UNIVERSITY OF GHANA

CONSTRAINTS OF MATERNITY HEALTH CARE DELIVERY IN GOVERNMENT HOSPITALS: THE CASE OF KORLE-BU TEACHING HOSPITAL.

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF M.A. DEGREE IN DEVELOPMENT STUDIES.

JULY, 2003

DECLARATION

I do hereby declare that except for references to other people's work which have been cited, this work is the result of my own original research and that this dissertation has not been presented for any other degree elsewhere.

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DEDICATION

TO
MY CHILDREN

PAA KOW & MAAME ADJOA

FOR ALL THE TIME I SPENT AWAY FROM YOU.

MAY TIME GRANT ME THE OPPORTUNITY

TO MAKE IT UP TO YOU, BEYOND MEASURE.

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Finally, I wish to accept responsibility for any errors detected in this work, and ask for your indulgence and assistance in correcting them.

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ACRONYMS

ANC	Antenatal care
CIDA	Canadian International Development Agency
CSSD	Central Sterilizing Section Department
DDNS	Deputy Director of Nursing Services
DPF	Donor Pooled Fund
GOG	Government of Ghana
HCA	Health Care Assistant
IGF	Internally Generated fund
KBTH	Korle-Bu Teaching Hospital
MOH	Ministry of Health
MS	Midwifery Superintendent
NO	Nursing Officer
O&G	Obstetrics and Gynaecology
OPD	Out Patient Department
PEN	Principal Enrolled Nurse
PMMN	Prevention of Maternal Mortality Network
PNO	Principal Nursing Officer
QRN	Qualified Registered Nurse
RHP	Reproductive Health Programme
SM	Staff Midwife
SNO	Senior Nursing Officer
SRN	State Registered Nurse
SSM	Senior Staff Midwife
SSN	Senior Staff Nurse
SUB BMC	Sub Budget and Management Center
SU	Enrolled Superintendent
SWA	Senior Ward Assistant
W.H.O.	World Health Organization
W.V.I.	World Vision International

ABSTRACT

A study was conducted at the Korle-bu Teaching Hospital to determine the constraints of maternity healthcare delivery.
Sixty-two patients as well as professional and non professional staff were interviewed.
The results indicate that 90.3% of patients who access maternity care at the hospital come from within Accra while 9.7% come from the immediate suburbs.
An average of 167 patients attend antenatal clinic daily and most prefer KBTH to other hospitals because of the presence of expert medical personnel, 24 hours emergency service and lower charges.
The majority of 53.0% of patients first attend antenatal clinic in the second trimester.
An average of 40 admissions and 33 deliveries are made daily.
Out of this, 33.2% are referred cases from other government and private health institutions.
Referred and emergency cases often have to be treated on credit as patients come to the hospital with no money or luggage.
The maternity department has 254 beds which are constantly occupied with extra patients lying on the floor.
The length of stay at the hospital has been shortened to make bed space available to incoming patients.
Some patients are not able to settle their bills after discharge. Some of these patients run away while others have their bills paid for them by Non Governmental Organizations or individuals through the Social Welfare.
The major constraints identified are shortage of nurses and doctors, lack of equipments and non-drug consumables, lack of storage space for files and a lack of bed space.
The hospital has these limitations because it mainly depends on government funds which are not sufficient and are released late.
To assist itself, the hospital generates funds internally through drugs and service charges.

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND TO THE STUDY

Maternity healthcare refers to medical care given women during pregnancy, delivery and in the post partum period.

Maternity services include antenatal or prenatal care, delivery, postnatal care, management of abortion, emergency obstetric care, family planning services and information dissemination through education and communication.

The primary aim of maternity care is to ensure that all pregnant women have access to basic obstetric care so that those at risk can be identified and treated. Neglect of maternity care therefore, could possibly result in complications of pregnancy and childbirth and to the death or disability of mother and/or child. Omran et. al. (1987) explain that maternity care might theoretically reduce maternal morbidity and mortality both directly and indirectly through detection and treatment of pregnancy related illnesses or through treatment of complications during delivery.

Kessel (1987) reports of a number of extensive studies throughout the world which document the positive association between maternity care and pregnancy outcomes. Such a positive association would exist on condition that there is sufficient healthcare coverage for both mothers and their infants.

Maternity healthcare coverage depends on the availability of resources, utilization of services, an understanding of health problems, the quality of healthcare delivered and the satisfaction derived by both consumers and providers with the care given.

The Ghanaian Ministry of Health has been committed to providing maternity healthcare for women by establishing public health facilities.

One of Ghana's leading maternity care facilities is the Korle-Bu Teaching Hospital (KBTH) located in Accra, the capital of Ghana.

Established in 1923, the hospital delivers the most specialized care over a full range of services and is a national referral center for all health problems.

Maternity healthcare at the KBTH is provided under the Obstetric and Gynecology.department (O&G).

Over the years, many women have accessed maternity services at the KBTH for reasons that could include:

- Availability of varied and expert medical personnel.
- A wide array of medical services with accompanying ancillary support services.
- First class attention.
- A feeling of safety.
- Relatively lower dispensary costs compared with private pharmacy shops and

- Relatively cheaper consultative, treatment and confinement charges.

To be able to satisfy the health needs of clients as expected, the maternity department of the KBTH must have all its resource needs met.

The Ghana Health Service (2002) in The Road to a Healthier Future for Ghana, Towards Vision 2020,p30, mentions that healthcare expenditures currently account for nine percent of the governments total budget. However, the Ghana Health Sector 5 Year Programme of Work Report (1996), p5, also states that " in real terms, resources available to the health sector have been shrinking over the years.....This has had a direct impact on the ability of the Ministry to run an efficient and effective system. Insufficient amounts are spent on non-wage recurrent costs. leading to shortages of drugs and other essential supplies and the persistence of weak logistic support systems"

Consequently. the KBTH, funded by the state, has had to deliver maternity health services within these reported constraints. This has limited patients' satisfaction and the ability of the department in achieving the goals of the medical service as set out by the World Health Organization. These goals include achieving equity and reducing the possibility of premature death, disease and disability.

1.2 PROBLEM STATEMENT

Biblically, children are a gift from God. Medically, however, women have to bear nine months of pregnancy after which they give birth to the children.

It is therefore important that women have safe, competent and adequate medical care so that child bearing is accomplished without any ill effect upon mother or child.

Recent information in the Ghanaian national newspapers attest to problems being encountered by the maternity department of the KBTH.

The current chief executive of the hospital, in the 6th November 2002 issue of the Daily Graphic, under the headline "Korle-Bu holds donors confab" echoes that the increasing population resulting from the country's high growth rate of 3.5% has more people seeking quality and sophisticated medical care.

This high growth rate has not been matched by any major expansion, rehabilitation or refurbishment of available medical infrastructure.

This has led to congestion of the Maternity department resulting in the rapid deterioration of physical infrastructure and equipment.

The hospital has also had to contend with dwindling manpower levels, thus making the few hands at the hospital work under stress.

There are also delays in the release of budgetary allocations which prevents the hospital from procuring inputs when needed and in quantities desired.

These circumstances at the hospital place limitations on the delivery of maternal healthcare.

This research therefore aims to determine what constraints are encountered by the KBTH in delivering maternity services, how the constraints affect delivery of healthcare services and the measures that are being taken to overcome the constraints.

1.3 JUSTIFICATION OF STUDY

Health of the citizenry is fundamental to national progress in every sphere (Gustav,1998). Good health is therefore both a cause and a consequence of economic success (M.O.H., 1996).

Constraints associated with maternity healthcare delivery such as inadequate space, shortage of financial resources, manpower and equipments has contributed to the poor reproductive health status of Ghanaian women reported in the Ministry of Health 5 year programme of work report, 1996. Many adult women die from complications of pregnancy, childbirth or unsafe abortion resulting in a high maternal mortality rate of 214 per 100,000 live births and a perinatal mortality of 75 per 1000 births (M.O.H.1996).

According to Anyawu (1994), women constitute a vital resource in developing countries accounting for over half the food produced and constituting one-fourth of the industrial labour force. They are responsible for child-care and household chores and could even contribute more if their opportunities to do so were not constrained. It is therefore important that this vital national resource is preserved by ensuring that little or no constraints exist in the delivery of maternity healthcare services.

In this study, constraints being encountered by the KBTH in delivering maternal services will be defined and their association with delivery and receipt of care determined.

Knowledge of constraints identified can be used in the design of interventions to improve maternal care.

1.4 OBJECTIVES

1.4.1 GENERAL OBJECTIVE

To identify the constraints of maternity healthcare delivery in the Korle-Bu Teaching Hospital and to determine the influence of the constraints on birth outcomes.

1.4.2 SPECIFIC OBJECTIVES

i. To determine patient turnover.

ii. To asses health staff to patient ratio.

iii. To determine facilities available in terms of quantity and quality.

iv. To evaluate clients ability to pay for services.

v. To determine availability and affordability of prescribed medication.

vi. To explore problems encountered by health staff in delivering maternity services.

vii. To determine clients satisfaction with services received.

1.5 RESEARCH QUESTIONS

i. What are the constraints encountered by the KBTH in delivering maternity healthcare services?

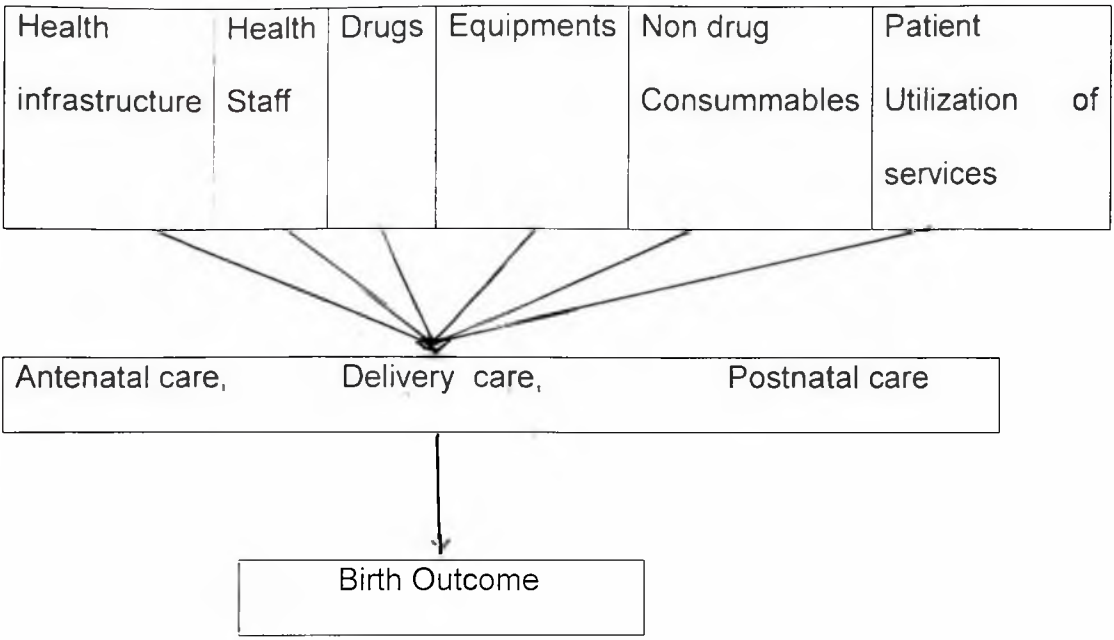
ii. How does existing constraints affect the delivery of maternity healthcare services?

iii. What measures are being taken to overcome these constraints?

1.6. Conceptual Framework

Figure 1.1

CONCEPTUAL FRAMEWORK



For efficient maternal healthcare delivery, there must be adequate health infrastructure/space, competent and sufficient health staff, sufficient and affordable drugs, sufficient and modern equipments and non drug consumables. Additionally, patients for whom these are intended must be able to access and utilize the hospitals services.

These physical, human and material resources are combined to provide antenatal, delivery and postnatal care services to patients. The presence or absence of these resources therefore could determine birth outcomes.

The absence of one or more of these resources would therefore impose limitations on the delivery of maternal care.

1.7 DEFINITION OF KEY WORDS

i. Constraint- Conditions, situations and circumstances that imposes limitations on the delivery of maternal care.

ii. Government Hospital- Publicly funded health facility with trained health personnel and other resources for providing maternal care.

iii. Maternity healthcare- The set of services provided by a health facility for taking care of antenatal, delivery and postnatal cases.

iv. Satisfaction- measures the success of healthcare in meeting the expectations and needs of consumers.

v. Utilization- Making use of a health facility for maternity care.

CHAPTER TWO

2.0 LITERATURE REVIEW

The literature review will focus on constraints associated with the factors affecting access and utilization of maternity services, constraints associated with health staff, the effect of constraints on maternal and infant morbidity and mortality and the overall constraints associated with planning for health delivery in Ghana at the national level.

2.1 CAUSES OF HEALTH CARE DELIVERY CONSTRAINTS

The basic needs in planning for medical care in pregnancy are essentially the same throughout the world (Omran et.al.,1987). These needs include financial, physical (health infrastructure, furniture, equipment, drug and non drug consummables) and human (professional and non professional health staff) resources.

Providing medical care using modern medical systems involves enormous cost which many developing countries cannot provide (Mechanic, 1978). Despite this fact, the last forty years in Ghana has seen considerable progress being made in improving the health status of Ghanaians. This has been evidenced by people living longer lives as life expectancy has increased from 45 to 55 years, more children are surviving as the infant mortality rate has dropped from 133 in 1957 to 66 in 1993 and health workers and facilities have increased.

In spite of these stripes forward, Ghana is still facing a number of serious reproductive health problems. Many adult women die from complications of

pregnancy, childbirth or unsafe abortion and the rate of HIV infection is increasing rapidly. The maternal mortality rate is stated as 214 per 100,000 live births (M.O.H. 1996)

This setback may be because population growth in Ghana has outstripped the provision of social infrastructure including health services. At the time of Ghana's independence, the population was less than 6 million. By the 1984 and 2000 censuses, this had risen to more than 12 and 18 million respectively. Projections indicate that if the current growth rate of 3% per annum is maintained, the population will reach 33.6 million by 2020.

About 40% of the population live more than 15 kilometers from a health facility and although people in urban areas are (about 32% of the population) are better served with facilities, the provision of health care has not kept pace with the growth of polylingual, multi-ethnic and peri-urban slum settlements (M.O.H.1996)

2.2 CONSTRAINTS ASSOCIATED WITH FACTORS AFFECTING ACCESS AND UTILISATION OF MATERNITY HEALTH FACILITIES.

A person's ability to take advantage of a health care programme is related to his/her socio-economic status, particularly income and level of living (Twumasi, 2001). The factors that influence women's utilization of maternity facilities are the existence of facilities, availability of information, accessibility of facilities, moderate cost of healthcare, adequacy of supplies and equipment, acceptability of services provided and the attitude of health staff.

