations by respondents

On ways to increase case detection the following suggestions were made by respondents;

1. Majority of respondents (94.7%) and participants of the FGDs said health education should be intensified on the signs; symptoms, causes with emphasis on the free treatment. Others said quack doctors should be targeted for health education since they play a significant role in the district health care system.

   All participants recommended close collaboration between health workers and significant others such as VHCs, traditional healers, faith healers CBSVs among others. They suggested that durbars should be organized for the various service providers on the same platform to openly display intersectoral collaboration to the community members.

2. Twenty one percent of respondents said they were prepared to participate in any way possible to increase case detection. They agreed that the best health education poster is a cured TB patient.

3. Financial support to identified cases.

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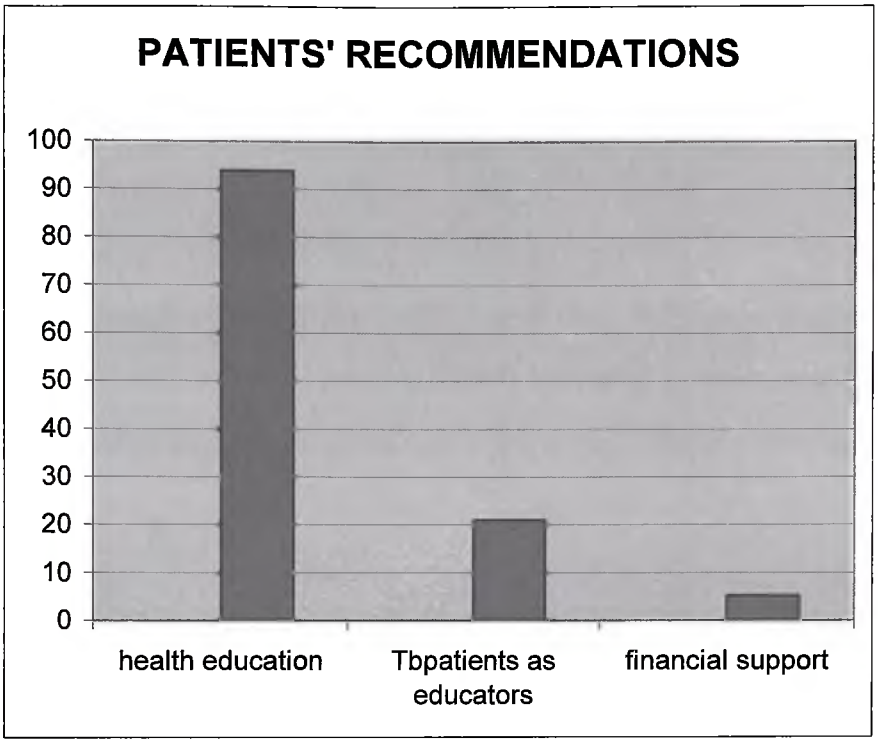
Figure 3: Respondents' Recommendations in percentages



5.2 Service Related Factors to Low TB Case Detection

Service was defined as services provided by orthodox and other health providers. Orthodox health providers were categorized into health managers and prescribers.

5.2.1 Background Information

Thirty-four (34) health personnel were interviewed. They included three health managers (DDHS, District TB coordinator and the District Public Health Nurse), two unorthodox or other service providers, a lab technician at the diagnostic center (Juaben hospital) and 28 orthodox health providers from all the five sub districts. This included providers from government, mission, and private institutions. The categories of staff were doctors, medical assistants, and nurses.

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Health providers' knowledge and attitude towards TB patients are fundamental in improving TB case detection so interviews were carried out to find out the setting in the district at the time of the study.

5.2.2 Knowledge of Service Providers

Orthodox Service Providers

Background

Twenty-eight prescribers participated in the study. Out of these 16(57.1%) were from government institutions, nine (32.1%) from mission, and three (10.8%) from privately owned institutions. Twenty-three 60.7% of respondents had been trained in the NTP. Out of the 23 who had received training, 66.7% received training in 2003 when the Global fund for TB was made available for TB treatment and education.

Knowledge

The overall knowledge of prescribers was high. Seventy-seven percent of respondents said TB is suspected when one presents with cough of duration three weeks or more. However, only 17.9% of respondents mostly from the government institutions knew how to correctly instruct the patients to take the sample. Only (1) 3.6% of respondents knew the strategy and case detection indicator for the national TB programme of 70%. Eighty five percent said they gave health education talks to patients but only 39.3% ever gave health education to community members on TB. Table 7 indicates that, less than half of respondents from the mission health institutions have been trained on the NTP and only (1) 11.1% ever gave health talk to community members.

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Table 7: Comparism between Government and Other Health Facilities on Training, Knowledge, and Measures to Increase Case Detection

Variable	Government n= (16)	Mission n=(9)	Private n=(3
Received Training in NTP	75.0%(12)	44.4%(4)	1
Correctly Suspect TB (when patient coughs for 3 weeks or more)	75.0%(12)	70.0%(6)	1
Request for sputum microscopy	87.5%(14)	44.4%(4)	0
Gave health education to community members	56.3%(9)	11.1%(1)	0

Table 8 shows the knowledge of health workers between trained and untrained staff.

