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A study of the cost of delivery services
and its role in determining utilization
patterns of pregnant women in the
Kintampo district.



A dissertation submitted to the School of Public Health,
University of Ghana, Legon in partial fulfilment of the
requirements for the award of the Masters Degree in Public
Health

September 2000

Declaration.

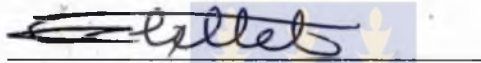
I hereby declare that this dissertation was prepared by me under supervision, and submitted as part of the requirements for the Masters of Public Health Degree of the School of Public Health, University of Ghana, Legon.

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INTEGRI PROCEDAMUS

Dedication

This work is dedicated to my wife Linda and our newly born baby,

Maame Adjoa Afriyie Marfoh



ACKNOWLEDGEMENT

I wish to express my appreciation to my supervisors, both in the School and on the field,

Dr. Sam Akor

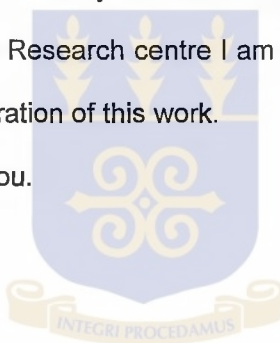
Dr. Paul Arthur

Dr. Edith Tetteh

Dr. Nii Ayite Coleman

for their invaluable contributions and suggestions that helped to produce this work. I also appreciate the contribution of my teachers in the School of Public Health. To the staff of the Kintampo Health Research centre I am deeply indebted for their support in various ways to the preparation of this work.

May God richly bless all of you.



Summary

Having a trained birth attendant at every delivery has been identified as the single most important way of reducing maternal mortality. However most women do not patronise supervised delivery services even where they are available. Among the reasons given for this state of affairs is the high cost of accessing the services. Supervised delivery in this district was estimated at 37% in 1998, which falls below the national figure of 44%. The actual cost to a woman for accessing this service, and the role cost plays in determining the utilization by women is not known in this district.

This study which was undertaken in the Kintampo district of the Brong Ahafo region of Ghana from May to August 2000 was to investigate the cost of delivery to women utilizing the various options of delivery: delivery at home, delivery under the supervision of a TBA and having a supervised delivery. These costs were compared and their effect on the choice of services by the women investigated. Women who had delivered in the three months before the study were chosen from three settings representing good, moderate and poor access to orthodox health care facilities for the survey.

It was found out that it cost a woman four to six times more to have a supervised delivery than to deliver with a TBA or at home. The bulk of the cost was found to be for services and drugs. Women identified cost as a very important factor in influencing their decision on where to deliver and ranked it second only to the safety of their life and that of their babies. Most women indicated their preference for hospital delivery if cost were not a problem.

It is recommended that to make supervised delivery an attractive option for women in the Kintampo district, service charges for supervised deliveries are reviewed downwards, delivery costs are subsidised and more staff are trained to supervise more deliveries.

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List of Acronyms

DSS	-----	Demographic Surveillance System
KHRC	-----	Kintampo Health Research Centre
TBA	-----	Traditional Birth Attendant
GDHS	-----	Ghana Demographic Health Survey
FGD	-----	Focus Group Discussion
MCH	-----	Maternal and Child Health
FP	-----	Family Planning

Chapter 1

INTRODUCTION

Pregnancy is a natural process that most women go through at a stage in their life but not uncommonly it may lead to her death. Maternal mortality in simple terms is the death of a woman because she got pregnant and it affects the whole family but most especially the newly born infant and his or her siblings. It is to address this issue that the Safe Motherhood Initiative was officially launched at the first international conference to focus specifically on the health of women in Nairobi, Kenya, in 1987. Since then, there has been a dramatic increase in attention to the problem of maternal mortality including research and programmes by developing-country governments, international agencies and non-governmental organisations.