(Lea,1994) also found that certain social issues interrelate with women's health behaviors which may prevent women from seeking medical advice These social factors include local cultural attitudes, poor transportation facilities, concerns about hospital expenses and refusal to leave other children at home unattended. These factors resulted in low compliance among "at risk" women who had been referred to regional hospitals. Additionally, women complained that physicians at the referral level did not cooperate or show as much enthusiasm as nurse-midwives at the community level (W.H.O, 1994).

According to Okafor (2000), The Prevention of Maternal Mortality Network studied the physical and social obstacles to the use of emergency health services in ten rural communities in Ghana, Nigeria and Sierra Leone. They found that the underlying causes to poor maternal health included poor health practices often shrouded in traditional beliefs and customs, lack of knowledge about risks associated with pregnancy and childbirth contributing to a delay or total failure. in the use of the few available health services on time and professional rivalry among the providers making coordination and smooth referral of emergency complications difficult and at times impossible. The PMMN report also classified delays in the treatment of obstetric emergencies into three levels. Phase 1 delay pertains to delays related to the decision to seek care on the part of the individual, the family or both. Phase 2 delays occur when there are delays in reaching an adequate health facility once the decision is made. Phase 3 delays describe those circumstances when the individual is unable to receive adequate care at the hospital even though she got there in time to be saved.

In the utilization of health facilities, Djukanovic & Mach, (1975) describes a "by-passing" phenomenon which may occur if people lack confidence in their health institutions in their local areas, when there is inadequate service quality, failure to meet peoples expectations and when people experience staff arrogance or discrimination. In such instances, people will ignore these health facilities preferring when ill to go to urban modern hospitals. This leads to the underutilization of certain health units and at the same time overburdens hospitals that should more properly be providing secondary or tertiary care and not primary care. As an example Mcintyre (2002) reports that in Ghana, regional and teaching hospitals are often congested with simple cases that could be treated at health centers or district hospitals.

2.3 CONSTRAINS ASSOCIATED WITH HEALTH STAFF

The Health Sector Five- Year Programme of work report in 1996, stated that many people perceive that the quality of health services in Ghana is poor and therefore choose alternative treatment sources. Confidence is undermined by frequent shortages of drugs and medical supplies, long queues, the absence of emergency services and poor staff behaviour which is often perceived as uncaring, demoralizing and financially motivated. In addition, patients have difficulty reaching facilities during working hours because these often accord with staff rather than client convenience.

The study of Okafor (2000) also indicated that the availability of physical structures did not necessarily translate into availability of services. This finding was based on the fact that in most health centers, there was no material to work with and medical staff who were not paid for months deserted the center. To forestall such problems in Ghana, Twumasi (2001) indicates that Ghana needs health staff who are able to operate within a societal milieu that lacks sufficient well-equipped hospitals to meet the high demand for care. He suggests that a new category of health staff, as medical assistants, be trained to perform basic and routine medical duties so that doctors can perform the more specialized technical duties. Also, nurses may delegate menial tasks to auxiliaries in a response to the need to make the best use of trained personnel.

2.4 EFFECT OF CONSTRAINTS ON MATERNAL AND INFANT MORBIDITY AND MORTALITY

The World Health Organization (1994) in a study concerning guidelines for development, adaptation and evaluation of home based maternal records reported that the maternal, neonatal and perinatal mortality rates are unacceptably high in most developing countries. They found that most deaths during the vulnerable periods associated with pregnancy and childbirth occur because of a failure to recognize the seriousness of problems and to make use of available services in good time to be saved. Though health infrastructures are inadequate, poorly furnished and not easily adequate, many of the deaths which occur can be treated using limited resources available in institutions if they were

identified in time. According to W.V.I./C.I.D.A. (1988) it is estimated that a woman who becomes pregnant in Ghana stands much greater danger, in fact, forty times or more of dying from pregnancy related causes and complications than her counterpart in Europe or America.

Twumasi (2001) also reports that before 1950, infant death rate in Ghana was as high as 250 deaths per 1000 babies born. This high rate was attributed to inadequate and poor services for the pregnant woman, lack of doctors, trained midwives, public health nurses and other healthcare workers. Between1950-70, the government established health centers and medical field units to help reduce the mortality rate among mothers and children. By 1967, the infant mortality rate had dropped to 79.1. W.V.I./C.I.D.A.(1988) concludes that presently, the causes that lead to maternal and infant deaths are frequently preventable or avoidable by taking simple precautions like going to clinics early and frequently in pregnancy, putting into practice sound advice regarding food, rest, clothing, exercise, medication and general health care.

These would prepare the pregnant woman for the stressful period of labor and delivery and ensure that the newborn enters the world in the right state of health.

Resource limitations strongly influence the availability of health services. In spite of this fact stressed by Twumasi (2001), the M.O.H,1996, (Health Sector 5 Year Programme of Work report) points out that "public expenditure on health has not been tied to stated priorities. The overall management of health services is weak and health support functions are underdeveloped. Health personnel are unevenly

distributed relative to need, their range of skills is often limited and their morale is low. Mcintyre (2002) reiterates in The Road to a Healthier Future for Ghana that many mothers die during pregnancy or delivery..... this is because people are dissatisfied with what we offer. Opening hours are inconvenient, the attitude of staff can be disrespectful and people too often do not get the care they need, especially in emergencies. In part, it is because of a lack of resources.....Lack of resources is made worse by our failure to harness what is available in communities, the private sector and health related sectors.....Three times as many people compete for each hospital bed in northern region compared with regions in the south. Our health institutions employ too few trained and technical staff compared with technical and auxiliary staff. There are also weaknesses in the way medical supplies and equipment are bought and distributed"

The Health Sector 5 Year Programme of Work report continues that linkage between the Ministry of Health and other stakeholders in health is weak while the health sector remains under funded.....The pressure for rapid results has pushed specific disease control approaches to health delivery and retarded the development of a broader based programme of basic Public Health, Maternity and Clinical services.

Omran et.al.(1987) recommends that the shortage of resources, manpower, equipment and maintenance stresses the need for seeking ways to optimize the use of whatever existing resources that are available.

CHAPTER THREE

3.0 METHODOLOGY

3.1 OVERVIEW OF STUDY AREA

The KBTH, established in 1923, is the leading of two teaching hospitals in Ghana. It is located in Korle-Gonno, a township in the capital city of Accra.

KBTH delivers the most specialized care over a full range of services and is a national referral center for all health problems. It offers undergraduate and post-graduate training in medicine and is responsible for research.

KBTH is a Budget and Management Center (BMC) implying that it is a service delivery unit that operates a budget. The entire hospital is sub-divided into eight manageable units called sub-BMC's. These are Medical, Surgical & Allied Surgery, Child Health, Pathology. Accident & Emergency Orthopaedic, Obstetrics and Gynaecology, Polyclinic and Plastics & Burns

3.2 DESCRIPTION OF STUDY AREA

The Obstetrics and Gynaecology department is made up of the Obstetrics, Gynaecology and Family Planning Units. Maternity falls under the auspices of the Obstetrics unit.

The Maternity block is made up of seven floors. The Ground floor contains the OPD for Ante-natal and Post natals , doctor's consultation rooms, Pharmacy department with dispensary, Stores, Laboratory, Medical Statistics and Documentary Unit, Ultrasound Unit, Emergency and Admission bay, Enquiries

section, Administrative Offices of Senior Nurses and a parking space for health staff, Ambulance, visitors' and patients' vehicles.

Each of the remaining six floors provides confinement services. The first to fifth floors are sub divided into East Wings, West Wings and Side wards. The sixth floor has no-wing sections but only single and double side wards.

To serve the needs of women and infants, each floor is provided with a Utility Room, Nursery, Store, Kitchen, Treatment Room, Sanitary facilities for patients and staff, Nursing Sisters Offices. Doctors' Rest Room and administrative Offices and a Day Room where patients can watch television as well as receive visitors.

One Operating theatre is each located on the first and second floors.

Labor wards for delivery are also sited on the first and second floors.

The West wing of the third floor serves as the Neonatal Intensive Care Unit (NICU) where neonates, pre-terms, very ill or big babies are cared for.

The department provides twenty-four hour emergency service throughout the year.

3.3 STUDY POPULATION

Different target groups were used to determine the constraints of healthcare delivery at the Maternity department. This is because maternal healthcare delivery is a comprehensive service to which all these categories contribute to make complete.

The first category are professional health staff working at the KBTH maternity department. These comprise midwives, nurses and doctors.

The second category are staff who render support services at the maternity department. These comprise staff of laboratory, stores', dispensary, records, security, sanitation, ward orderlies and accounts clerks.

The third category are women who were on admission. They are used to determine constraints from the consumers' point of view.

Finally, staff at the finance department of the hospital are used as a source of information on financial issues pertaining to the maternity department.

3.4 SAMPLING PROCEDURE AND SAMPLE SIZE

A multistage sampling technique was used to obtain respondents on admission. First, the maternity department was stratified according to the existing floors. This gave six floors from which respondents could be chosen.

On floors 1-5, patients were stratified into east wing, west wing, side ward and floor patients to help capture the varying circumstances of the patients. This is because the researcher was informed that the west wing housed patients who had freshly undergone caesarean sections, east wing housed self delivered and C/S cases ready for discharge, side ward housed ante-natal cases yet to deliver and on the floor were patients who had overstayed their discharge.

Within each group, a simple random sampling procedure was used to select respondents by numbering the patients and drawing lots.

The total number of patients on admission varied between floors. To obtain samples of equal sizes from the various floors, a proportional stratified sampling technique was used. By this means, one –fifth of the total number of patients on each floor was sampled. The total number of patients sampled is presented in Table 3.1.

Table 3.1 NUMBER OF PATIENTS SAMPLED

Floor	Total number of patients on admission	Number sampled
1	56	11
2	65	13
3	49	10
4	80	16
5	40	8
6	18	4
TOTAL	308	62

A non random sampling procedure was used to sample professional Health staff, auxiliary staff and other administrative personnel. They were sampled according to who was on duty at the time of the study. Therefore the proportions of professional and non professional staff sampled may not be representative of the total staff available at the department.

3.5 DATA COLLECTION TECHNIQUES

Both quantitative and qualitative data was collected for the study between the 15th-27th of June 2003.

Quantitative data were obtained from the Matron of the Maternity department. These were the 1997-2002 annual Obstetrics patients' statistics.

Other quantitative data was the nursing staff returns for various grades and nursing staff movement in 2003.

The list of medical doctors in charge of the maternity department was also obtained from the office of the head of Obstetrics and Gynaecology.

These were supported by reviewing the KBTH 2000 annual report that was available at the Nursing school library.

To obtain qualitative data, individual questionnaire was administered by interviewing sampled women on admission. The questionnaire was subdivided under five main headings.

The first was demographic data to ascertain age, marital status, parity and residence.

The second heading addressed the socio-economic status of patients.

The third heading sought antenatal data such as gestation of pregnancy at first antenatal visit, number of antenatal visits prior to admission and financing of antenatal care.

The fourth heading covered admission data such as reason for admission, length of stay, treatment received, access to drugs and financing admission bills.

The fifth heading determined patients perception of services.

A trained teacher was employed as an assistant and trained in the use of questionnaire and interviewing techniques.

Permission to interview the patients was sought from and granted by the Matron of the maternity department. Prior to interviewing, the matron notified the nursing sister in charge of the fifth floor by telephone and researchers were asked to start from there. After completing the fifth floor, an auxiliary was asked to introduce us to the fourth floor sister-in-charge. This downward procedure was followed until the first to fifth floor interviews were completed.

Thereafter four interviews were conducted on the sixth floor.

To obtain additional qualitative data, an in-depth interview was held with the following persons:

- 2 nurses on each floor
- Matron of maternity department
- Head of first floor labour ward
- Three staff of the Statistics and Records department
- KBTH Budget Coordinator in charge of institutions accounts
- Three nurses of the ante/post-natal care section
- One ambulance staff
- Sub-Bmc stores manager
- Two orderlies
- One pharmacist
- Two doctors

By observation, the quantity and conditions of the bedding and sanitary facilities in the wards were assessed.

Interviews on the floors were conducted on two days. On Friday, 20/06/03 and Tuesday 23/06/03, women were interviewed on the fifth, fourth, third and second, first and sixth floors respectively.

3.6 DATA PROCESSING

From the field, the researcher examined all the completed questionnaires to ensure that all answers to questions were not ambiguous.

Analysis of data was done using the Statistical Package for Social Sciences version 10.

Results on quantitative data have been summarized in frequency tables and graphs.

Qualitative data and observations made are analyzed descriptively to determine how they contribute to constraints on healthcare delivery.

CHAPTER FOUR

4.0 ANALYSIS AND DISCUSSION OF RESEARCH FINDINGS

The results obtained are analyzed using descriptive statistics methods.

This is done by summarizing outcomes of variables from both primary and secondary data sources into tables, graphs, diagrams and charts.

The qualitative data and observations made are discussed to ascertain their relevance to maternity healthcare delivery constraints.

Findings are organized under the following headings:

- Demographic characteristics of maternity healthcare consumers.
- Staff at post as of June, 2003.
- Antenatal care services and constraints
- Delivery/Lying-in care services and constraints

  -Neonatal Intensive Care Unit (NICU)

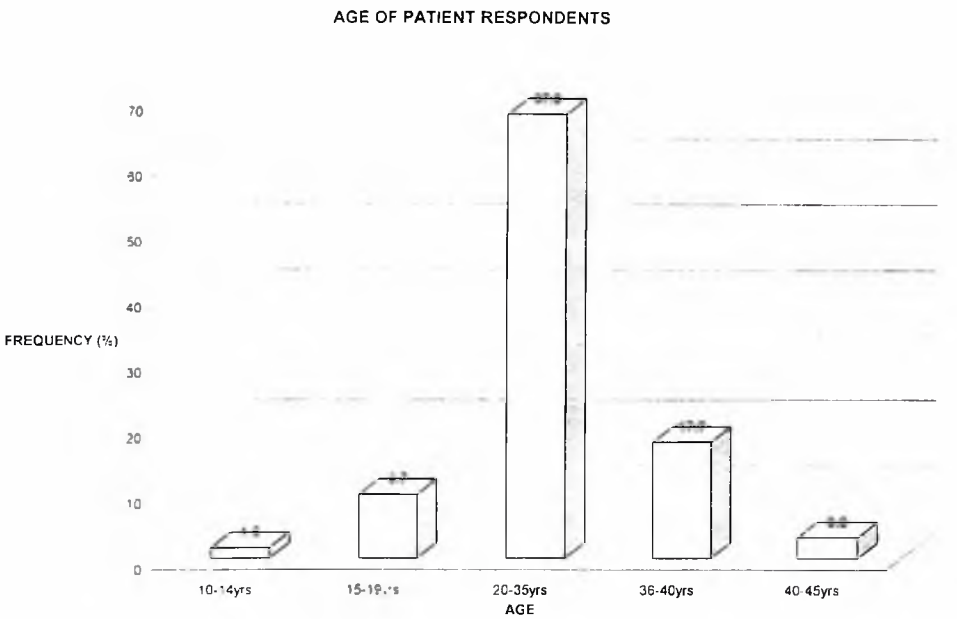
  -Discharging patients
- Maternal Mortality
- Postnatal care services and constraints
- Effect of constraints on medical personnel who deliver maternity services
- Constraints of support services
- Why the constraints exist
- Efforts being made to reduce constraints

4.1 DEMOGRAPHIC CHARACTERISTICS OF MATERNITY HEALTHCARE CONSUMERS

4.1.1 AGE OF RESPONDENTS

The age distribution of respondents is shown in figure 4.1

Figure 4.1 AGE DISTRIBUTION OF PATIENT RESPONDENTS



The ages of respondents are grouped into the early teens (10-14 years), late teens (15-19 years), low risk age group (20-35 years) and high risk age groups of over 35 years (36-40 years), and (40-45 years).