Table 8: Knowledge of Providers and Training in NTP

Variable	**Trained staff (17)**	**Untrained staff (11)**
Know of NTP	100%	18.2%
Know at least one rationale	94.1%	27.3%
Correctly suspect TB	94.1%	36.4%
Know how long sample can be stored	52.9%	27.3%
Give health education to community members	52.9%	18.2%

Table 8, training in NTP influenced prescribers' knowledge in TB, which in turn could positively affect case detection in the district. There is a significant difference in trained and untrained staff in their ability to correctly suspect cases (p=0.0001) and correctly instruct patients to take sputum samples (p=0.002).

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During the interview with the head of the laboratory, he said the objective of the laboratory technician is to identify acid-fast bacilli in the sputum in order to diagnose pulmonary tuberculosis. He said after staining, the slide is observed for about two minutes before he declares a specimen smear positive or negative.

Knowledge of Other Service Providers

During an in depth interview with the traditional healer, it was revealed that though he had knowledge of TB, there were some misconceptions. He said that germs that are transmitted through the air, unclean water, poorly cooked foods as well as fatty foods cause TB. He believed that cough among smokers is normal and cannot be taken seriously and emphasised that TB is suspected when one coughs continuously during the day or night irrespective of the duration. He alleged that though he does not diagnose TB, clients who present with persistent cough are put on herbal preparations for two months and if no improvement, are asked to seek treatment elsewhere.

The homeopathic practitioner said TB is suspected when one coughs for about six months with blood and grows lean. He alleged he on average does not see TB patients even though it was shown that five respondents visited that homeopathic clinic[•](table 6) and received treatment between two to three months and when they weren't getting better, they decided to go to the hospital where they were detected as cases and put on treatment.

[•] There is one functional homeopathic clinic in the district

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5.2.3 Quality of Care by Service Providers

Orthodox prescribers

Health workers' delay in diagnosing was defined as the average number of weeks' patients visited health facilities with respiratory symptoms before being diagnosed as a TB case. This was calculated to be 3 weeks. Most respondents (97.4%) were asked to have a sputum microscopy for acid-fast bacilli (AFBs) before diagnosis was made. 28.9% of respondents were however asked to have both chest x-ray and sputum test for AFBs before diagnosis was made. Twenty one percent of respondents paid for treatment 15.8% of them at the laboratory.

An impressive 67.8% of respondents had no TB manual and none of the health facilities visited had any material on TB case detection and treatment displayed at vantage places for clients' consumption.

Most of prescribers interviewed especially providers in mission and private institutions do not give health talk to community members.

The head of laboratory services said there has not been any supervisory or monitory visits by the regional team this year (2003). No quality checks on the slides have been carried out during this same period even though this is supposed to be done monthly.

Other prescribers

Both unorthodox practitioners said they do not see TB patients but clients who present with cough are treated with herbs between two to three months and if no improvement, are asked to seek treatment elsewhere.

5.2.4 Practices of Prescribers

Out patient department (OPD) cards of client 15 years and above with diagnosis of respiratory tract infection in 2002 was selected from Juaben hospital, Kwaso and Ejisu health centres. In all a total of 282 cards were reviewed.

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Table 9: Review of OPD Cards January – December 2002

Sub district	No of patients with RTI	No (%) Who presented with cough >3weeks stated on OPD card	No (%) Sent for sputum microscopy
Juaben	72	10(5.8%)	5
Ejisu	126	4(3.1%)	0
Kwaso	84	2(2.4)	1
TOTAL	282	16	6

There were 282 cards with a diagnosis of respiratory tract infection from 1st January –31st January 2002 in the three institutions. Out of these 216(76.6%) cards could not be assessed because of lack of adequate information on them. Out of 216, 140(64.8%) duration of cough were not indicated and 76(35.2%) of the cards had diagnosis without history written. The study was therefore carried out on 66 OPD cards. Of these 66 cards, 16 cards had cough three weeks or more stated on the OPD cards but only 6(37.5%) were sent for sputum microscopy. Most of the cards reviewed did not have the laboratory requests written on them even though there was indications that certain laboratory investigations were requested for. For example, results of laboratory investigations were recorded on some cards even though no requests had been made earlier on. All the cards had one or more antibiotic prescription on them. Quality of diagnosis is generally poor as shown in this study. Only 37.5% of patients who met the criteria of cough three weeks or more were sent for microscopy.

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5.2.5 Logistics

To be able to offer any quality service, a facility needs to be properly equipped with logistics and skille personnel. For this reason, an inventory of laboratory equipment and supplies was conducted in th diagnostic centre to ascertain whether the laboratory had the capacity to offer quality service.