Maternal deaths may occur during pregnancy, childbirth or immediately after childbirth. In order to significantly reduce maternal mortality therefore, all pregnant, labouring and recently delivered women must have access to essential obstetric care should complications arise. The major causes of maternal mortality can be grouped under Medical factors, Health Service factors and Socio-cultural factors. Among the health service factors is the cost of accessing the service since high costs keep many women who would otherwise have used the service from using it. This cost goes beyond the direct fees charged for services and drugs to include other costs such as transportation and social costs.

It is therefore necessary to determine what constitutes the real cost to a pregnant woman and her family in utilising essential care during labour and investigate its role in influencing utilization patterns.

This study, which will be undertaken in a largely rural district in the Brong Ahafo region of Ghana, will estimate the cost to a pregnant woman for accessing delivery services. The different options of delivery care that will be investigated are delivery at home by herself or assisted by family members, delivery assisted by a TBA, and delivery in an allopathic health care facility. The cost implications of these various options will be compared and their role in influencing utilization explored.

This information will help to find practical ways of making essential obstetric care services more financially accessible and a more attractive option to pregnant women thereby making a positive impact on maternal mortality.

Definition of Terms

- Supervised delivery: - delivery under the supervision of a skilled birth attendant, that is a trained midwife, nurse, nurse-midwife or doctor who has completed a set course of study and are registered or licensed to practice.
- Cost of delivery: - Economic cost of delivery including the cost of transport to and from the place of delivery and items purchased to aid in the process.

1.2 Statement of Problem and Rational for Study:

In 1997 the government of Ghana in an effort to reduce the financial burden of health care on vulnerable subpopulation groups in the country, extended exemptions and subsidies in hospital fees to pregnant women, the aged and children¹. Under this policy, pregnant women receive an average of 4 free antenatal visits for every pregnancy. Delivery services however are not covered under this policy.

Even before the introduction of this policy however antenatal services were quite well patronised with coverage between 80 and 90%². Maternal mortality still remains unacceptably high at 2.4/1000 live births in 1997 and 2.5/1000 live births in 1998³. With these developments there is the school of thought that delivery services need to be subsidised if an impact is to be made on maternal mortality. In deciding whether or not, and which components of maternity services to subsidise there is the need to have an idea of the cost of maternity services to a pregnant woman and its different components. This information is largely lacking in the literature reviewed and will differ among regions, districts and even among different types of institutions, public and private, in the same district.

Even where formal fees are low or non-existent, there are some cost implications for the woman or her family members. The various components of the costs for the different options of maternity services are not expected to be the same and information on these differences may explain why one option is preferred to the other.

In the Kintampo district the proportion of pregnant women who utilise supervised delivery services is estimated at 37% and maternal mortality rate at 870 per 100,000 life births⁴. These figures fall below the national averages of 44% and 250 per 100,000 life births respectively. Since the district is a largely rural one with a majority of the people of low socio-economic status, cost is likely to play a significant role in their utilization patterns. This study is aimed at determining the cost implications of accessing the various options of delivery services available to pregnant women in the Kintampo district which are, supervised delivery, birth attended by a traditional birth attendant and birth at home either alone or with the assistance of a family member. By comparing these costs it is expected that recommendations can be made on how to make supervised delivery services more attractive to women in the district thereby making a positive impact on maternal mortality.

1.3 Hypothesis and Objectives

Hypothesis:

Costs of supervised delivery services are relatively high and negatively influence a woman's decision to use the service in the Kintampo district.

Objectives:

General Objective:

- To compare the cost of the various options of maternity care and its influence on utilisation patterns in the Kintampo district.

Specific Objectives:

- To describe the pattern of use of delivery services in the Kintampo district.
- To estimate the cost of accessing the various options of maternity care in the Kintampo district.
- To explore the effect of cost in influencing service utilisation in the Kintampo district.
- To make recommendations on ways of making supervised delivery services more attractive to pregnant women in the Kintampo district.