The highest age group among the respondents are women in the low risk category. 67.8% followed by 20.9% who are in the high risk age group of 36-40 years. The lowest age group are in the early teens category 1.6%.

By age classifications, 67.8% of the respondents are low risk pregnancies while high risk pregnancies classified as teenage and over 35 year old pregnancies are 32.2%. As a tertiary and referral health institution, the proportion of risk cases could have been higher than low risk cases which are intended for the primary and secondary health institutions. The proportions observed could be due to the fact that risk cases are also referred to other regional hospitals in Accra such as the 37 Military Hospital, Police Hospital or Ridge Hospital.

The proportion of women over 35 years was 20.9%. This was higher than the national average of 12.3% recorded for 2001 in the Reproductive Health Programme 2001 report. This could be because KBTH has specialist facilities where most of such high risk cases are referred.

Also, the proportion of 9.7% recorded for older adolescents or late teens (15-19) years is below the national average of 14.1% recorded in the 2001 RHP report.

A possible explanation is that most teenage pregnant women would shy away from the bigger hospitals and prefer maternity homes or primary healthcare institutions. It was noted that the few who attend KBTH are those brought in by their relatives.

4.1.2 MARITAL STATUS OF RESPONDENTS

Thirty eight (61.3%) of the women are married. 27.4% were impregnated while dating, while 11.3% are living together but not married to the child's father.

4.1.3 PARITY OF RESPONDENTS

Forty- two percent of respondents are primiparous, 22.5% are expecting their second child, 19.4% are expecting their third child and for the remaining 16.1%, this is their fourth or more child.

The highest group of 42.0% for parity one could be because the hospital has the priority of providing maternity healthcare for all first pregnancies which are classified among risk categories.

4.1.4 RESIDENCE

Ninety percent of patient respondents live within Accra. Only 9.7% women live outside Accra. It was noted that women who reside outside Accra live in the immediate surburbs of Accra such as Kasoa and Weija. The absence of patients from other regions could be because all regions now have district and/or regional hospitals which provide maternity healthcare for women within those regions.

4.1.5 EDUCATIONAL STATUS OF RESPONDENTS AND THEIR SPOUSE

The educational status of pregnant women and their child's father is shown in figure 4.2, below.

Figure 4.2. COMPARATIVE EDUCATIONAL STATUS OF PREGNANT WOMEN AND SPOUSE

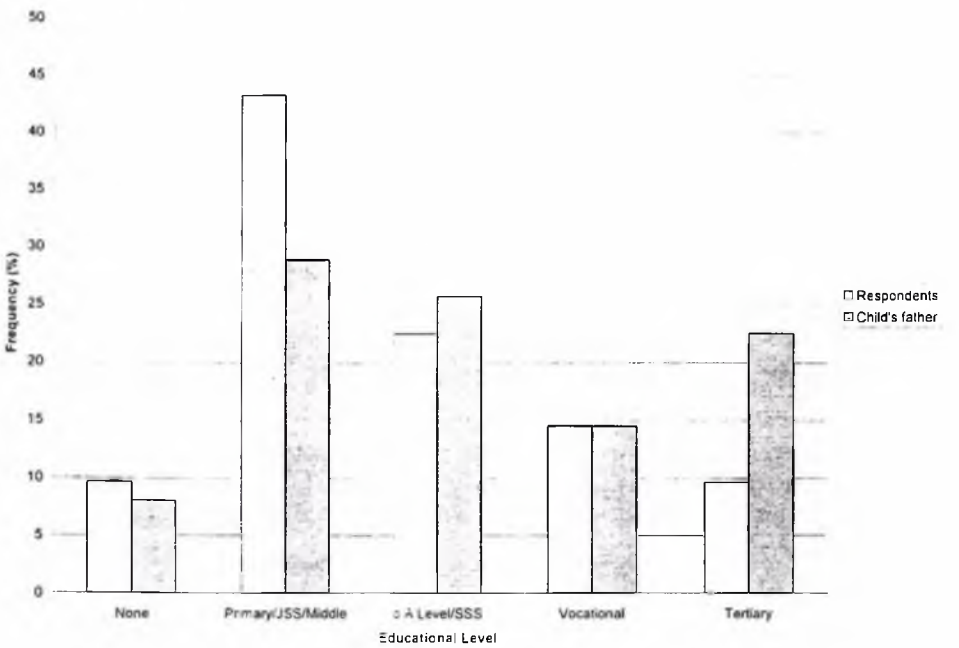


Figure 4.2 shows that at the basic levels of education, more women are educated than men. At the secondary and tertiary levels of education however, more men than women are educated. The trend observed could be reflective of the drop out of girls at higher levels of education due to such problems as teenage pregnancy, early marriage and parental preference for the male child to pursue higher education.

4.1.6 OCCUPATION OF RESPONDENTS

The main occupation of the respondents is trading 45.2%. This is followed by 29.0% who are artisans such as dressmakers and hairdressers.

Thirteen percent are salaried employees of private or public organizations and the final 12.9% are unemployed. A total of 87.1% of the women are therefore in some form of employment, from which they could obtain income to partly or fully finance their maternity healthcare needs.

4.1.7 OCCUPATION OF RESPONDENTS' SPOUSE

Occupation of respondents' partners could determine the presence of financial support for women during pregnancy. According to the respondents, 41.9% of partners are artisans such as Plumbers, Construction workers, Welders and carpenters or professionals such as musicians and footballers. Twenty-one percent are salaried workers in private or public organizations, 17.8% are traders 8.0% are unemployed while 11.3% of the respondents said they did not know the occupation of the child's father.

4.2 STAFF AT POST (JUNE 2003)

4.2.1 NURSES AT POST

Data available for staff at post could not be obtained for Maternity/Obstetrics only. This is because Obstetrics and Gynaecology is one department served by the same staff. The staff strength of the Maternity department is therefore analyzed based on data for both O&G.

Table 4.1. O&G NURSING STAFF AT POST AS AT JUNE 2003.

	PROFESSIONALS											NON-PROFESSIONALS			
Staff Category	DDNS	AG. DDNS	PNO	SNO1	SNO2	NO1	NO2	MS	SSN	SSM	SM	SUP	PEN	SWA	HCA
Number at post	_	1	21	13	5	32	_	73	11	33	37	17	_	3	16
Total Number present						262 (+ 1 finalist) =263									
Actual number required						357									
Extra Number required						94									

Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON. JUNE,03.

The nursing staff at post are made up of 227 professionals and 36 non professionals. These staff serve both the Obstetrics and Gynaecology departments. Nurses in the category of D.D.N.S.(Deputy Director of Nursing services) are purely administrative staff, P.N.O's (Principal Nursing Officers) are Sisters'-in-charge of wards and all other categories work directly with patients either in the OPD's or wards.

The department has a shortage of 94 nurses. To make up for this gap in the work schedule, administrative staff often take up OPD and ward responsibilities in addition to their normal work schedule.

4.2.2 DOCTORS AT POST (JUNE 2003)

Table 4.2. DOCTORS AT POST (O&G) AS AT JUNE 2003.

TEAM	DUTY FLOOR	CONSULTANTS	RESIDENTS	M.O	H.O
A	4th	5	2	3	5
B	2nd	4	2	3	5
C	3rd	4	2	2	4
D	1st	4	3	2	5
E	5th	4	2	2	4
Total		21	11	12	23

Source: DOCTORS DUTY ROSTER, O&G, JUNE, 03.

Table 4.2 shows doctors at post for both Obstetrics and Gynaecology as of June 2003. The Doctors are made up of a total of 21 Consultants, 11 Resident Doctors, 12 Medical Officers, and 23 House Officers.

As the table shows, a team of doctors, made up of a number of consultants, Residents, Medical Officers and House Officers are in charge of each floor. The duty roster (See appendix II) for doctors indicate that during the week, each team is scheduled to work one day each at the Gynaecology clinic, Theatre, Obstetrics and Emergency.

During the course of the month, each team works two weekend days.

In each team, the House officers are junior doctors on rotation who would soon move on to another department.

Also, Medical Officers could pursue postgraduate studies, in which case they would be on rotation between district hospitals as well as other departments within the hospital, and finally travel abroad for a period of time. They would therefore be unavailable to render maternity services. The records show nine doctors on district rotation.

No specific team of doctors is in charge of the sixth floor. This is because each of the 5 teams is allocated an amount of bed space where it admits those patients who can afford the sixth floor charges of 120,000.00 cedis for single rooms and 100,000.00 cedis for double rooms. A doctor whose patient is on the sixth floor therefore visits and treats that patient only.

4.3 ANTENATAL CARE SERVICES AND CONSTRAINTS

Antenatal care is the healthcare and education given during pregnancy. It is a preventive healthcare service with the prime objective of early diagnosis of abnormalities and the detection of potentially threatening conditions in either mother or fetus.

The components of antenatal care as given by the KBTH maternity department are registration of patient, reviewing medical history, general examination (temperature. blood pressure, weight , height , gait, deformities), obstetric examination. physical examination, laboratory examination, routine prescription of drugs, client education and the treatment of complications, if any.

Out of the 62 respondents, 18.0% attended antenatal clinics at private hospitals or maternity homes, 27.0% attended antenatal clinic at other government health

institutions and 55% obtained antenatal care at the KBTHmat. This shows a 55% preference among respondents for the KBTHmat. The reasons given by patients for preferring KBTH are:

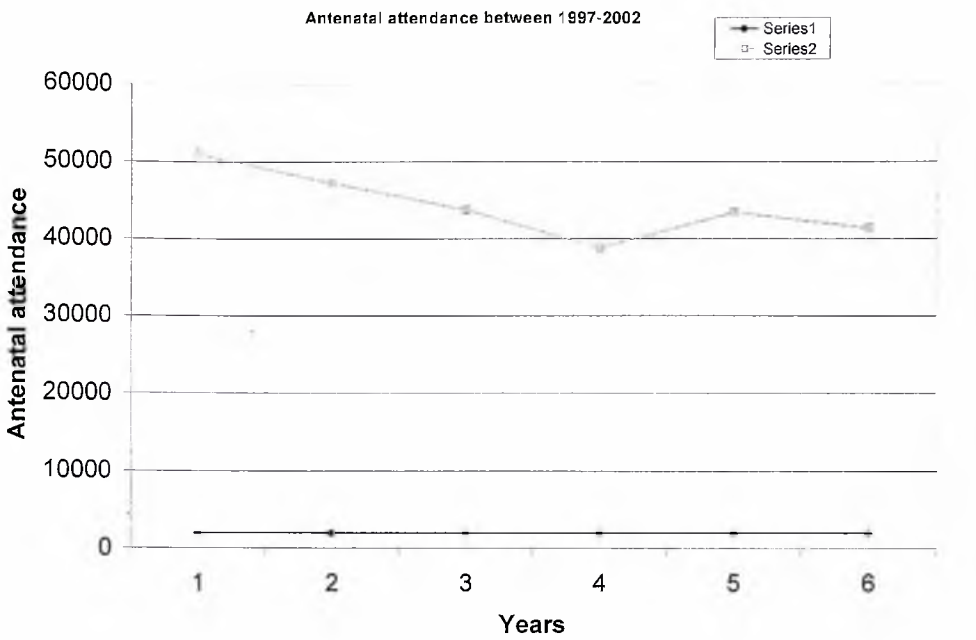
- Service charges and drug costs are comparatively cheaper than private health institutions;
- the expectation of expert medical care
- Prompt emergency care available twenty four hours a day
- the need to be under the care of personal physicians who are staff of the hospital,
- KBTH being the 'last stop' where all emergencies would be referred
- being former patients with peculiar health problems who are instructed by doctors to report at KBTH anytime there was a new pregnancy and
- patients are given medical care whether they deposit or do not deposit money.

Eighteen percent of respondents chose to access antenatal care at private health institutions because

- they wanted more privacy,
- expected that proportionally more health staff would be available to attend to their individual needs as and when they needed attention and
- were avoiding KBTH because they had heard that Caesarean Sections were being rampantly done.

Antenatal attendance between 1997 and 2002 is shown in the Figure 4.3 below.

Figure 4.3 TREND OFANTENATAL ATTENDANCE FROM 1997 TO 2002.



Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE 2003.

Figure 4.3 shows that antenatal attendance decreased between 1998 and 2000 and then increased in 2001 and 2002. This observation is consistent with the declining trend in ANC coverage observed in the Greater Accra region between 1998 -2000 as reported by the 2001 annual report of the Reproductive Health Programme. The number of women who registered as antenatal attendants in 1997, 1998, 1999, 2000, 2001 and 2002 are 47,271, 51,012, 43,785, 38, 829, 43, 480 and 41,422 women respectively.

These figures give a daily antenatal attendance range of 147-193 patients per day between 1997 and 2002 with an average of 167 patients per day. This

attendance rate is considered to be high by health staff when compared to other health institutions with equal antenatal space. The high attendance rate could be because the hospital is easy to access and services are more affordable for a number of women who live in Accra.

4.3.1 ROUTINE ANTENATAL CARE SERVICES

The health staff on duty to serve the health needs of these patients are made up of:

- Two nurses taking history and records
- One nurse testing urine for glucose and protein
- Two nurses checking blood pressure and prescribing laboratory tests
- One nurse checking weight and height
- Five consulting rooms for ANC with at least three doctors available after 9:00 am.

This available staff size gives a patient to health staff ratio of 1: 167 for urine and weight/height checking units, 1: 84 for record taking and BP units and 1: 34 for doctors giving consulting services.