There were four functional microscopes, the stocks of microscope regents; slides (100) and sputur containers (150) at the district level were adequate. There was no record to check if they ever run out c slides, regents, or sputum containers. There were no tally cards for sputum containers, slides and reagents Furthermore, requisitions of these items are based on the supervisor's discretion. The laboratory had on laboratory technician assisted by two service personnel.

Table 10: Logistics Supply in TB Case Detection in 2003

Items	Qty 1st quarter	Qty 2nd quarter	Qty 3rd quarter
Sputum containers	*	-	150
Slides	-	-	100
TB 05 cards (sputum exam)	-	-	100
Reagents	-	-	300mls

* - Means no records

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Recommendations by Service Providers

The service providers and managers made the following recommendations;

1. Regular clinical meetings for prescribers and categorising workshops for different category of health staff instead of lumping all staff together.

2. Other health workers especially public health nurses should be sensitised to see the gravity of the TB situation and incorporate TB education into their work during outreach services.

3. Participation of all prescribers including mission, private and other informal prescribers such as traditional healers, VHCs, CBSVs, opinion leaders, and the community members. Some recommended risk allowance as a form of motivation to health staff.

4. Formation of TB teams to carry out educational activities in schools, churches, and mosques and assist patients financially.

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Chapter Six: Discussions

Community related factors

Tuberculosis like other stigmatized and chronic diseases is faced with the problem of getting patients to seek care especially in developing countries where level of formal education is quite low.

In this study, 81.6% of respondents had none or very little formal education. (Up to middle school leaving certificate) (Table5). The mean age of respondents was 47.8 years. The economically active age group of 18-59 years represented 71.1%. The sex distribution of the study population shows TB is highest among adults and there is a predominance of males over females (58% to 42%). Most of respondents (65.8%) and majority of participants have a regular income (farmers, traders, self employed and salaried workers). This finding shows that travel cost could not be an issue to most people. This was evident when most of the respondents said the travel cost was reasonable. The high proportion of respondents with formal education only up to MSLC (81.6%) could be associated with the low level of knowledge about the causative agent. Information on free treatment of patients in the health institutions is yet to be disseminated to the household level. More than half the respondents (63.2%) did not know that germs cause the disease and about a quarter (26.3%) did not know that treatment is free.

Though most respondents (92.1%) were aware of the most common symptom of TB (as prolonged cough), it appeared they were unaware of the importance of the symptom so the long delay in seeking treatment (average=11 weeks) ranging from one to fifty two weeks. This confirms the findings from other studies done in Madras India which found that only 40% had sought professional help within a month of onset of symptoms whiles 16% delayed action for more than six months. [22]

Health seeking is typically delayed for several reasons, which include a balance of costs and benefits to the patients. The benefits of getting well may not out weigh the cost of putting up with bad staff attitude, long waiting time, misconception and stigmatization by community members. In this study, 21.1% of

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respondents said friends shunned their company, whiles 42.2% were shunned by relatives.36.5% do not know the cause of TB and some thought the disease was hereditary.

Studies done in India found that TB was considered a hereditary disease which is still stigmatized as such patients were reluctant to talk about the disease and gave wrong addresses to keep their identity confidential. [19] Other studies done in Yugoslavia showed that 29% of respondents would not allow their child to marry someone who suffered from TB and 14% would not visit a close friend suffering from TB. [23]

Community members shop for treatment from unorthodox practitioners who do not know the signs and symptoms of TB. From table 12, 52.4% of respondents first visited unorthodox health institutions.

A survey in Madras found that only 40% had sought professional help within a month of onset of symptoms. [6]

Table 6, shows that five respondents first visited traditional healers before seeking orthodox care, yet none of the fifty traditional healers in the district is officially part of the primary health system where case detection takes place. A study done in Malawi showed that over 40% of smear positive TB patients spent at least one month with a traditional healer before seeking orthodox medical care. [6] In view of this finding, traditional healers cannot be left out in primary health care as long as TB case detection remains low in the district.

From this study, none of the respondents was diagnosed at the private or mission institutions most likely due to lack of providers' knowledge in the NTP. Some respondents might have sought help first from private and mission health institutions where prescribers were mostly not trained in the NTP. (Table 8) as such, might not know the cardinal symptom of the disease. Majority of health care providers especially those from the private and mission institutions in the district have not been trained in the NTP. Since case detection is passive, prescribers who are knowledgeable enough on the cardinal symptom of the disease should detect self-presenting patients.

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Studies done in India showed that 80% of TB patients first approach private practitioners who are considered to be more respectful, understanding, sympathetic and afford more privacy, but do not get correct diagnosis. [21]

Attitude and perception of community members greatly influences case detection. Most participants assumed TB patients should be shunned to facilitate control of the disease. For this reason, patients would keep their diagnosis to themselves and most community members perceive TB disease a rarity in their communities.

Majority of clients was satisfied with staff attitude even though participant in the FGDs said that it was very poor. This could be attributed to the fact that clients' expectations are too low they may be satisfied with relatively poor behaviour.