Chapter 2:

Literature Review:

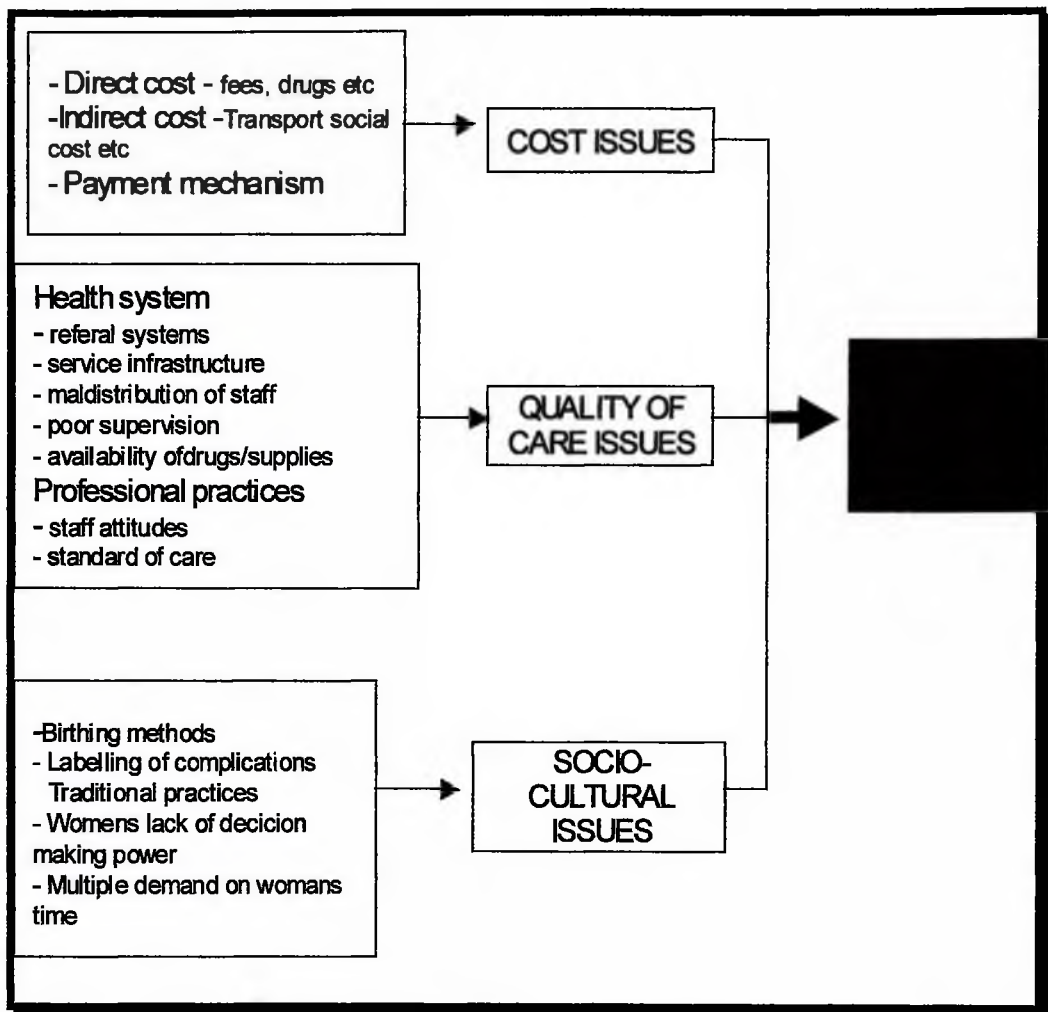
Maternal mortality is the death of a woman while pregnant or within 42 days of termination of pregnancy no matter the site or duration of pregnancy, due to factors related to or aggravated by the pregnancy or its management but not from accidental causes⁵. Of all the health statistics monitored by the WHO, maternal mortality is the one with the largest discrepancy between developed and developing countries. On the average maternal mortality is 18 times higher in the developing world⁶. Everyday at least 1,600 women die from complications of pregnancy and childbirth, which is 585,000 women – at a minimum dying every year². Almost 90% of these deaths occur in Asia and sub-Saharan Africa, approximately 10% in other developing regions, and less than 1% in the developed world^{6, 7}. In many developing countries, between 25% and 33% of all deaths of women in the reproductive age group are the result of complications of pregnancy and childbirth⁸. Maternal mortality should be looked at as just the tip of the iceberg of maternal morbidity and disability.