This high ratio means that nurses must sit for long periods serving patients. In performing their duties, nurses are seen getting up frequently to stretch themselves or take short breaks of about five minutes. This could be because nurses are tired of sitting at one place and the short breaks could lead to more efficient work being done.

Nurses on duty explained that many patients arrive as early as 6:30am with the hope of leaving early for work or back to their homes. However, the small staff size in addition to the outmoded medical equipments (specifically BP apparatus) being used, slows down work performance and delays receipt of treatment. This causes a queue to form and each patient spends a substantial amount of time at each unit. The above scenario has its own effect on patients who are often seen quarreling among themselves whenever any patient is suspected to have jumped the queue.

Also. after routine examinations, patients often have to wait between one to three hours for doctors to arrive for consultation services. This creates overcrowding at the antenatal clinic as patients who arrive late add up to the early arrivals. It is therefore a common sight to see many antenatal patients occupying pharmacy or postnatal unit seats with a few standing and waiting for their turn to sit down.

Commenting on this issue, doctors explained that their daily schedule requires them to first attend to lying -in patients or any emergency needs before reporting for antenatal work. This has become necessary in view of the reduced number of doctors at the hospital. Also, the duty roster requires that doctors' who are scheduled for antenatal clinics, are also in charge of any emergencies occurring on that day. As a result, a doctor may not report at all for antenatal duty or may be called in the middle of the clinic to render an emergency service. In such instances, the doctor's patients would have to consult other doctors available.

Discussion with antenatal patients revealed that many of them dislike this change of doctors. This is because after the first visit, the women develop a personal

preference for the doctor who gives them consultation services. Some of the patients said when asked to consult another doctor, they refuse and go back home, especially when they do not feel sick on that particular day. Other patients said they seek out their preference doctors and obtain the care they wish to have. Reasons given for this preference are that each doctor prescribes different drugs to his patients and has his personal style of treating patients.

4.3.2 FINANCING ANTENATAL CARE

Hospital user fees are charged for antenatal care services. At the first clinic visit, a patient pays fourteen thousand cedis and all subsequent visits are charged ten thousand cedis as at June 2003. This figure has been reviewed upwards from seven thousand, five hundred cedis in 2002 and five thousand cedis in 2000 to commensurate the rising cost of inputs.

Depending on the nature of care required, a patient has to fund her user fees, laboratory tests ,Ultrasound tests/Scan and purchase her drugs.

Antenatal clinic nurses revealed that many patients have the notion that medical services at the hospital are rendered free of charge. Consequently, many patients come to the hospital expecting free services or having all drugs and laboratory tests free after paying the daily user fee. The Matron of the department said that unfortunately, this situation does not exist and that services at the KBTH have never been free.

Patients interviewed on this issue said that the idea of 'abban' which literally means government hospital, connotes free or at least very cheap services available for patients.

Patients said they spend about 16,000 cedis for routine check-ups only and 140,000 to satisfy all requirements (user fees, drugs, laboratory tests and scan).

Out of the 62 patient respondents, 77% said they could afford all these costs while 23% said they could not. Fifteen percent% of those who could not afford all the costs state the Scan as the most expensive (The charge for a scan ranges between 35,000-45,000 cedis) , followed by 8%of respondents who could not afford laboratory and drug costs.

Patients who could not afford these medical requests refrain from attending subsequent antenatal clinics on scheduled dates for fear that they would be reprimanded and not treated. This view is supported by ANC nurses who said certain treatments are based on medical findings, as such, pregnant women who delay tests and appropriate receipt of care increase their chances of complications associated with pregnancy.

Also, all pregnant women are expected to request another person to donate blood on their behalf at the KBTH blood bank. This store of blood is relied on for patients in the event of emergencies that demand blood transfusion for patients.

Nurses complain that many patients delay honoring this request so that in the event of emergencies, it becomes the nurse's responsibility to make arrangements for patients' relatives to replace blood taken out of the blood bank to save the patient's life.

Patients interviewed on this issue said the first person they ask to donate blood on their behalf is their spouse. Some spouses agree and go to donate immediately. Others however, assume that blood can be paid for when the need arises and therefore do not attach any importance to the request.

Other spouse's also express some fear of the act of donating blood.

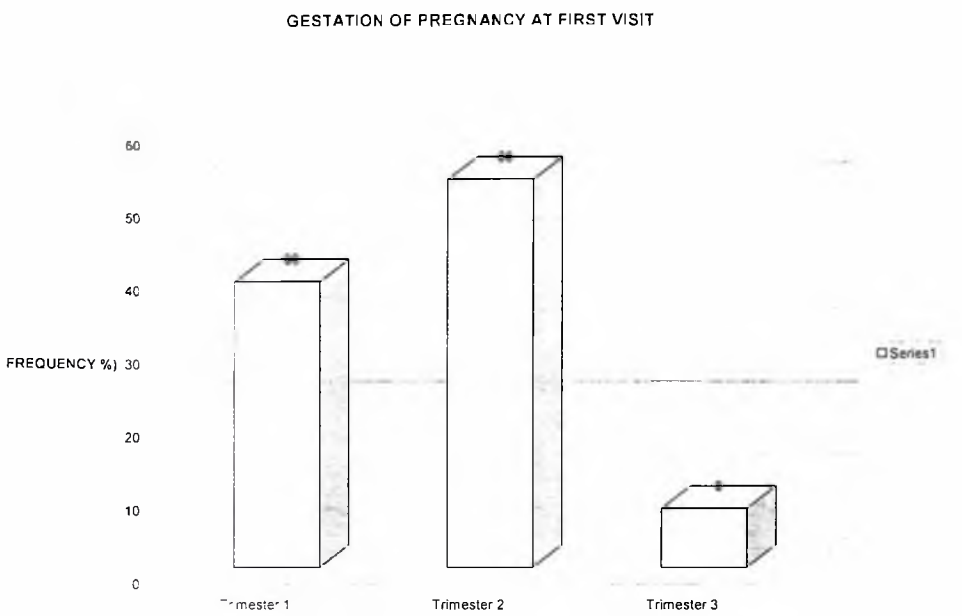
Unfortunately, these delays make antenatal patients uneasy because they are queried by nurses each time they attend clinic. To salvage the situation, some pregnant women bring in relatives or close friends to donate the blood for them.

It is also required that women start attending antenatal clinics early, preferably in the first trimester. This would allow for early screening procedures to be performed, risk factors detected and timely intervention and management procedures undertaken. The standard recommendation for antenatal attendance according to the World Health Organization is that

- Monthly antenatal visits should be made from the onset of pregnancy up to the 28^{th} week,
- Two week (fortnightly) visits should be made from the 28^{th} to 36^{th} week of pregnancy and
- Weekly visits made from the 36^{th} week until delivery.

Figure 4.4 shows the gestation of pregnancy at first antenatal visit of women interviewed.

Fig.4.4 GESTATION OF PREGNANCY AT FIRST ANTENATAL VISIT



Thirty-nine percent of women interviewed first visited the hospital within the first three months of pregnancy, 53% between 4-6 months and 8% sought medical attention after the sixth month. This results show that the majority of pregnant women first accessed antenatal care in the second trimester. This is consistent with observations made in the 2001 Reproductive Health Report which stated that

" majority of clients reported in the second trimester (45.7%) and still a sizeable proportion (21.4%) reported in the third trimester"

Reasons given by first trimester attendants are they

- felt sick from the onset of pregnancy and therefore were obliged to seek medical attention,
- wanted to obtain appropriate medical care in order to ensure a full term pregnancy and a safe delivery.

Reasons given by second trimester attendants are

- they felt healthy and therefore did not see the need to attend hospital
- though they wished to attend hospital earlier, they postponed it due to financial constraints.
- Relied on knowledge and experience from previous pregnancy to assess their health status and when to start attending antenatal clinic.
- They did not know they were pregnant until after the third month.
- They were receiving treatment from traditional herbalists and therefore did not wish to mix hospital drugs with local drugs. Traditional treatment received was mostly to manage pregnancy induced hypertension. The women who accessed this treatment said they presently had no symptoms of hypertension unlike previous pregnancies.

It is possible that delayed antenatal clinic attendance until the second trimester would have little negative effect on birth outcome if the pregnant woman has good nutrition, rest and is healthy. This is based on the fact that second trimester attendants who had already delivered, had normal and healthy babies.

Women who first attended antenatal clinics in the third trimester did so mainly due to financial constraints.

Commenting on this trend, ANC nurses said delayed antenatal clinic attendance prevents pregnant women from receiving medical care needed to sustain pregnancy. Luckily, some patients do not develop any complications with delayed antenatal attendance. A few others, however, could have hidden health problems which are worsened as the days go by without medical attention. Patients in this category could later develop complications that demand that they be admitted into hospital and given medical treatment.

Patients who delayed antenatal visits, in addition to those who failed to report for subsequent visits as discussed earlier, frequently fail to or just attain the minimum of four antenatal visits recommended by the W.H.O.

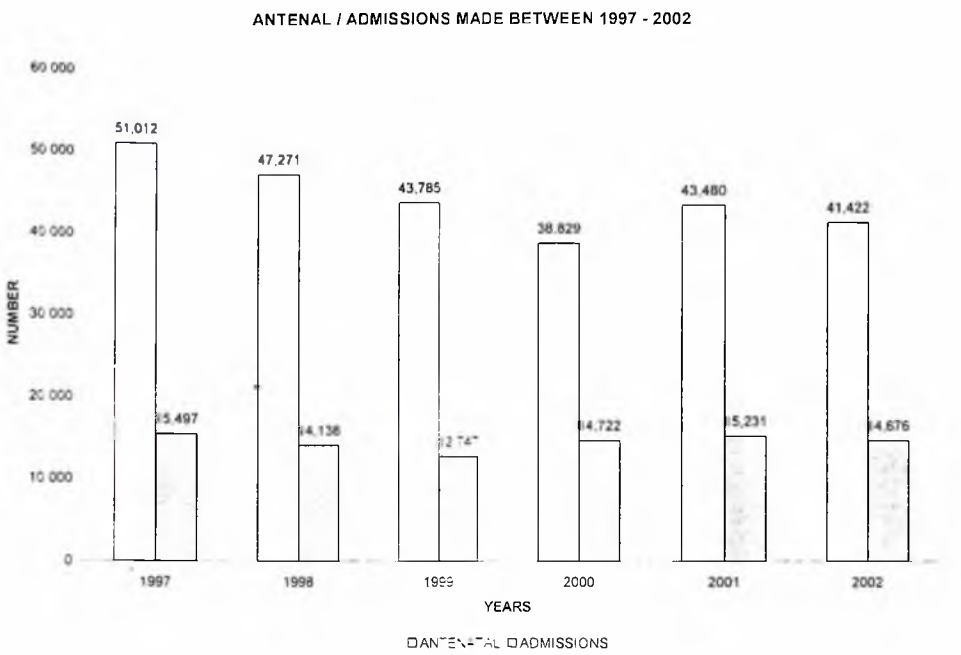
Out of the 62 women interviewed, 19% attended antenatal clinics between 1-4 times. 69% between 5-10 times and 12% between 10-14times. This gives an average of 5-10 visits which falls within the range of 0-10 visits recorded by the RHP report 2001 for the Greater Accra region.

4.4 DELIVERY / LYING IN CARE SERVICES AND CONSTRAINTS

Admission / lying in services imply confinement of patients within hospital wards for a length of time. It allows the health of patients to be closely observed and monitored by health staff for appropriate medical care to be given.

AT the KBTH, patients are admitted for antenatal, delivery and postnatal care purposes.

Fig. 4.5 shows a comparison of antenatal attendants and admissions made between1997-2002.



Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE, 2003.

Figure 4.5 shows the proportion of antenatal attendants admitted into hospital annually.

Between 1997 and 2002, the maternity department admitted a total of 86,988 patients with an average of 14,498 annually and 1,208 patients monthly.

On a daily basis, this translates into an average of 40 admissions per day.

This shows that out of every 167 antenatal attendants (refer fig.4.3), 40 are eventually admitted. There is therefore a vast disparity in the number of antenatal attendants and number of women who are eventually admitted into hospital.

The gap identified is due to the fact that many patients who are identified as low risk cases are sent back to deliver their babies at public health institutions near their homes. This is one of the strategies adopted by the health staff to decongest the hospital.

Also, some patients who attend antenatal clinics stop half-way and choose to deliver their babies elsewhere.

Data are not available on bed space between 1997 and 1999. However, records available from the maternity Matrons office indicates a bed space of 254. With the exception of the sixth floor which has a percentage occupancy of 29.74%, floors one to five have percentage occupancy rates of 94.85%, 99.32%, 93.75%, 135.15% and 79.08 respectively. This means that at any time, most of the beds in the wards are occupied by patients.

A situational analysis at the time of the study (See table 3.1) reveals that two staff nurses and one doctor per session are in charge of between 40-80 mothers and an average of 26 babies on the various floors.

Also, all the beds on floors one, two four and five are occupied with extra patients lying on the floors. Only the third and sixth floors have available bed space. Though there is bed space on the third floor, some patients are lying on the floor.

Out of the 62 interviews conducted, 45% are referred cases from private and government institutions and 55% are the hospitals own cases.

Nurses interviewed in lying-in wards explain that the admission figures are made up of the hospital's own cases and referred patients. Patients are referred to the hospital when they have any of the following risk factors:

- Women under five feet tall (150cm) or women with deformities of the pelvis or lower back.
- Girls in their teens (ie before 20 years)
- Women over the age of 35
- Women having their first child or women with more than four previous deliveries,
- Women whose babies are not positioned normally (breech, transverse...)
- Women with sickle cell disease or anaemia, diabetes, multiple pregnancy (twins), hypertension (high blood pressure), history of eclampsia, retained placenta, hemorrhage or other complication with a previous delivery,
- Previous caesarean section or assisted delivery.

These give the hospital a wide range of cases that are referred to it for admission in addition to its own patients.

According to the matron, two nurses per unit is inadequate considering the care required by lying -in patients. For instance, the work schedule of nurses in lying-in wards comprise of the following:

- Administrative duties
- Taking and monitoring temperature and BP of patients,
- Giving injections to those patients who need them
- Giving drugs to patients at scheduled times

- Fixing and monitoring IV infusions
- Responding to patients and babies demand for care
- Monitoring first stage labour patients in wards
- Preparing patients for the theatre
- Dressing wounds of C/S patients
- Taking care of personal hygiene needs of new C/S cases
- Preparing hot water for patients who need it for breakfast
- Ensuring that patients bath
- Counseling patients going home on how to take care of themselves and their babies
- Monitoring general health status of patients and calling doctor when necessary
- Allocations and adjustments of beddings ensuring that each patient has a sleeping place.
- Going on patient-rounds with the doctor when he arrives to fill him up on the current situation of each patient.
- Monitors the health of babies in the ward.