When participants were asked about their expectations at the health facilities, their major concern was a good and courteous reception by health workers. Concerning working hours, the consensus was that it was convenient. The cost of transportation was considered okay. This could be justified by the fact that most of the respondents (65.8%) and participants in the FGDS had regular source of income. (farmers, traders, self-employed and salaried workers). A number of respondents 21.1% however paid for TB services at the health institutions.

Service related factors

Knowledge of prescribers was assessed by interviewing them on the NTP in terms of its rationale, strategy, and guidelines for case detection.

The long-term objectives of the NTP are:

- To reduce the incidence and prevalence of tuberculosis
- To reduce the physical and psycho-social suffering of the population from tuberculosis

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- To reduce the incidence of disabilities or deformities caused by tuberculosis, in such a way that tuberculosis no longer remains a public health problem

The objective related to case finding is to increase the level of case finding from 36% of the total estimated incidence of smear-positive cases to 70% by the year 2006.

Case detection in relation to the NTP is by passive case detection through testing of patients who presents with respiratory symptoms of three weeks or more duration to any government health institution using sputum smear microscopy. This is important because it facilitates prioritization of cases, helps to identify those at high risk of spreading the disease, and indicates those who are most ill and it is more reliable than x-rays and more reliable for monitoring treatment results.

In accordance with the NTP, once a patient is suspected of having PTB, his/her sputum must be examined for AFBS. Sputum specimen should be collected properly if not patient may not be diagnosed correctly and he will continue to spread the infection. Three sputum specimens are collected from a patient within two days. During the first encounter with the patient, the first specimen is collected that is the spot specimen. The patient is asked to clear the back of his/her throat and produce phlegm into the container. The patient is then given a second container home to collect the second specimen that is the early morning specimen. The third specimen is collected when the patient visits the health facility the next working day. These three specimens must be examined by microscopy not later than one week after they are collected.

In the NTP manual the slide is supposed to be looked at for 10-20 minutes before declaration. According to the NTP, health education to community members is necessary if case detection is to improve. According to the TB checklist for supervisory visits, the regional TB coordinator should visit each district health office at least once a month together with the regional laboratory supervisor for TB microscopy. During some of the visits, they should accompany the district TB coordinator on visits to microscopy laboratories.

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Knowledge of health workers is key to TB case detection. From Table 8, training in NTP could account for the health providers' awareness of the cardinal symptom of TB to correctly suspect cases (p=0.0001) and correctly instruct patients to take sputum samples (p=0.002). Only 36.4% of untrained staff knew how to correctly suspect TB as against 94.1% of the trained personnel.

From the background information on prescribers, it was realized that though more than half of prescribers in the district are in mission or private institutions (26 out of the 56) prescribers, that is less than half of them have received training in NTP. From the results of this study, none of the respondents was diagnosed in any of these non-governmental facilities. A study done in India showed that fifty percent of TB diagnosis is done in private institutions. [3]

In India where the global burden of TB is 28%, studies done revealed that the private or informal sector s were the first point of contact for 80% TB patients; but there was a lack of effective models for involving the private sectors in the DOTS. In 1995, a private health institution implemented DOTS on behalf of the government. From 1995-1998, of the 300 patients placed on DOTS, 190 were referred from private institutions. [19] As a result of this study, government incorporated the private sector in TB care and the case detection target of 70% was achieved in 2002. Other studies done in Pune India showed that more than 60% of respondents utilized private providers when ill, 28% chemists, 24% self help, and 10% government institutions. [3]

These findings show that continuous education of health staff is necessary. Additionally the mission and private sectors must be incorporated into the TB team.

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Chapter Seven: Conclusion and Recommendations

Conclusion

From this study, the following factors are associated with TB case detection in the district;

- Knowledge of TB especially the causative agent and free treatment of TB
- Practices of health seeking behaviour of community members
- Attitude and perception of community members
- Competence and attitude of service providers
- Availability of appropriate educational materials for clients and service providers
- Collaboration among service providers
- Waiting time at health institutions

Recommendations

The use of information, education and communication materials in educating patients and potential patients about TB, its cause, mode of transmission, and free treatment is a very important means of getting people to understand the messages involved in TB case detection and subsequent treatment.

There were no Information Education and Communication (IEC) materials such as posters, pamphlets, and booklets for clients use. All the facilities visited had no posters displayed on their premises except the DHA, which had a "Think TB poster", displayed during the data collection period.

In my opinion, displaying posters at vantage points would strengthen and improve case detection in the district. Considering the fact that 81.6% of respondents were people with none or little formal education (up to MSLC), the basic information on TB can be translated into the most spoken dialect that is Akan (78.9%) and the pamphlets displayed at vantage points in the health institutions and some distributed during outreach services.

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Considering the fact that staff attitude and waiting time at the facilities were also strongly criticized, measure need to be put in place to enable service providers offer client friendly services.

- The NTP (National office) should make provision for good and locally appropriate and acceptable health education materials and street theatres on signs, symptoms, aetiology, transmission and especially availability of free TB services to the communities. This will be targeted at improving the knowledge and health seeking behaviour of TB suspects and family members.