Most maternal deaths take place during or shortly after delivery yet this is the time when women are least likely to receive the health care they need⁹. Having a skilled health professional at delivery is essential for making motherhood safer. WHO defines skilled birth attendants as trained midwives, nurses, nurse-midwives or doctors who have completed a set course of study and are registered or licensed to practise¹⁰. Traditional birth attendants,

including those who have been trained, are not included in this definition. The proportion of pregnant women who have care during delivery is universally lower than those who receive antenatal care¹¹. On the average 53% of deliveries in developing countries take place with the assistance of a skilled birth attendant⁹. There is however a wide variation among the different countries.

In Ghana the utilization of supervised delivery services vary from region to region and also between rural and urban areas. According to the GDHS 1998¹² whereas 76.3% of women in urban areas had supervised delivery only 34.1% of women in rural areas had supervised delivery over the 5-year period preceding the survey. In the Greater Accra Region supervised delivery was estimated at 72.6% compared to 11.1% in the Northern Region and 51.3% in the Brong Ahafo Region.

Access to maternal health services means that women can reach maternal health care easily and are not deterred by cost or poor treatment by staff. Low utilization rates for maternal health services are due to: Cost, Quality of Care and Socio-cultural issues. These factors are illustrated in Figure 1 below.

Figure 1: Conceptual Framework of Factors Influencing Access to Maternity Services.

The effect of cost of services on utilization of health facilities has been investigated in some studies in developing countries however the results are mixed. In one study in Mexico, lack of money was found to be a critical consideration behind non-use of physicians in 58% of illness episodes. Although respondents felt that medical care was an appropriate treatment choice for these illnesses, the cost of obtaining such care actually deterred

them from seeking it¹³. However in another study, among the factors affecting in patient choice of hospitals in Nigeria's Oyo State, cost was a priority consideration in only 12% of 859 respondents¹⁴. Nnadi and Kabat¹⁵ in a survey conducted among a sample of 680 Ibo, Yoruba and Hausa people in Nigeria revealed five factors that influenced peoples decision to seek traditional or western medical care. Respondents ranked cost and distance fourth and fifth respectively. Kloos et al¹⁶, reported that in Ethiopia, cost of service was often a less important consideration in the utilization of services than were quality of service and perceived efficacy of the treatment. Thus some traditional healers and private clinics were visited for certain diseases, although they charged more than did government facilities. The services they offered were perceived to be more effective and of better quality than those provided by the government.

Yoder 1989¹⁷, examined the impact of the increase in user fees on overall patient use of health services in Swaziland. Data on average patient attendance over a three-month period was collected from a 71% sample of government and mission facilities. Analysis showed that the changes in the fee structure resulted in a 17% decline in the patient use of all health facilities. Average attendance at government facilities decreased by 32%. At the same time, average attendance at mission facilities increased by 10%. Mission facilities were being substituted for government facilities; since the fees charged by both were now the same, but the quality of the services at the former were superior. This study also showed that, in general, the greatest decline was in average attendance for preventive care at government facilities