All nurses interviewed said this work schedule keeps them fully occupied.

The duty schedule for each team of doctors is made up of

- One day at the Gynaecology clinic
- One day at the Obstetrics clinic (Antenatal clinic) & Emergency
- One day at the theatre
- Report for duty two weekend days in a month.

Prior to taking up each day's schedule as listed above, doctors attend to lying in patients one by one. The condition of each patient is assessed and the doctor either prescribes drugs, laboratory tests, caesarean section, discharge, blood transfusion, etc.

With the current lying in patient population, by the time doctors finish and are ready to report for antenatal or Gynaecology clinics, the time is well past 11:00am. At the clinic, the doctor works till the last OPD patient is seen. When the need arises, the OPD doctor could be called in between consultation services to attend to emergency cases brought in.

There is often one doctor left on duty per floor. Doctor's on duty stay overnight and attend to lying in patients 24 hours.

The lack of adequate staff, as explained by a doctor, has persisted for more than six years now. The cause, as he narrated, could be because health staff are deserting the health service because they are dissatisfied with the working conditions. This means that staff are frustrated when they cannot render services at a rate commensurate with the influx of patients, when there is a lack of equipments needed to provide healthcare for a patient, because they are dissatisfied with their financial rewards, because there is irregular allocations of personal items such as uniforms which could come in biannually, the lack of official accommodation for a majority of staff, lack of transport facilities especially needed by afternoon duty staff who leave the hospital after 8:00pm, funding a greater portion of their own medical bills when sick, working extra hours on emergency cases and often staying overnight when they are not scheduled to do

so and confronting a high patient size each day. Not satisfied with their working conditions, many health staff have resigned over the years. Data was only available for resigned nursing staff in the first six months of 2003.

The table below shows the number of nursing staff the department has lost from January to June 2003.

Table 4.3 STAFF (NURSES) MOVEMENTS FROM JANUARY TO JUNE 2003

Reason for movement	Number	Rank
Posting to other department	2	S.S.N., N.O.
Resignation	5	N.O., S.N.O.(2), S.S.M.,S.S.N.
Retirement	3	D.D.N.S., M.S., S.S.N.
Vacation of post	1	N.O.
Death	2	M.S. (2)

Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE 2003.

The table shows that within six months, the department lost 13 nurses. Out of these, one was an administrative staff and twelve were ward nurses of different ranks. To make up for lost staff, nurse administrators work in the wards in addition to their administrative responsibilities.

Other circumstances considered by nurses as constraints within which maternity care is delivered are;

- Partly torn mosquito nets which leave ample space for mosquitoes to enter the wards. Patients with babies therefore keep watch over their babies at night for fear that they might develop malaria. The presence of mosquitoes in the wards defeats the aim of the facility in trying to prevent illness.
- Lack of refrigerators. At least 2 fridges are needed per ward. One for storing drugs and one to store food for patients. When asked about a fridge seen in one of the wards, one nurse said" oh, that fridge is twenty years old....when you put water inside, it will boil...'enye kwraa' (not good at all)" The lack of refrigerators mean that patients drugs needing refrigeration must be stored elsewhere in the department or hospital. This would give additional work to the health staff who must leave their wards to deposit and collect the drugs when needed. Also, without fridges, drugs would expire leading to a waste of financial resources.
- Lack of a television set especially needed for patients who are admitted for up to three months. Patients staying in the hospital for extended periods of time often seemed depressed. Television programmes therefore liven them up.
- Nurses purchase their own thermometers and are not refunded. This has become necessary because the needs of the highly populated patients in wards can only be met by using digital/electronic thermometers which reads faster and does not break. The fact that health staff must purchase

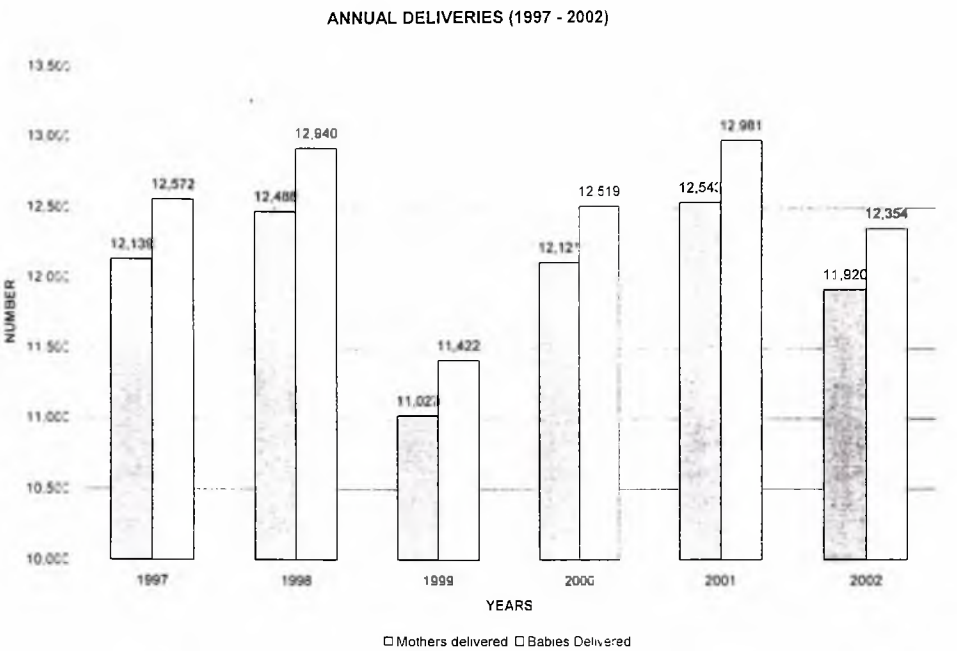
their own thermometers is evidence of the lack of adequate financial resources at the hospitals disposal to purchase medical equipments.

- Lack of stoves to heat left over foods for patients. The hospital does not serve supper to patients. As a result, patients mostly depend on supper brought from home. Some patients may have leftover foods which they would wish to eat the next day. The absence of stoves in the wards means that patients must eat the foods cold.
- Lack of a generator as an alternative source of current in the event of power cuts. One patient said she has witnessed power cuts four times between seven and nine o'clock in the evenings within one week. During power cuts, the wards have two or three kerosene lanterns which are used. Patients complain that the lights off create a lot of fear amongst them, especially in those scheduled for theatre the next day. In the darkness, patients said they must rotate a patient's torchlight in caring for their babies. Also, when the lights are off, the night duty doctors do not come round to check on patients.
- There are only few patient chart holders. Nurses must therefore improvise new ways of keeping patients documents together in the wards. Some folders placed on the beds frequently have papers in them flying away.
- There are only a few drip stands. For the majority of patients, nurses must device new ways of fixing their drips on them. This is often done by hanging drips on the bed poles and throwing them overboard curtain poles for support.

- Mattresses and bed linen available are not sufficient. Many patients must therefore use their own bed linen.
- All categories of patients are roomed in the same ward which is not desirable. Nurses would prefer that patients are roomed according to case types viz spontaneous deliveries, caesarean sections, anaemia, postnatal and antenatal care.
- Patient lockers are not sufficient for the number of admitted patients. Patients without lockers therefore keep their personal belongings in baskets and bags on the floor. This makes the wards look unkempt and reduces floor space, so that sometimes nurses must push items aside in order to reach patients.
- Only one apparatus for reading blood pressure is available per floor. This delays service to patients on the ward and reduces the efficiency with which nurses work.
- Some patients have very untidy behaviors. They spit on the floor, leave lavatories. sinks and baths untidy and litter the ward with their personal belongings. Dirty lavatories could be a source of infection to patients.

The effects of the high rate of admission is observed at the labour wards where babies are delivered.

Fig. 4.6. ANNUAL DELIVERIES MADE FROM 1997 TO 2002.



Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE 2003.

Fig 4.6 shows the number of mothers who delivered babies, and the number of babies delivered between 1997 and 2002. Within six years, a total of 72,238 women delivered 74,788 babies. The number of babies is higher than mothers because some mothers delivered twins or triplets.

Deliveries increased from 1997 to 1998, decreased sharply in 1999 and increased again in 2000 and 2001. The year 1999 recorded the lowest number of deliveries while 2001 recorded the highest number of deliveries.

According to the midwife in charge of the second floor labour ward, there is one midwife for every thirty deliveries made in her unit. The unit has four midwives and one or two doctors on duty per time to handle previously admitted women due for delivery. This number of health staff is woefully inadequate because in addition to patients who are brought in from the wards for delivery purposes, many emergency cases are referred from government or private hospitals that need prompt attention in order to save the life of the patient. For instance, out of the 11,920 mothers who delivered in 2002, 33.2% of the mothers were referred emergency cases. Popular among the causes for referral were :

- Prolonged labour
- Retained placenta
- Post partum hemorrhage
- Ruptured uterus and
- Others such as breech presentation

Apart from these, pregnant women in the second stage of labour are often rushed in as emergency cases. For instance, while conducting interviews in the labour ward on Tuesday 24th of June 2003, the researcher witnessed a 26 year old pregnant woman wheeled in and bleeding. She was brought in as an emergency case. She had no folder (records of attendance) and no luggage. One midwife quickly left her administrative work to attend to the patient. Upon examination, the case was diagnosed as abortion with the baby positioned as breech.

According to the in-charge, this is a common occurrence in the labour ward. Often, labour ward staff have to handle emergency patients who come in with no admission luggage, no records of antenatal attendance, no referral notes from referred sources and patients whose situations are worsened out of fear of what was happening to them that merits referral.

In the labour ward, there are 14 beds for all first, second and third stage labour patients. These are inadequate for both admitted and emergency patients most of whom arrive in the night. For lack of bed space therefore, patients in labour, as well as new mothers with or without babies are bedded on the floor when necessary. This situation has worsened since the first floor labour ward was put under renovations.

To provide healthcare required by the high patients influx, labour ward staff often sacrifice their off- days and stay in to work.

The in-charge also recounts that medical items needed in the labour ward does not flow freely. This is because the labour ward is said to regenerate only a fraction of the total costs of drugs and other equipment that it is supplied with. Commenting on this, the midwife said that medical care for a pregnant woman in labour is an essential obstetric care that cannot wait. Any delay could result in the death of the mother, or baby, or both. As a result, patients without deposits are equally given medical care and debited with drugs to be paid upon discharge.

4.4.1 DELIVERY BY CAESAREAN SECTIONS (C/S)

Pregnant women who do not deliver vaginally undergo caesarean sections. Pregnant women are either notified and scheduled for caesarean section during antenatal clinics or undergo caesarean section under emergency conditions. Obstetrics data available for 2000 and 2002 record 3,435 and 2,883 caesarean section cases for 2000 and 2002 respectively. This averages to 14 and 12 Caesarean sections being done daily in 2000 and 2002 respectively. According to a theatre staff member, an average of 14 caesarean sections are done daily. Theatre equipments are available in sufficient quantities. However, sometimes scheduled cases have to wait whilst emergency cases are being treated. These situations lead to backlogs being created for cases that need Caesarean section. In spite of these setbacks, 48% of caesarean sectioned patients interviewed said they were treated day after arrival while 52% were treated within four days of arrival.

4.4.2 NEONATAL INTENSIVE CARE UNIT (NICU)

The neonatal intensive care unit provides medical care for neonates, preterm babies, very ill babies and big babies. Such babies delivered are straightaway sent to NICU where they are placed in incubators for appropriate medical care to be given. The length of stay of a baby at NICU could be from a few days to three months depending on his or her condition. Observations made at NICU revealed that there are 12 incubators and 44 wooden cots. Five of the incubators contained 2 babies each.

Interview with a doctor at NICU revealed that the incubators are insufficient for the number of babies who need intensive care. To ensure that all babies who arrive at NICU have equal chances of survival, babies in incubators are transferred into cots as soon as their conditions are considered stable. Also, only radiant heaters and drip stands are available for medical care. Certain essential equipments lacking are cardiac monitors and ventilators.

A nursery nurse revealed that sometimes mothers who cannot afford their baby's medical bills manage to take babies out of ward home without staff notice. Mothers have this chance when they come in to feed or visit their babies.

Some babies at NICU do not survive Recently, NICU has been furnished with a miniature morgue where dead babies are kept for 24 hours and then released to the family or permission granted to the hospital to bury the corpse. The nursery nurse intimated that some mothers upon losing their babies never turn up leaving the hospital to dispose of the corpse.

4.5 DISCHARGING PATIENTS

Patients are ready for discharge between 2:00pm to 5:30pm daily on weekdays and between 11:00am to 4:30pm on weekends.

Table 4.4 DAILY AVERAGE ADMISSIONS AND DISCHARGES, 1997-2002.

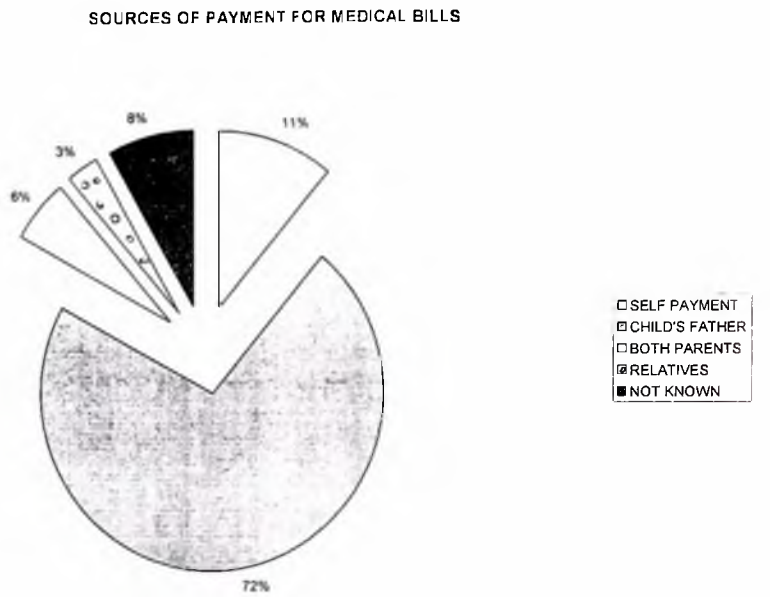
YEAR	1997	1998	1999	2000	2001	2002
AVERAGE DAILY ADMISSIONS	43	39	35	41	42	41
AVERAGE DAILY DISCHARGE	42	40	40	41	44	41

Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE,2003.

Table 4.4 shows average daily admissions made against discharges between 1997 and 2002. The table shows that in 2000 and 2002, the average number of daily admissions and discharges were equal, in 1998, 1999 and 2001 discharges were higher than daily admissions by 1, 5 and 2 patients respectively, while in 1997, admissions were higher than discharge by one patient.