- The DHMT should form a committee consisting of people with TB, health managers, civic leaders, and representatives of local organizations to help create the awareness about TB in the community and also help refer patients to the health institutions.

- The DHA should assign more formal roles in TB activities to certain category of health workers such as Public and Community Health Nurses.

- The Regional TB team should ensure that a functional system for the supervision of the laboratory staff on regular basis is put in place.

- The DHMT should ensure that clinical meetings are held regularly by prescribers in the district in order to create a high level of TB suspicion when patients present with respiratory symptoms. In-service training should be organised for all prescribers to make them aware the importance of proper history taking and the need to write laboratory requests on OPD cards.

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- The DHMT should organize workshops for health professionals in all health institutions in order to improve their performance. Staff attitude and waiting time at the facilities needs to be improved as soon as possible.

- The DHMT should foster intersectoral collaboration, co-operation, and co-ordination of efforts of these key players: Government institutions, NGOS, private practitioners, traditional healers, community members, and the media.

- The DHA should encourage regular feedbacks from community members.

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Appendices

FACTORS CONTRIBUTING TO LOW TB CASE DETECTION IN EJISU-JUABEN DISTRICT

TB PATIENTS QUESTIONNAIRE: JULY 2003

GREETING AND INFORMED CONSENT (TB PATIENTS)

My name is ---------- I am working on a research to find reason for the low TB case detection in the Ejisu-Juaben district. The purpose of this study is to gather information with the aim to assist the District Health Management Team (DHMT) improve case detection in the district.

If you agree to join the study, you will be asked questions about your knowledge, attitudes, and practices related to TB case finding. If a question makes you feel uncomfortable, you may choose not to answer it.

All information that you provide will be considered private and confidential. Any report from this study will not use your name. There are no risks involved in taking part in the study. Your treatment would not be adversely affected whether you participate in the study or not. Do you have any questions now?
You may contact the principal investigator at the DHMT office in Ejisu-Juaben if you have questions later on.

Her name is Dr Asomani-Wiafe Tel. 0208134504

Do you voluntarily agree to participate in this study?

(1) Yes (2) No

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I certify that I read this statement to the client, that s/he fully understood it's meaning, and that s/he verbally agreed to participate in the study.

Interview Date----------

Name of facility----------

BACKGROUND INFORMATION

1. ID Number []
2. Age As At Last Birthday []
3. Sex 1. Male 2. Female
4. Education 1. None 2. Basic 3. JSS 4. SSS 5. Tertiary 6. MSLC 7. Polytechnic 8.other (specify)

5.Marital Status 1. Single 2. Married 3. Divorced 4. Widowed

6.Occupation 1. Farmer 2. Trader 3. Housewife 4. Self employed 5. Salaried worker 6. Unemployed 7. Pensioner 8. other (specify)

7. Religion. 1. Christian 2. Moslem 3. Traditionalist 4.None 5.Other (specify)

8. Ethnicity 1. Akan 2. Northerner 3. Other (specify)

KNOWLEDGE OF TB

9.What is TB? 1. Disease 2. Curse 3. Don't know 4. Other (specify)

10.What do you think causes TB? 1 Sunshine 2. Witches 3. Rain 4. Germs 5. Air 6. Don't know 7. Other (specify)

11. How do people in the community think TB is caused? (Probe)----------

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12.How is TB transmitted? 1. Cough 2. Sneezing 3. Other (specify)

13. What are the symptoms of TB? 1. Cough 2. Night sweats 3. Weight loss 4. Fever 5. Tiredness 4.loss of appetite 5. Other (specify)

14.Is TB curable? 1.YES 2. NO 3. Don't know

15. If yes, how can it be cured? 1. Herbs 2. Orthodox medicine 3. Don't know 4. Soothsayer 5. Other (specify)

HEALTH SEEKING BEHAVIOUR

16. In your community, which provider would people visit first when they fall sick?

1. Traditional healer 2. Prayer camp 3. Health Facility 4. Drug store 5. Other (specify)

17. Where did you first go for treatment?

1.Traditional healer 2.Prayer camp 3. Health facility 4.Drug stores 5. Other (specify)------

18. How long did it take you visiting other places before going to the health facility? ----------

QUALITY OF CARE

19.Can you tell approximately how long it took to be diagnosed after you first developed the symptoms?

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20.When you started visiting orthodox health facilities, how long did it take before you were diagnosed?

1. One week 2. One month 3.Two months 4. Six months 5. Other (specify)

21.Were you asked to have a sputum test before diagnosis was made? 1. Yes 2. No

22.Were you asked to have a chest x-ray done before diagnosis was made? 1. Yes 2. No

23.Did you pay for TB services in the facility? 1. Yes 2. No

24.If yes where did you make the payments?