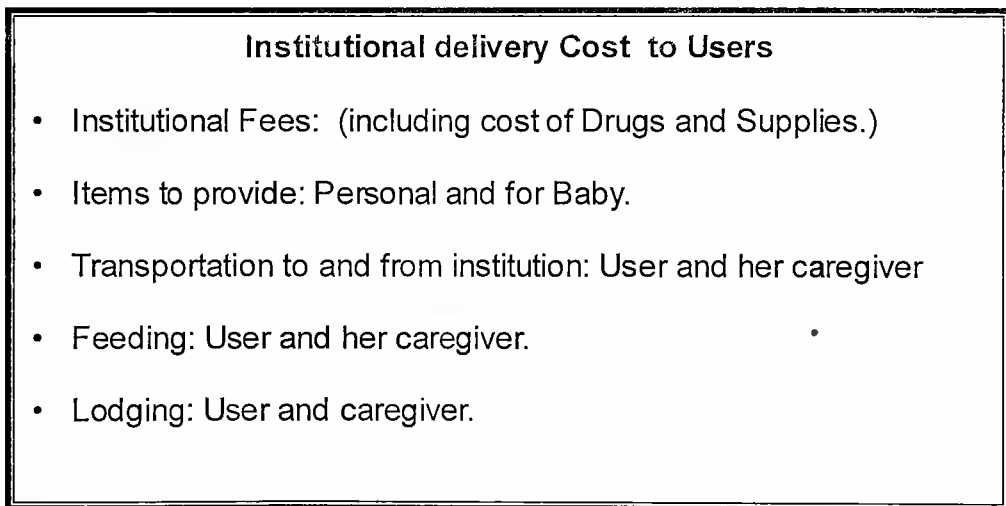
where fees for preventive services increased by about 50 cents after having been free.

Some studies also suggest that government facilities may be under-utilised precisely because they are free. Auerbach¹⁸ (1982) found people in Tunisia commonly associate higher cost with better quality of care. Two surveys in the La Cote d'Ivoire showed that people preferred to pay for medical services, believing that they would receive better care if they paid for it. In one survey, 41% of respondents said they preferred to pay for services, and in the other, 80% believed they were better cared for when they paid for medical care¹⁹ (Lasker 1981). The literature does not provide systematic evidence that cost of service is a major barrier in seeking care in the developing world. Dor and van der Gaag²⁰(1988) conclude that the literature on household demand for health care in developing countries has not yet shown that money prices affect the utilization of health services.

Fees reduce women's use of maternal health services and keep millions of women from having hospital-based deliveries, or from seeking care even when complications arise. Even when formal fees are low or non-existent, there may be "informal" or under-the-table fees, or other costs that pose significant barriers to women's use of services. These may include cost of transportation, lodging or drugs and food for the woman or for family members who help care for her in hospital²¹ Some components of cost to users of supervised delivery services are illustrated in figure 2 below. In Zaria, Nigeria a study found that the shift from free to fee-based services for obstetric care reduced admissions overall but significantly increased

emergency cases. The number of maternal deaths rose correspondingly²². This introduction of fees probably made the service inaccessible to many more women and therefore they opted for other services, only being forced to report to hospital when complications developed. Another study in Ghana had similar findings on the effect of an increase in user fees²³. In one study in the Upper East Region of Ghana, 64% of women who died of pregnancy complications sought help from a traditional healer before going to a health facility²⁴. Their families cited cost and their belief that the woman was not ill enough as the main reason for not seeking hospital care.

Figure 2: Components of Cost of Institutional Delivery



It's interesting to observe that even though some of the barriers to accessing maternity services are common to antenatal and delivery services, antenatal services remain better patronised than supervised delivery services. Some factors that may account for this are:

- The need to provide some items for institutional delivery

- Limited time to reach facility once labour starts due to long distances and poor transport.
- Women or caregivers having to stay longer at institution for delivery services leaving responsibilities at home.

To have an institutional delivery women are often required to provide items, which may include soap, items of clothing for the baby and personal toiletry for at least an overnight stay in the facility. These items attract some cost, which may be out of the reach of the woman or her family. Whilst an antenatal visit can be planned at the woman's convenience to, for instance, fall on a market day when transportation is easy to come by, the day of delivery cannot often be accurately estimated and labour may start when it is least expected.

In an effort to resolve this difficulty of access to emergency obstetric care, particularly for women living in rural areas, a number of developing countries have established maternity waiting homes. Although it is generally claimed that this is a cost effective way of bringing women and medical care closer together, there has been no systematic appraisal of their actual effectiveness²⁵. In one such intervention in Ghana²⁶, it was found that the cost and hardships of staying away from home and lack of perceived need were among the reasons why maternity waiting homes were poorly utilized. Another intervention is to bring health care closer to the rural community by introducing health workers into the community. One such study in rural Bangladesh, showed a significant association between the posting of professional midwives in villages, providing them with equipment to treat

immediately obstetric complications, backed by an effective referral system and a substantial reduction in obstetric mortality in the community¹⁶. Other interventions tried include the provision of transportation for obstetric emergencies^{27, 28} and training of traditional birth attendants.