Commenting on this trend, nurses said in order to make bed space available for newly admitted patients, the length of stay at the hospital has been shortened over the years. It is generally expected that in the early post-partum period, ie 24-48hours after delivery, the mothers dependency needs would be met. This usually includes assistance with cleaning the body and other menial tasks such as lifting items. However, most women who have spontaneous deliveries are discharged within 48 hours if they are observed to show no signs of complications. Women who are delivered through caesarean sections however stay for a minimum of 5 days during which period their wounds are treated and observed. Nurses defended this shortened length of stay by saying that an early discharge carried no health risks to mother or baby and that the medical risks of a 48 hour discharge were certainly less serious than those of non-admission of women in high risk categories needing admission or emergency care. The views of patients on early discharge are that it meets their desires to return to their families early and it enables them to take care of their personal hygiene needs which they cannot do satisfactorily when confined in hospital.

Fig.4.7. PATIENTS' SOURCE OF FINANCING MEDICAL BILLS.



Irrespective of who would pay, nurses said some patients bills are settled promptly, others delay and others are not paid at all.

Patients who have been discharged are allowed to occupy beds for a maximum of 48 hours. A patient with or without baby whose bill is not settled within this period is transferred from the bed on to a mattress on the floor where she stays until her bill is paid and she goes home. These patients are classified as 'discharged but still in' patients. This has been one of the major causes of congestion in the wards.

In 2002 alone, 317 patients were discharged but still in cases. Their total bill amounted to 291,995,319.00 cedis, out of which 177,170,409 cedis and114,824,910 cedis comprised hospital services bill and drug bill respectively. Out of the respondents, 19.4% were discharged but still in cases. Commenting on their own situation, these patients, many of whom were crying, said they are still looking forward to the baby's father to settle the bill. For them, the frequency with which they are visited by relatives has dropped to almost zero and they have to depend on other lying-in patients for toiletries and live solely on the hospitals food served as breakfast and lunch only. They also feel slighted because nurses often tell them to go home and stop using the hospital as a hotel and their request for medical care or otherwise are reluctantly, if ever granted.

Commenting on this issue, the Matron in charge of maternity said that" this discharge but still in cases are a recent phenomenon" She recounts that it started when churches, individuals and NGO's started assisting patients classified as paupers to settle their hospital bills. Thereafter many patients have pretended to lack funds with the hope of having her bills paid freely.

Not all patients have this attitude. For instance, in an effort to settle her bill, a patient said with permission, she was escorted by a hospital security guard in the morning to seek out the child's father at his work place where she put her problem before his immediate superior. Surprisingly, this patient had her bills paid two days after this interview after overstaying her discharge for twenty-seven days.

Other patients at their wits end choose to leave without paying. The Matron said absconding started in the late 1990's. Records show that in 2002, 36 patients absconded. Their total bill was 29,784,100 .00 cedis out of which 11,874,800 cedis was drug bill and 17,909,300 cedis was for hospital services. Patients who normally abscond are those who have lost their babies. They arrange with their visitors who send their personal belongings home little by little until nothing is left at the hospital. Thereafter absconders either mingle with visitors and ran away after visiting hours or do not return when permitted out of the ward to the ground floor to purchase an item.

Absconding during visiting hours is common because with two nurses on duty per ward, it is virtually impossible to keep an eye on all of the patients all of the time. Also, during visiting hours, nurses are preoccupied with counseling and cross-checking the documents of patients who are ready to go home.

Over the years, certain measures that have been taken to forestall absconding include;

- Positioning security men at ward entrance/exit gates
- Allowing a regulated number of traders into wards to sell common items needed by patients such as provisions, toiletries and baby's items,
- Allowing food vendors in to sell food to patients in the evening as the hospital provides only breakfast and lunch and no supper.
- Selling ice cooled sacheted ("pure") water which the patients frequently crave in the wards. This is handled by the nurses for the ward.

With these measures, it is hoped that the number of patients who leave without paying would be reduced.

The remainder of paupers who cannot pay after prolonged periods are handed over to Social Welfare staff. Social Welfare helps patients by negotiating with a salaried worker brought in by patient as a proxy. At the end of each month, a fraction of the bill is paid from the proxy's salary until all the bill is settled.

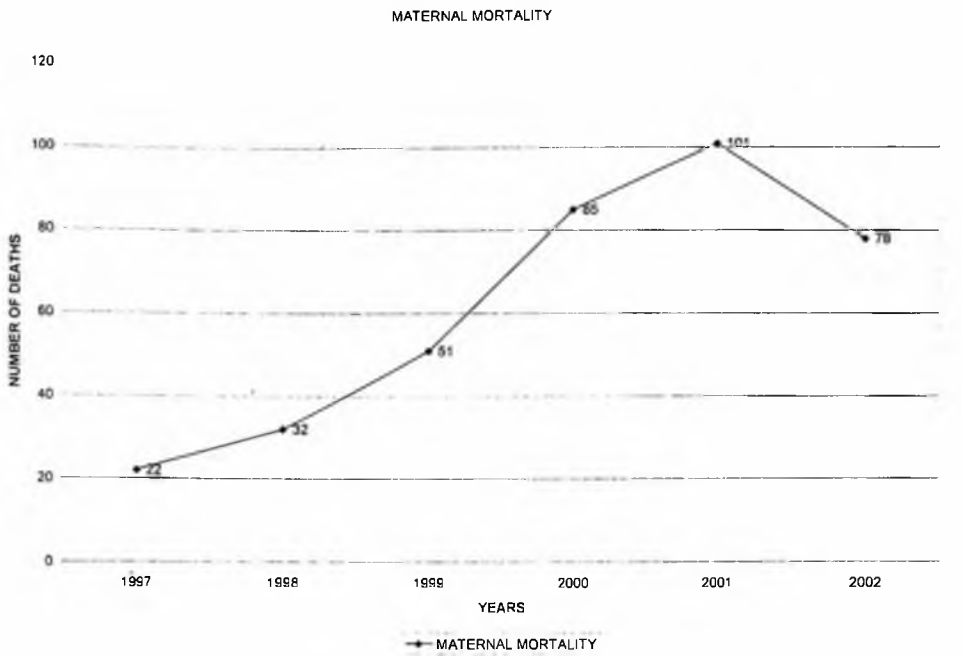
As stated earlier, sometimes paupers are fortunate to have their hospital bills paid. Non Governmental Organizations and churches donate money through the social welfare who settle the bills for patients to be released.

Other times, the hospital administration also intervenes to settle the bills of those who cannot pay. The administration last did this when it authorized the maternity department to release all paupers still in ward as at 31st December, 2002. Thirty-six paupers were thus released and their total bill amounted to 30,131,871.00 cedis.

4.6. MATERNAL MORTALITY

Maternal mortalities reflect women who die either directly or indirectly through pregnancy related causes. Fig.4.8 shows maternal mortalities recorded by the KBTH maternity department between 1997 and 2002.

Fig.4.8.MATERNAL MORTALITIES RECORDED FROM 1997 TO 2002.



Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE, 2003.

The graph shows that maternal mortality increased continuously from 22 deaths in 1997 through 32, 51and 85 deaths in 1998, 1999, and 2000 respectively and reached a peak in 2001 with 101 deaths. In 2002, it decreased to 78 deaths.

The declining trend observed could be because the hospital noted the increasing trend of maternal deaths and consciously put in measures to abate it such as increasing the number of modern theatre equipments.

Considering that within the same period, 86,993 women were admitted into hospital, it could be deduced that the maternal mortality ratio in KBTHmat is 1: 236. Implying that out of every 236 pregnant women admitted into the hospital, one died. Considering that maternal mortality is maternal deaths per100, 000 live

births, this would translate into 423.7: 100,000. Meaning that out of every 100,000 women admitted, 423.7 would loose their lives. This falls just below the ratio of 500-999: 100,000 reported by the World Bank/ W.H.O. Maternal and Newborn Safe Motherhood unit for Ghana in 1990.

It is however higher than the ratio of 214:100,000 reported by the Ministry of Health in the Five Year Programme of Work report in 1996.

The exact causes of death could not be ascertained from staff. However, the World Bank/W.H.O. report stated that the causes of maternal death in sub-Saharan Africa as identified in 1998 were severe bleeding, infection, eclampsia, obstructed labour, unsafe abortion as well as direct causes such as ectopic and embolism and indirect causes such as anemia, malaria and heart disease.

Sometimes, some patients are brought in already dead. Nurses explain that this is mainly because the cases are delayed at home for too long for various reasons that could include financial constraints or the wish to deliver at home.

Two brought in dead cases were recorded in 1999, 2 in 2000, 4 in 2001 and 3 in 2002. The Matron revealed that sometimes some maternal mortality cases lead to legal actions being taken by relatives of deceased against health staff, under the conviction that the circumstances of healthcare delivery led to the death of the patient. In such instances, the work of administrative staff is delayed while they use office hours to investigate into the case. Meanwhile, such legal cases which are highly publicized, discredit the department in the eyes of the public.

Such occurrences could demoralize the health staff and also deter some potential patients from accessing healthcare at the KBTH. When pregnant, these patients would prefer to go to the private hospitals.

4.7 POSTNATAL CARE AND CONSTRAINTS

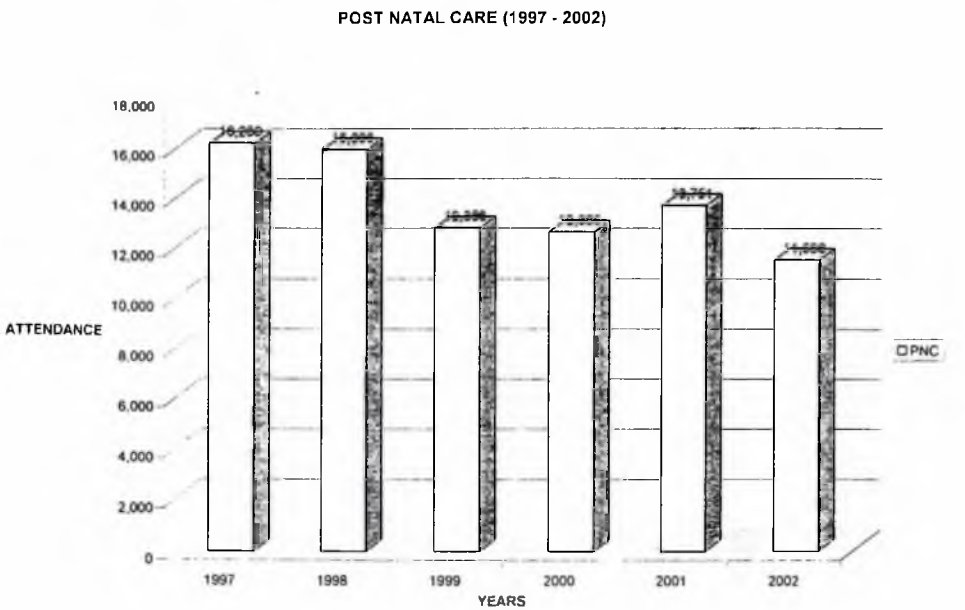
Post natal care services offered at the KBTHmat include

- Teaching patients about self- care, infant care and the need for family planning.
- Weighing and immunization of babies.
- Assessing health status of mothers and/or babies.
- Prescribing medication if necessary.

Discharged patients are required to make their first and second postnatal visits two and six weeks after delivery respectively. However, women and/or babies who develop any health problems within this period could come in to see the doctor.

Post natal attendance between 1997 and 2002 is shown below in fig 4.9.

Fig.4.9. POSTNATAL ATTENDANCE FROM 1997 TO 2002.



Source: STATISTICAL RECORDS, OFFICE OF O&G MATRON, JUNE 2003.

Figure 4.9 shows that postnatal attendance was high in 1997 and 1998 but decreased between 1999 and 2002. The total postnatal attendance of 83,141 for the period was more than total deliveries of 72,141made. A gap of 3,870 more postnatal attendants existed. The difference could be due to the fact that women who delivered in other health institutions accessed postnatal care at the KBTH after the sixth week. This is possible because all mothers are instructed to access postnatal care and immunization services at the nearest public hospital to their homes after the sixth week. As such, all mothers who live within the vicinity of the KBTH but do not deliver there would still go for postnatal services.

The general constraints encountered at the postnatal section as recounted by nurses are;

- Inadequate sitting space for mothers
- Only two nurses serve PNC patients
- Some mothers default in attending Post natal clinic at the scheduled time.

4.8 EFFECT OF CONSTRAINTS ON MEDICAL PERSONNEL WHO DELIVER MATERNAL SERVICES

As stated earlier, some nurses and doctors who are not satisfied with their working conditions resign.

Staff who did not resign agitated for better working conditions through strikes. During strikes, doctors work from 8.00am to 5.00pm and do not admit patients into wards. This started in 1996 and led to the institution of the Additional Duty Hours Allowance, (ADHA), for doctors and Work Overload Allowance for nurses, where extra income earned is calculated based on one's salary and extra hours worked. Though health staff interviewed said they are content with this arrangement, they are however displeased that the allowances often delay between two to three months before being released by government. These delays have been the cause of junior doctors industrial unrest for the past four years.

Industrial unrest by medical staff could be regarded as a threat to the constant availability of medical care. This is because without medical staff, patients would not be treated. All admission or emergency cases would be redirected to other

hospitals. This increases the patient size of those hospitals and puts pressure on their facilities and health staff. Patients who cannot afford the charges of alternative hospitals could be forced to deliver their babies at home and this could eventually contribute to maternal mortality cases recorded in the country.

4.9 CONSTRAINTS OF SUPPORT SERVICES

The units that render support services to maternity healthcare delivery discussed below are Stores, Pharmacy, Ambulance services and Records.

4.9.1 STORES

All non-drug consumable items (see appendix III for sample list) are supplied through the O&G SUB-BMC store keeper. An interview with the store keeper revealed that requisitions are made for supplies every two weeks from the central stores of the hospital. Though items are supplied and distributed to wards on Tuesdays, the quantities requested are reduced by the central stores manager so that wards are given only a fraction of what they request for. For instance, each ward is given one bar of key soap per week instead of at least two.

Some items listed as being in short supply are baby ID bands, stationary (e.g. labour history form, consent form for burial), and cleaning agents.

According to the store keeper, the O&G SUB-BMC has a high demand for inputs and therefore its allocations should be increased.

This wish is possible only if the hospital has unlimited financial resources.

4.9.2 AMBULANCE SERVICES

Maternity healthcare delivery demands that an emergency vehicle in the form of an ambulance be available to transport patients into and out of the hospital. The KBTH maternity department has one ambulance allocated to it. It does not bring patients from town into the hospital. According to the ambulance driver, it operates mainly within the hospital by transporting patients from O&G to other departments where they require medical care and then bringing patients back into their wards. Patients may also be transported to another hospital, example, the 37 Military Hospital for requisite medical care and then brought back to hospital. The ambulance service is not for free. Example, for trips outside the hospital, an amount of one hundred thousand cedis is charged. The ambulance service could be a means used by the hospital to generate funds. However, it increases the cost of medical care for patients. Also, with only one ambulance available, a back log of patients requiring ambulance service may be created whilst they wait for their turn. In the meantime, it is possible that their health would be deteriorating.