1. Consulting room 2. Laboratory 3. Dispensary 4. Injection room 5. Other (specify)

25. Do you know that TB treatment is free? 1. Yes 2. No

26. Where did you get this information?

1. Health worker 2. Radio 3. TV 4. Other (specify) _____

27. How long do you stay in the health facility when you visit for treatment? 1. One hr

2. Between 1hr and 2 hrs 3. 30 minutes 4. Above 2 hrs

28.Is the opening time of the facility favorable? 1. Yes 2. No 3. Don't know

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18. Why? ----------

29.How would you classify the attitude of health workers?

1. Bad 2. Satisfactory 3. Good 4. Excellent

30.Were you told for how many months you would have to continue treatment?

1. Yes 2. No 3.Don't remember

31.If yes (specify)---------- months

32.Has a health worker ever visited you at home or work place in connection with your TB?

1. Yes 2. No

33.If yes, what did he or she say?

34.Was there a time when you didn't want to come to the health facility for treatment?

1. Yes 2. No

35.If yes, why? ----------

ATTITUDE AND PERCEPTIONS

36.How do community members relate to you as a TB patient?

Probe ----------

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37.Do your relatives know you have TB? 1 yes 2. No 3. Don't know

38.If no or don't know, why?

Probe----------

39.If yes, did they encourage or help you in any way to go to the hospital? 1. Yes 2. No

40.If yes, specify who and how? ----------

41.Was your TB diagnosis an embarrassment in your family? 1. Yes 2. No

3. Don't know

42.Do your friends and neighbors know you have TB? 1. Yes 2. No 3. Don't know

43.If yes, how did they treat you when they found out? ----------

---

ACCESS IBILITY OF CARE

44.Why do you come to this facility and not another?

Probe----------

45.How do you travel to the facility? 1. Walk 2. Vehicle 3. Other (specify)

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46.How much time does it take you to travel to the hospital?

1.Less than 10 minutes 2. 10 minutes 3. 30 minutes 4. An hr 5. More than an hr

47.If you travel by vehicle, how much do you spend traveling to and from the facility?

1.¢1,000-¢5,000 2.¢5,100-¢10,000 3. ¢10,100 and above

48.How will you access the transport cost? 1.Too much 2. Just okay 3. Low

49.In your opinion, what can be done to encourage people who may have TB in the community to report to the health facility for detection?

_____

_____

Thank you for your time!

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FACTORS CONTRIBUTING TO LOW TB CASE DETECTION IN EJISU-JUABEN DISTRICT

FOCUS GROUP DISCUSSION GUIDE FOR COMMUNITY MEMBERS/ TB PATIENTS: JULY 2003

KNOWLEDGE OF TB

1. What is TB?

2.What causes TB?

3.What are the symptoms of TB?

4.How is TB transmitted? ? (Witchcraft, cough, overcrowding, talking, germs etc.)

ATTITUDE TOWARDS TB PATIENTS

5. How do you want TB patients to be treated or cared for in the health facility? (Isolated?)

6.How are TB patients treated in the community?

7.Why do some refuse to seek medical care? (Clinic hour, travel time, cost, staff attitude, stigmatization, and fear of rejection, cultural factors and confidentiality).

8.Do you think TB is very common in the community?

9. What do people do when they have TB?

AVAILABILITY OF SERVICES

10.What services are available and where are they?

11.Have you received any information from MOH staff on TB, its cause, and mode of transmission, free treatment for patients?

TREATMENT

12.Is TB curable?

13.What are the benefits of treatment?

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14. What are the dangers of not treating patients?

15. What in your opinion can be done to improve TB case detection in the community?

- Identifying
- Using facility
- Compliance

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FACTORS CONTRIBUTING TO LOW TB CASE DETECTION IN EJISU-JUABEN DISTRICT

FACILITY AUDIT: JULY 2003

1. Adequate supply of sputum containers? Yes/NO
2. A sterilizer in good condition? Yes/NO
3. Adequate supply of TB treatment cards (NTP client cards) request for sputum examination forms (TB05) and referral/ transfer forms (TB 09). Yes /NO
4. Adequate supply of slides? YES/NO
5. Functional microscope? YES/NO
6. Adequate ventilation in the laboratory? YES / NO

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FACTORS CONTRIBUTING TO LOW TB CASE DETECTION IN EJISU-JUABEN DISTRICT

INTERVIEW GUIDE FOR SERVICE PROVIDERS: JULY 2003

1) ID NO [ ]

2) Health Facility

1. ==Government
2. ==Mission
3. ==Private

3) Designation of staff member being interviewed:

1. ==Nurse
2. ==Medical Assistant
3. ==Doctor
4. ==Other (specify)

Date of interview: (dd/mm/yy) _____

GREETING AND INFORMED CONSENT

My name is ---------- working on a research to find the factors contributing to low TB case detection rate in the Ejisu-Juaben district. As part of the study, you will be asked questions about your knowledge, attitudes, and practices related to the provision of TB services. If a question makes you feel uncomfortable, you may choose not to answer it. The information obtained from the study will be put together and used by the District Health Management Team (DHMT) to improve case detection of TB in the district.