Antenatal care is generally an outpatient service whereas institutional deliveries require admission usually for a minimum of 24 hours. This usually requires a woman and her caregiver to leave their social and household responsibilities and they may need to hire the services of someone else to perform them. This opportunity cost is often overlooked when discussing the cost of institutional delivery to the user.

Cost of delivery services is not equal universally but depends on a woman's place of residence, how far away she is from a service delivery point and the type of services provided. In the literature reviewed no information on the cost of maternity services to pregnant women in Ghana was found.

Chapter 3

Methods:

3.1 Study area.

The District: The Kintampo district is one of the 13 districts of the Brong Ahafo Region of Ghana. It has a projected population of about 170,469 in 1999 based on the 1984 census. Farming is the main occupation in the district engaging about 70% of the adult population. The transportation system in the district is not very adequate. There is one first class road running from the south boundary through the capital to the northern boundary. The roads linking the capital to other communities in the district are of second-class category and deteriorate with the onset of rains. Vehicles plying between the sub districts and the district capital are mostly old and ill-maintained ones. Telecommunication facilities are poorly developed. There is one District hospital, 5 Rural Health centres, 2 MCH/FP Clinics, 2 private Maternity Homes and 1 Private Clinic. Of these only the hospital and three of the Health centres are manned by midwives and offer maternity services. These are the Jema, New Longoro and Dawadawa health centres. Maternal mortality was estimated at 870 per 100,000 life births in 1998⁴.

The district has two important institutions of the Ministry of Health, the Rural Health Training School and the Kintampo Health Research Centre.

Demographic Surveillance System:

Since 1995, KHRC has maintained a surveillance system in about 81 villages in Kintampo district, including Kintampo town. This does not cover the whole

population children born since May 1995 and pregnant women in the villages covered are all recorded in the database. The demographic surveillance system covers a total of thirteen major areas in and around Kintampo, seven outside and six inside Kintampo.

A zone is a geographical area that includes a number of villages that have been grouped together for purposes of implementation and supervision of project activities. Currently, there are 8 zones in the project as follows:

NORTH	CENTRAL	SOUTH
Babartor	Akroma	Nante
Soronuase	Bawakura	Nante Zongo
	Krabonso	Jema
	Hyireso	Jema Nkwanta
	Anyima	Ampoma
		Beposo
		Kokuma
FAR-SOUTH	EAST	FAR-EAST
Amoma	Ntankro	Apesika
Pramposo	Oforikrom	Anokyekrom
Krutakyi	Akora	Fokuokrom
Paninamisa	Akora Nkwanta	
	Pamudu	
	Kwabia	
WEST	FAR-WEST	KINTAMPO
Yabraso	Weila	6 sections
Asantekwaa	New Longoro	
Nyabea	Mansie	
Techira No.1	Konkomba No. 2	
Techira No.2	Babukrom	

A Pregnancy Register (REGISTER) is completed when the prospective study mother is > seven months pregnant. This serves as an enrolment form, which is used to collect information on birth intervals and menstruation cycles for mothers. It is also used to find out the resident status of mothers enrolled, i.e. whether they plan to stay in Kintampo district for a long time. A Pregnancy Outcome (PREGOUT) form is generated from the REGISTER and if the mother does not have a REGISTER and the birth is picked then a REGISTER form is completed at the same time as the PREGOUT.

This form is only completed for children who are less than six weeks old. Information is obtained on prenatal visits, place, type, outcome and date of delivery as well as maternal deaths and the weight of the child. The Field workers have been given a calendar to check that the name of the child and the day it was born on match. A pregnancy register is kept which contains information on prenatal visits, place, type, outcome and date of delivery as well as maternal deaths and the weight of the child. The Field workers have been given a calendar to check that the name of the child and the day it was born on match. A notification form is completed when the child or mother dies or moves (within or outside project area), the mother refuses further participation or the child is admitted to hospital. The dates and places of these events are also notified²⁹.