4.9.3. RECORDS DEPARTMENT

The records department houses all records concerning patients medical history. Information in these files are of vital importance in relating old and new obstetric cases of the same patient. Information obtained from staff of records department was that all available space for storing folders have long been filled. There is no more space, so that current patient files are kept on front desk used by staff.

Upon observation, it was noted that the filing room, also supposed to be the office of records staff, has been neglected because of its deteriorated condition. To save the cabinets/folders from destruction, four plastic buckets have been positioned at various points on the floor to catch drip water falling through gaping roof from the first floor labour ward above.

Patients are given new folders/files each time they report a new pregnancy.

This could be because the storage system makes searching for an old file cumbersome. At the same time, this arrangement also inflates the folder size, and reduces any available space in no time.

Such a storage system would reduce efficiency as workers have to spend more time than necessary retrieving files when necessary.

4.9.4 PHARMACY DEPARTMENT

The pharmacy department provides all drugs needed for obstetric patient care. Commenting on drug availability, the Pharmacy manager for the Obstetrics & Gynaecology unit, stated that the pharmacy department has in stock all drugs listed in the maternity formulary. If for one reason or another a drug is not available, orders are placed for the drug to be supplied as soon as possible.

Occasionally, certain drugs expire in stock because doctors decide against prescribing those drugs.

On the whole, the pharmacy department has almost hundred percent of all drugs needed for patient care.

Drugs are provided to patients either as credit for in-patients only or by direct purchasing from the out patient department outlet.

The major constraint faced by the pharmacy unit is the lack of adequate staff needed to accompany doctors on ward rounds (Ward pharmacists).

The Ward pharmacists assist doctors in determining drugs to prescribe for patients and also update doctors knowledge on current drug trends.

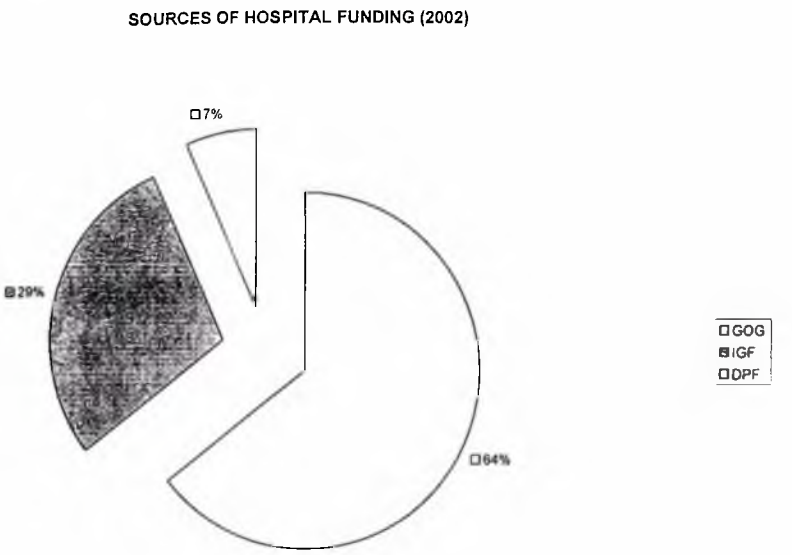
Secondly, the pharmacy unit losses money from lying-in patients who do not pay for credited drugs. To curtail losses, the Budget Coordinator of the hospital responsible for all institutions accounts, said the hospital has categorized all its drugs into the essential drug list and non essential drug list. All drugs given out on credit are on the essential drugs list needed for survival. The non essential drugs are not credited and can only be obtained by purchasing from the OPD outlet. For the pharmacy unit therefore, all drugs needed by patients are available. Patients can access drugs either by purchasing and/or crediting.

4.10 WHY RESOURCES ARE LIMITED AT THE HOSPITAL

The healthcare needs of the maternity department are directly financed by the hospital's central administration. These needs are categorized as drugs, non-drug consumables and medical equipment. To provide these needs, the central administration relies on three main sources of funding. These are the Government of Ghana subvention (GOG), Internally Generated Fund (IGF) and Donor Pooled Fund (DPF) as shown in the figure below for 2002.

GOG / IGF/ DPF

Fig. 4.10. PROPORTIONS OF GOG/IGF/DPF OBTAINED FOR 2002



Source: KBTH Annual Financial Report & Financial Statements, Dec.2002.

Figure4.10. shows that in 2002, the hospitals income was made up of 64% government subvention, 29% internally generated fund and 7% Donor Pooled Funds.

The KBTH is a sub vented organization. As a result, the government allocates funds annually to cover costs of personal emoluments, administrative expenses, services and investments. These funds are released at the end of each quarter to the hospital administration. The total annual allocation made is based on the hospital's budget subject to approval by parliament and the availability of funds.

In a move to restrict expenditure to revenue, the government introduced cash ceiling as a resource allocating tool from April 2001. As a result, funds allocated to the hospital are sometimes lower than amount budgeted for some of budgets sub-sections (See Appendix IV).

Funds for each quarter are released late. For instance, as at 11th of July, 2003, the first quarter's allocation had not been released. This results in delays being made for the payment of goods and services procured to provide healthcare for patients. Another effect of the delay is that it prevents the hospital from enjoying favorable credit terms from suppliers since delay premiums have to be factored into prices. Also, operating within a ceiling brings about difficulties in getting the required number of inputs within the available budget to provide and maintain acceptable level of quality care to patients.

Finally, the delay creates difficulties in planning since it is difficult to predict any price increases at the time of preparing the budget. For example, table 4.5 shows a comparison between prices of some inputs in late 1999 and late 2000.

Table 4.5. INPUT PRICES OF MEDICAL EQUIPMENTS IN 1999 AND 2000

Item	Prices in 1999 (Cedis)	Prices in 2000 (Cedis)	Percent Change
Foley Catheter 2 way 20	1,850	3,800	105
IV Cannula size 20	1,900	4,100	116
Surgical blade 20	15,000	34,600	131
Surgical Gloves 7.5	674	2,500	271
Syringes 20cc	400	984	146

SOURCE: KBTH ANNUAL REPORT 2000, PAGE 74.

Table 4.5 shows percentage changes in the prices of some medical inputs between 1999 and 2000. The prices of inputs listed increased by between 105% to 271% over a one year period. These increases imply that between the time the hospital presents its budget and the time government releases funds, the actual money received would cater for less inputs than was estimated.

To forestall these problems, the hospital meets its daily needs by running on internally generated funds. When the GoG funds are released, the hospital uses it to pay for huge bills such as fuel and maintenance costs which accumulate over time.

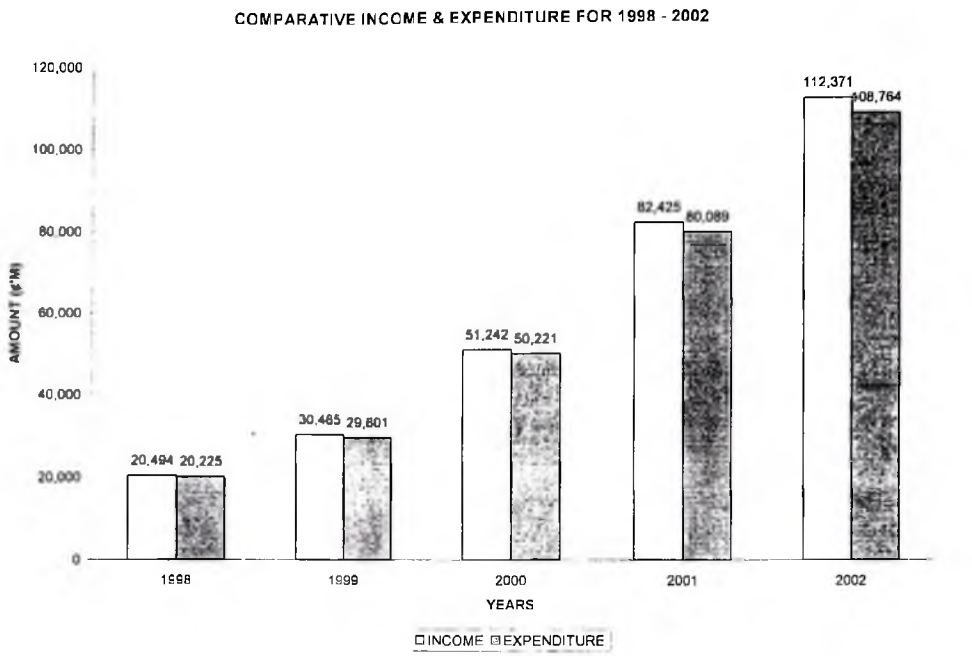
Internally generated funds are funds accruing from the sale of drugs and service charges/ non-drug consumables. Specifically, revenue from services/non-drug consumables are obtained as fees from dressings, feeding, Central sterilization department, consultation, consumables, laboratory tests, X-ray, hospital fees, theatre charges, folders, sanitation, physiotherapy, ECG/EEG, cardio, mortuary, C/T scan and optical services.

These monies, received daily, are banked gross day after receipt and used to supply the needs of the hospital. Due to regular reliance on this fund, it does not accumulate for the implementation of major projects.

The donor pooled funds are donations from foreign countries shared among health institutions. This can be spent on all items except personal emoluments.

Fig 4.11. shows the proportions of these funds that was available to the hospital between 1998 and 2002.

Fig.4.11. COMPARATIVE INCOME AND EXPENDITURE FOR 1998 TO 2002.



Source: KBTH Annual financial Report& Financial Statements, Dec, 2002.

Figure 4.11 shows the income available to the hospital against expenditures made between 1998 and 2002.

The annual incomes (in cedis) available to the hospital within the period was 20,494b in 1998, 30,465 billion in 1999, 51,242billion in 2000, 82,425billion in 2001 and 112,371billion in 2002.The expenditures made out of these incomes left a surplus of 0.269b (1.31%) in 1998, 0.664b (2.18%) in 1999, 1.021b (2.00%) in 2000, 2.336b(2.83%) in 2001 and 3.607b (3.21%) in 2002. The surplus income available to the hospital annually therefore averages 1.579b (2.30%).

The graph also shows that as incomes increase, the hospitals expenditures also increase. The hospital therefore has a high expenditure that consumes an

average of 97.69% of the hospital's income. According to the 2000 Korle-bu annual report, "most of the items including medical equipment are imported and therefore the turbulent foreign exchange market affects their prices.....while prices increase, the hospital is unable to increase its user fees to generate more revenue due to statutory constraints limiting its user fees adjustment".

The Budget Coordinator responsible for institutional accounts said that the KBTH, is primarily a service oriented health institution. Therefore in the midst of limited resources, it changes and prioritizes its needs in order to provide health services to patients.

As a result, expansions, renovations, refurbishments and other development activities are often foregone.

The Obstetrics and Gynaecology department, as one of the departments within the hospital, has its resource needs met within these financial constraints. These financial constraints therefore directly impacts on the provision of maternity healthcare inputs and services.

4.11 EFFORTS BEING MADE TO REDUCE HEALTHCARE DELIVERY CONSTRAINTS AT THE KBTH.

In an effort to improve upon services and facilities at the hospital, the Budget Coordinator said KBTH is being decentralized according to SUB-BMC's. Each SUB-BMC would ran its own budget and undertake its own development projects with approval from the Chief Executive of the hospital. Currently, SUB-BMCs have been allocated development funds to use for projects.

It is the aim of the hospital that if these development funds are properly accounted for and projects sustained, then the hospital would be decentralized and each SUB-BMC given the chance to develop itself.

This is an effort in the right direction. The success of this would depend on sufficient resources being made available to Sub-BMC's and good management practices in handling resources placed under them. Otherwise each sub-BMC would only emulate what is happening in the whole system.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The maternity department of the KBTH provides antenatal, delivery and postnatal care services to patients.

67.8%of patients interviewed are low risk pregnancies while 32.2% are high risk pregnancies.

90.3% of patients who access maternity healthcare come from within Accra while 9.7% come from the immediate outskirts of Accra. Between 1997 and 2002, an average of 167 patients attended antenatal clinics daily.

55% of patients interviewed preferred the KBTH hospital to other government or private health institutions because its costs/ charges are more affordable, it has varied and expert medical personnel who give specialist care and it provides twenty-four hour emergency services.

The majority of patients (53.0%) first attended antenatal clinics in the second trimester, while 39.0% and 8.0% attended antenatal clinics in the first and third trimesters respectively. Most patients attended ANC in the first trimester because they felt sick or wanted to ensure a full term pregnancy and safe delivery, second trimester because they felt healthy and felt no need to seek medical care, delayed antenatal clinic attendance due to financial constraints or relied on past pregnancy experience to take care of themselves and third trimester because of financial constraints though they wished to attend hospital earlier.

Late antenatal attendance prevents health staff from rendering all essential care needed in pregnancy.

Sometimes, patients who come to the hospital expect free or very cheap services because they consider the hospital to be a government hospital.

Twenty-three percent of patients interviewed could not afford all medical expenses, specifically scan, laboratory and drug costs. Unable to satisfy medical requests, these patients attend ANC clinics irregularly, and thus 19%of patients interviewed could not attain the minimum of four antenatal visits recommended by the W.H.O. for all pregnant women. These women therefore reduce opportunities for the detection of conditions that lead to complications , if any.

ANC clinics had a daily attendance averaged at 167 patients against an average of two nurses at records, BP and temperature units, one nurse each at height/weight and urine testing units and four doctors in consulting rooms. This staff size is considered to be inadequate to serve the needs of patients.

The high patient turn-out, small staff size and use of old equipments lead to slow moving work and overcrowding at the ANC clinics.

The maternity department admits patients for antenatal, delivery and post natal care services. Between 1997 and 2002 an average of 14,498 patients were admitted annually with an average of 40 admissions daily. Out of this, 12,039 mothers were delivered annually with an average of 33 babies delivered daily.

Many admission cases are referral cases from other hospitals. For instance, in 2002, 33.2% of deliveries made were referred cases from other government and

private health institutions. Referred and emergency cases sometimes arrive with no money, no luggage, no medical records or referral notes. Such patients are treated on credit and debited with drugs.

The maternity department has 254 beds which, except for the sixth floor has an average of 100.21 % occupancy rate as at 2000.

The length of stay at the hospital has been shortened to make bed space available for incoming patients. Patients who have spontaneous deliveries are discharged within 48 hours and Caesarean sectioned patients after a minimum of 5 days.