You may contact Dr Asomani-Wiafe, the principal investigator at the DHMT office in Ejisu-Juaben if you have questions later on.

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Do you voluntarily agree to participate in this study?

(1) Yes (2) No

I certify that I read this statement to the health care provider, that s/he fully understood it's meaning, and that s/he verbally agreed to participate in the study.

Interviewer's signature----------

Please circle where applicable

4) 1. Do you know about the National TB Programme? 1. Yes 2. No

5) 2. Have you been trained on NTP? 1. Yes 2. No

6) If yes, when _____years

7) Do you have a TB manual? ASK TO SEE IT 1. Yes 2. No

8) Which One? _____

9) Do you have posters, fliers or other materials depicting TB symptoms and treatment?

1. Yes 2. No ***(Ask to see them)***

10) Do you know the rationale for the National Tuberculosis Program? 1. Yes

2. No

11) What is the rationale? ----------

12) On what strategy is the NTP in Ghana organized? ***(If DOTS mentioned, probe for components)***.

---

13) Do you know the indicators for the programme? 1. Yes 2. No

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14) What are the indicators? ----------

---

15) When do you suspect a TB case?

---

16) What do you do when you suspect a case?

---

17) How do you advise the patient to take the sample? ----------

---

18) How long can the sample be stored? ----------

19) Whom do you report to when you confirm a case? ----------

---

20) What role do you play after a case is confirmed? ----------

---

21) Do you give health education to the patients? 1.Yes 2.No

22) What health education do you give the patients? ----------

---

23) How often do you give them health education during treatment? ----------

---

24) Do you give health education to the community members? 1.Yes 2.No

25) What health education do you give the community members? ----------

---

26) How often do you give the health talk? ----------

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27) What is your general impression about the NTP? ----------

---

---

28) What is your impression of the community response or acceptance of the NTP in general?

---

29) In your opinion, what can be done to improve TB case detection in the district? ----------

---

Thanks for your time!