3.2 Study Design:

The study was a descriptive one divided into three parts.

Record Review

All pregnancy outcomes from the database of the Kintampo demographic surveillance system over the last year (March 1999 – March 2000) were reviewed to determine the utilization patterns of delivery services. This system does not cover the whole district population because small and difficult to reach areas are excluded from its coverage which is estimated at about 85 -90%. The utilization data generated therefore probably represent a better picture than really exists since it is expected that the hard to reach areas not covered by the surveillance system will also be the poorest covered by formal health care facilities. The total number of deliveries was calculated and the percentages of the different services utilized were calculated.

Household Survey

Since it was expected that the cost of delivery services will not be uniform throughout the district mainly due to the geographic location of health facilities, in the second part of the study, a purposeful sample of three zones were chosen on the basis of the availability of services. The first zone has a public hospital, a private maternity home, and other services. In the second zone there is a public health centre and other services whereas the third zone has no formal health services.

Sample size: In these three zones all women who had delivered in the last three months prior to the study were interviewed to arrive at the cost of accessing the services they utilized. The total sample size was 86. The

various cost issues associated with utilizing the various options were also investigated. Information collected included personal information, place of birth and person conducting delivery as well as the various costs incurred. The data collected was then grouped based on the place of delivery into three groups: Home delivery (alone or assisted by a family member), delivery with a TBA and delivery in an orthodox health institution. For this latter category no distinction was made between public and private institutions since they were all considered to provide supervised delivery services.

Analysis was done using EPI-INFO statistical programme. Means, and percentages of various components of the costs of the services were calculated and comparisons made. In the end an average cost for the different services and their components were calculated.

Focus group Discussions.

The final part of the study investigated the influence of cost and cost issues on utilisation patterns using qualitative methods. A convenience sample of 8 women each who have delivered before were chosen from three communities representing the distribution of health services outlined above. The communities selected were Kintampo town, representing a setting with relatively good access to health care facilities, New Longoro, representing a setting with moderate access to health care facilities and Atta Akuraa representing a setting with poor access to formal health care facilities. In each of these three settings a focus group discussion was held with the women sampled to explore the role of cost in influencing their choice of service. The discussion explored the services utilized by women in the community, and the

factors that influence their use. Participants were then asked to rank the factors mentioned in order of importance and to decide among themselves where they preferred to deliver if cost were not a problem. Information from the focus group discussion was recorded using a tape recorder and by taking notes during the discussions. This information was then later transcribed manually and interpreted.

3.3 Limitations:

- This study focused on only the cost of the various methods stated above and not on their effectiveness.
- The costs arrived at depends on the ability of the women and their families to recall expenses made. Since this was expected to be limited by time, a period of three months since the last delivery was chosen to minimise the effect of recall bias.
- Even though costs may differ considerably from one woman to another it is expected that the average cost arrived at will be representative of the group being described.
- Not all costs were quantifiable so this study focused on those costs that could be quantified by the respondents.

3.4 Ethical Considerations:

- Mothers who may have had lost their babies had to recall their pregnancies and labour. Where this was not desirable to the woman, she was given the option to decline having the interview.