Out of the patients interviewed, 19.4% could not settle their medical bills after discharge. After a 48 hour grace period, these patients with or without babies are relocated on mattresses on the floor.

In 2002, 36 patients who could not settle their bills absconded. Other discharged but still in patients had their bills settled by NGO's, individuals or churches through the social welfare. The hospital administration also periodically authorizes the release of such patients who could overstay their discharge for up to three months.

For the lying –in wards, an average of 2 nurses are on duty per session to take care of patients needs. Doctors on duty come round twice daily, at 9:00am and between 4:00pm and 5:00pm daily. The work schedule for health staff in relation to patient size is considered to be high leading to work overload for nurses and doctors. In order to have remuneration commensurate with work load, health staff agitated through industrial unrests. Through negotiations, this led to the

institution of ADHA for doctors and Work Overload Allowance for nurses. Though content with this arrangement, the delayed arrival of these allowances is still a matter of concern for health staff.

Almost all drugs needed by patients are available and can be obtained from the pharmacy department either as credit of essential drugs for emergency and lying in patients or through purchase of non-essential drugs from the OPD dispensary for all patients.

Certain non-drug consumables and medical equipments are lacking or supplied in reduced quantities.

The department has one ambulance that transports patients either between departments of the hospital or occasionally to/ from other hospitals for a fee. Patients requiring ambulance service outside the hospital have to find their own means of transport.

There is a lack of storage space for patient files and folders. Consequently, current patient files are kept on working counters of records staff.

These limitations exist because the hospitai is a sub vented organization that depends on GoG funds. Release of quarterly GoG funds are delayed and actual amounts allocated for certain sub sections of the budget are often less than amounts estimated. To make up for the deficit and provide the hospital's needs while awaiting the GoG subvention, the hospital generates funds internally through the sale of drugs and service delivery charges. The GoG funds, when released are mainly used to cover huge debts such as maintenance and fuel costs.

In an effort to improve upon service delivery, the hospital has been divided into SUB-BMC's. In the future, each SUB-BMC will control its own budget and undertake its own development projects subject to approval from the Chief Executive of the hospital.

5.2 CONCLUSION

The results show that the KBTH faces a number of limitations in delivering maternity healthcare. Paramount among these problems are the lack of adequate bed space, manpower, equipments and a high patient turnover.

The hospital has a large patient size. This could be a good indication that the public has a high preference for the hospital. This however, often translates into patients being bedded on the floor for lack of extra space. This situation is disfavored by patients and could mar the image of the hospital in the eyes of the public who do not know the circumstances leading to the phenomenon.

Patients have contributed to healthcare delivery constraints by delaying antenatal clinic attendance, having a discontinuous attendance, not satisfying medical requirements as requested by health staff, delaying the payment of medical bills and leaving without paying medical bills. This attitude by patients reduces their chances of obtaining all medical care needed during pregnancy and could contribute to the amount of complications or emergency cases presented to health staff at a later date.

The dwindling manpower levels due to unfavorable working conditions has left health staff at post with a high work load that is made worse by the lack of certain modern equipment that would increase staff efficiency. This is a discouragement

for staff at post and a disincentive for newly trained staff ready to enter the health service.

The lack of adequate bed space has resulted in the length of stay at the hospital been shortened for patients. This shortened hospital stay has caused nurses to realign priorities for care. The amount of time that physical care is provided by the nurse has diminished and the emphasis on client teaching for self-care and health maintenance has increased.

It is encouraging to note that most drugs needed by patients are available at the hospital. This indicates that a patient can access his drugs if he has sufficient money to purchase it.

Many patients overstay their discharges for lack of funds to settle their medical bills. Some of these patients eventually abscond or have their bills settled by individuals, NGO's or the hospital administration. Though this shows a general philanthropic spirit for the cause of paupers, it could also encourage pretence among patients capable of settling their bills as well as prevent individuals from taking responsibility for their actions. At the same time, newly pregnant women who perceive themselves to have insufficient funds for medical care even at the "abban" hospital which is supposed to be affordable, and would not wish to overstay their discharges could end up delivering their babies at home. This would defeat the aim of the GHS to increase institutional deliveries.

Finally, decentralizing the hospital gives each department a chance to develop itself. With this opportunity, the maternity department would be able to prioritize

and provide its own needs so that constraints associated with maternity health care delivery would be minimized.

5.3 RECOMMENDATIONS

On the basis of the findings made, the following short and long term recommendations are given;

SHORT TERM RECOMMENDATIONS

- Decongest maternity department by redirecting more of the low risk cases to Primary or secondary healthcare institutions.
- Under the current conditions of staff shortage, more medical staff auxiliaries should be trained to assist nurses in the care of patients.
- NGO's , Vocational schools, Churches and other institutions which give women training in income generating activities should include maternity healthcare issues in their syllabus.
- The filing system of the department should be computerized.
- The hospital administration should provide floors one, two and three with security staff to check absconding.

LONG TERM RECOMMENDATIONS

- MOH should develop strategies to entice pregnant women to attend hospital in the first trimester, such as waiving user fees in the first three months of pregnancy.

- To ensure payment of medical bills, pregnant women could be made to give guarantors during antenatal visits, who could be contacted to settle medical bills if patients overstay their discharges or abscond.
- KBTH administration should consider establishing a blood bank for the O&G department since it is said to be the highest consumer of blood at the hospital.
- It is suggested that further studies be made into ;

  The Socio-economic status of patients who overstay their discharge. The results could be used to develop a payment strategy for these group of persons.

  Periodic changes in maternity healthcare delivery at the KBTH.

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APPENDIX I
SAMPLE QUESTIONNAIRE

TOPIC:
CONSTRAINTS OF MATERNITY HEALTHCARE DELIVERY IN GOVERNMENT HOSPITALS : THE CASE OF KORLE-BU TEACHING HOSPITAL.

RESPONDENT: MATERNITY PATIENTS ON ADMISSION

PURPOSE OF INTERVIEW:
TO FIND CONSTRAINTS OF MATERNITY HEALTHCARE DELIVERY FROM THE CONSUMERS POINT OF VIEW.

QUESTIONNAIRE

Number:..... Date: .....

DEMOGRAPHIC DATA

1. Age .....
2. Ethnic Origin
3. Religion (a) Traditional Religion (b) Christianity (c) Islam (d) Others .....
4. Relationship with Child's father (a) Married (b)Divorced (c) Courtship (d) Living together (e) Others.....
5. Parity (a) 1 (b) 2 (c) 3 (d) 4 (e) 5 and more
6. Residence (a) Within Accra..... ... .(b)Outside Accra.....

SOCIO-ECONOMIC STATUS

7. Educational status of respondent (a) None (b) Primary/Jss/Middle © O'/A'level/SSS (d) Vocational (e) Tertiary
8. Educational status of child's father a) None (b) Primary/Jss/Middle © O'/A'level/SSS (d) Vocational (e) Tertiary
9. Occupation of respondent (a) Unemployed (b) Trader (c) Artisan (d) Employed Worker (e) Other.....
10. Occupation of child's father (a) Unemployed (b) Trader (c) Artisan (d)Employed worker (e) Other.....

ANTE-NATAL DATA

11. What was the gestational age of the pregnancy at your first ante-natal visit?
    (a) 1st Trimester (b) 2nd Trimester (c) 3rd Trimester

12. Why did you attend ANC at that gestational age?
    .....
    .....

13. Which maternity health facility is the nearest to your home?
    (a) Public hospital/Polyclinic (b) Private maternity home
    (c) Private clinic/hospital

14. Where did you attend antenatal clinic?

15. Why did you /did you not attend the maternity facility nearest your home?

16. How many antenatal visits did you make prior to admission? Was it continous?

17. How did you finance your antenatal visits?

18. Which medical requirements were you unable to satisfy?

ADMISSION DATA

19. Why were you admitted into hospital?

20. How did you prepare financially/materially towards admission/delivery of the baby?

21. For how long have been on admission?
22. When did you/will you receive treatment?

23. Have you been discharged? (a) Yes (b) No

24. If yes, how much is the hospital bill?

25. Who will finance payment of your bill? (a) self (b) Child's father (c) Relative
    (d) Other .....
26. How often does relatives, spouse, or friends visit you at the hospital?
    (a) Never (b) Daily (c) Irregular (d) other.....
27. If you have overstayed your discharge, how do you hope to settle your bills eventually?

28. How do you obtain required drugs whilst on admission?

29. When were you last admitted into KBTHmat?

30. State any differences in the resources available and service rendered between your first admission and now.

PERCEPTION OF SERVICES

31. Explain why you are satisfied or dissatisfied with the services rendered under each of the following:

		Satisfied	Dissatisfied
i.	Food		
ii.	Care/Attention from Nurses/Doctors		
iii.	Medical Care		
iv.	Cost of drugs/Charges		
v.	Sanitation		
vi.	Physical facilities		

32. Give reasons why you would prefer KBTHmat to any other stated maternity facility or vice versa.

33. Give suggestions for how services rendered can be improved.

APPENDIX II
MATERNITY BLOCK
KORLE BU TEACHING HOSPITAL
DUTY ROSTER FOR JUNE 2003

TEAM A 4th floor	TEAM B 2nd floor	TEAM C 3rd floor	TEAM D 1st floor	TEAM E 5th floor
Dr. Lassey	Dr.Obed	Dr. Nkyekyer	Prof. Kwawukume	Dr. Collison
Dr. Annan	Dr.K-Aryee	Dr. Appiah-Kubi	Dr. Damale	Dr. Seffah
Dr. Nelson	Dr. Armah	Prof. Klufio	Dr. Wilson	Dr. Peterson
Dr. Arthur	Dr. laryea	Dr. Adanu	Dr. Samba	Dr. Ampofo
Dr. A-Arhin	Dr. Kareem	Dr. Agbelenkor	Dr. Kwakye	Dr. Srofenyoh
Dr. Maya	Dr. Kotei	Dr. Biga	Dr. A-Boamah	Dr. Koranteng
Dr. Boafor	Dr. K-Kumah-MO	Dr. Anderson-MO	Dr. Coleman	Dr. Brightson-Mo
Dr. Gafrey –MO	Dr. Aja-MO	Dr. Armah-MO	Dr. Tigbe-MO	Dr A- Ampaw-MO
Dr. Lartey-MO	Dr. Doe-MO	Dr. Sarpong-HO	Dr. Akaba-MO	Dr. Baidoo-HO
Dr.A-Henaku-MO	Dr. Addo- HO	Dr. Afari-HO	Dr. Hobenu-HO	Dr. C. Tagoe-HO
Dr. Arkurst-HO	Dr. Yawson-HO	Dr. Fynn-HO Dr.	Dr. Boima HO	Dr. Adzamli-HO
Dr. Twum-HO	Dr. xexemeku-HO	Obeng-HO	Dr. Kuwornoo-HO	Dr. Yeboah-HO
Dr. Hanson-Nortey-HO	Dr. Eshun-HO		Dr. Owoo-HO	
Dr. Mensah-HO	Dr. Okoye-HO		Dr. Hemeng-HO	
Dr. Kemewor-HO				

WEEKDAYS	OBSTETRICS CLINIC	GYNAECOLOGY CLINIC	THEATRE
MONDAY	TEAM B	TEAM D	TEAM C
TUESDAY	TEAM C	TEAM E	TEAM D
WEDNESDAY	TEAM D	TEAM A	TEAM E
THURSDAY	TEAM E	TEAM B	TEAM A
FRIDAY	TEAM A	TEAM C	TEAM B

EMERGENCY

MONDAY- TEAM B
TUESDAY- TEAM C
WEDNESDAY- TEAM D
THURSDAY- T EAM E
FRIDAY - TEAM A

ON ROTATION

Dr. Butungu
Dr. McCarthy
Dr. Adodoe
Dr. Ntumy
Dr. A-Mensah
Dr. Aduamah
Dr. Asare
Dr. Gumanga
Dr. Aryertey

APPENDIX III

SAMPLE LIST OF NON- DRUG CONSUMMABLES

1. SURGICAL STERILE EXAMINATION GLOVES
2. GIVING SET FOR INFUSIONS
3. URINE BAGS
4. COTTON WOOL
5. SUTURE SETS
6. SYRINGES/NEEDLES
7. CLINICAL THERMOMETERS
8. FACE MASK
9. STATIONARY (LABORATORY FORMS, NURSES NOTEBOOKS,
10. 4 HOUR TEMPERATURE CHARTS) ETC.
11. CLEANING AGENTS.

APPENDIX IV
KORLE BU TEACHING HOSPITAL
SCHEDULE OF INCOME - 2002

SOURCE	1st QUARTER	2nd QUARTER	3rd QUQRTER	4th QUARTER	TOTAL ACTUAL	TOTAL BUDGETED	VARIANCE
GOG	(a)	(b)	©	(d)	e=(a+b+c+c+d)	(f)	(e-f)
Personal Emol'nt	5,525,251,419	7,745,007,817	9,775,830,725	9,023,854,744	**32,069,944,705**	16,207,223,993	15,862,720,715
ADHA	3,937,878,000	6,077,526,855	10,623,300,000	10,623,300,000	**31,262,004,855**	31,262,004,855	
SUB TOTAL (a)	**9,463,129,419**	**13,822,534,672**	**20,399,130,725**	**19,647,154,744**	**63,331,949,560**	**47,469,228,848**	**15,862,720,715**
Administration	777,000,000	1,028,878,338	841,322,229	1,416,434,446	**4,063,635,013**	4,063,635,013	
Service		895,461,000	1,190,963,000	1,222,000,000	**3,308,422,000**	3,581,844,932	273,420,932
Investment						2,500,000,000	2,500,000,000
SUB TOTAL (a)	777,000,000	1,924,339,338	2,032,285,229	2,638,434,446	**7,372,057,013**	10,145,479,945	2,500,000,000
GOG TOTAL (a+b)	**240,129,419**	**15,746,874.01**	**22,431,415,954**	**22,285,589,190**	**70,704,008,573**	57,614,708,793	2,773,420,932
Donor Fund	3,802,089,000		2,539,014,000	1,625,000,000	**7,966,103,000**	12,269,469,557	4,303,366,557
IGF	6,081,450,850	7,465,450,904	7,718,146,289	7,728,657,215	**28,993,705,258**	28,971,687,701	22,017,557
IGF-Other Income	660,058,152	924,587,578	1,723,270,190	1,399,602,157	**4,707,516,077**	4,707,516,077	
TOTAL	**6,741,509,002**	**8,390,038,482**	**9,441,416,479**	**9,128,259,372**	**33,701,221,335**	22,017,557	
GRAND TOTAL	**20,783,725,421**	**24,146,912,492**	**34,411,846,433**	**33,038,848,562**	**112,371,332,908**	**103,583,128**	**8,807,950,780**