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DISTRICT MAP OF GHANA

MAP OF ASHANTI REGION

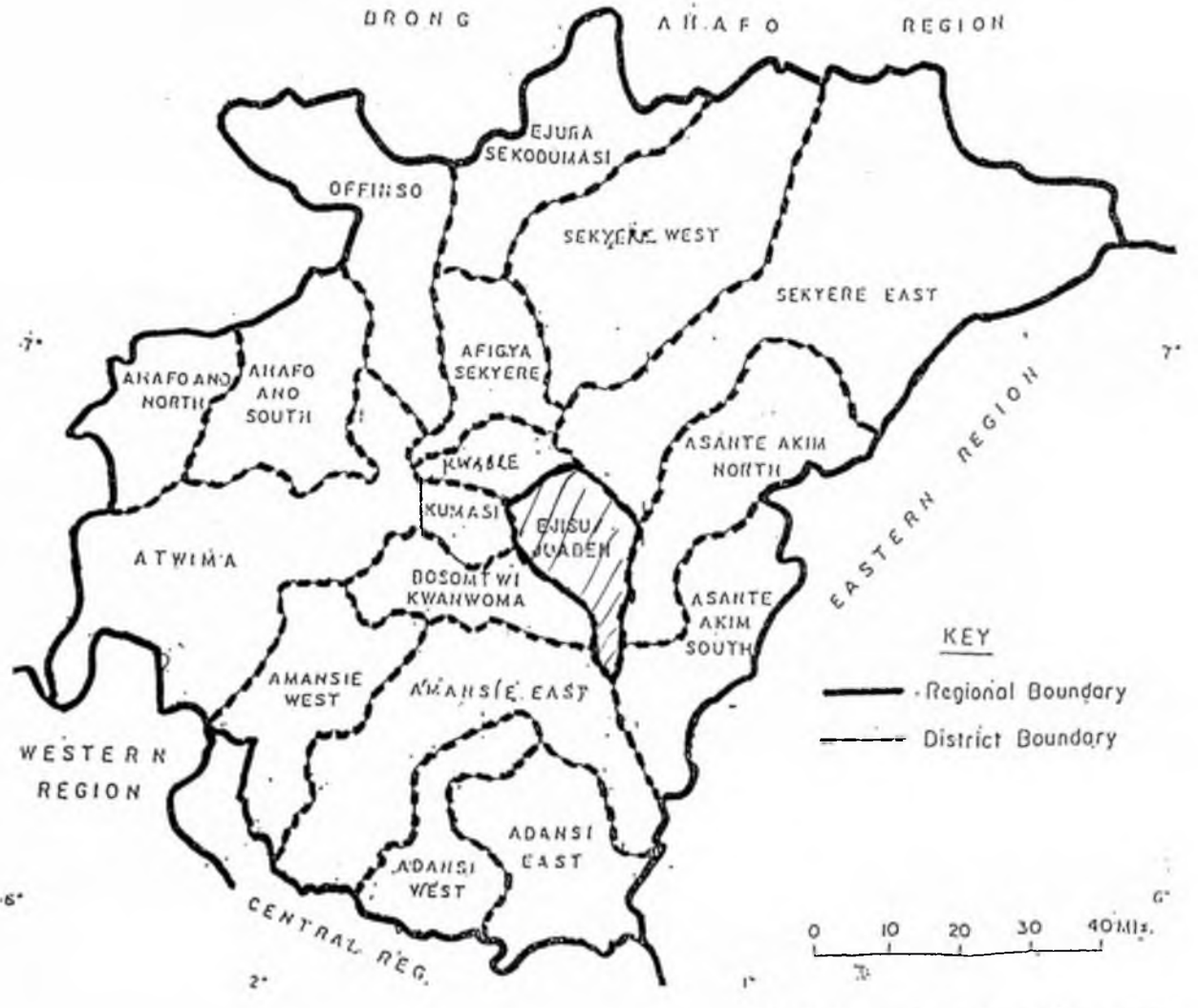

FIG. 1

SOURCE - DEPARTMENT OF GEOGRAPHY LEGON.

Drawn by S.G. Dugan, Dept. of Geogr. Legon

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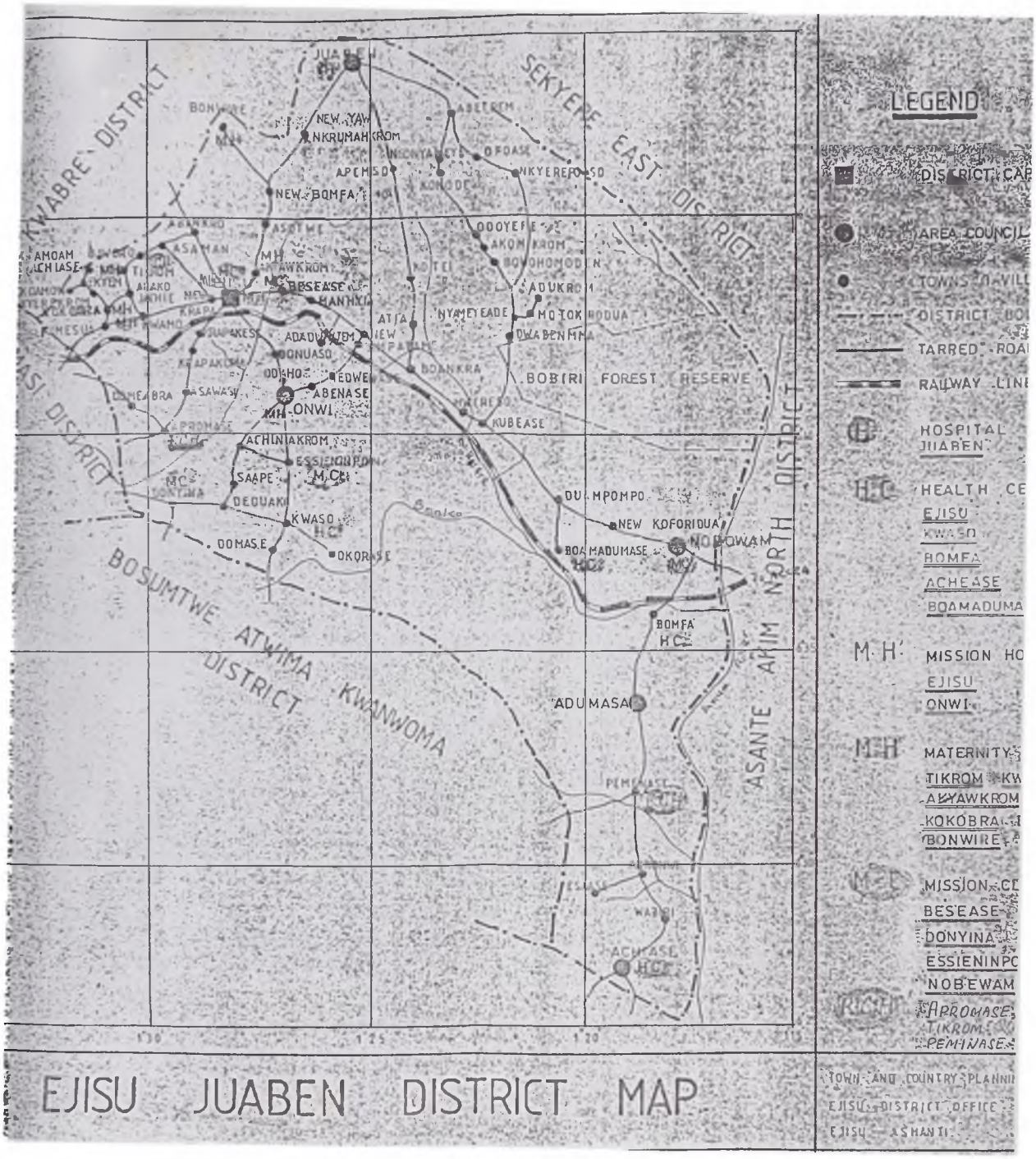

EJISU JUABEN DISTRICT MAP