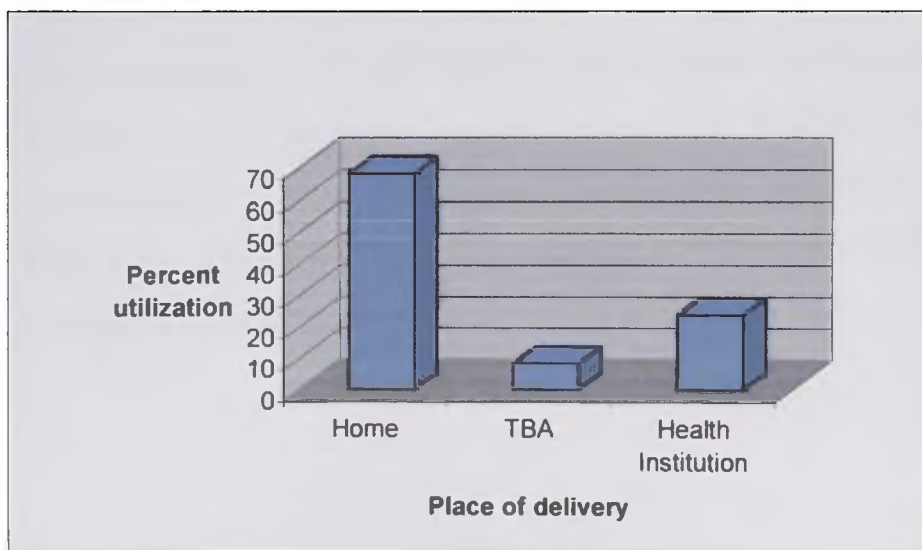
Chapter 4: Results

Record review

Data in the database of the KHRC covers a period of three years however only the records spanning one year are presented below since the trends have not changed much. The records presented below span the period between January and December 1999. The patterns of utilization of delivery services by women in the district covered by the DSS of the KHRC is summarised in figure 3 below. As stated earlier, this system covers most of the district (about 85 –90 %) and should give a fair representation of the situation in the District.

Figure 3:

Utilization of delivery services by women in the Kintampo district.



Source: Database of the DSS of the KHRS.

There were a total of 1945 deliveries recorded out of which 1327 representing 68.2% took place at home. It must be stated that some of these births were attended by TBAs. 458 deliveries occurred in an orthodox health care facility representing 23.6% of deliveries for the year. These facilities include clinics health centres, hospitals, private maternities and private clinics. The important characteristic about these deliveries is that nurses/midwives and doctors supervised them. 160 births representing 8.2% of all births took place with TBAs. This pattern represents the picture in the whole district however the pattern varies from community to community based on the availability of services.

Table 1 below shows the utilization patterns among the women sampled. Kintampo represents a community with good access to health facilities, having a hospital, a private maternity home, as well as TBA services. New Longoro represents a community with some access to health facilities, having a health centre. In this community however there are no TBAs. Babator represents a community with poor access to health facilities with no orthodox health facility. There is a TBA living in the community and the nearest hospital is Kintampo some 20 kilometres away.

Table 1:

Utilization patterns of delivery services by access to health services among women in study group.

Place	Institutional deliveries (%)	TBA deliveries (%)	Home deliveries (%)
Kintampo (good access)	77.8	5.6	16.7
New Longoro (some access)	90.0	0	10.0
Babator (poor access)	16.7	60.0	23.3

In Kintampo and New Longoro 77.8 and 90% of women respectively delivered in health institutions whereas only 16.7 and 10% respectively of these women delivered at home. In Babator the majority of women, 60% delivered with TBAs whilst 23.3% delivered at home and only 16.7% delivered in a health institution.

Household Survey.

A total of 86 mothers were interviewed for the second part of the study, which looked at the cost of delivery to women utilizing different services. Only women who had spontaneous vaginal deliveries were compared. The total cost of delivery in the different settings is summarised in the table 2 below. These costs do not include the social cost to the woman and her family.

Table 2:

Summary of the total cost of delivery among study group by place of delivery.

Statistic	Place of delivery		
	Home	TBA	Orthodox health Institution
Number	10	21	51
Mean	₵8,460.00	₵14,621.43	₵50,698.04
Standard error	₵2,419.62	₵1,307.78	₵4,211.80
Median	₵7,500.00	₵13,950.00	₵50,000.00
Minimum	0	₵5,800.00	₵10,000.00
Maximum	₵24,000.00	₵26,500.00	₵102,100.00

There were a total of 10 women delivered at home by relations. The cost of delivery to them ranged from a minimum of 0 to a maximum of ₵24,000.00 with a mean of ₵8,460.00 and a standard error of ₵2,419.62. A TBA delivered a total of 21 women. For this group of women the mean cost of delivery was ₵14,621.43 with a standard error of ₵1,307.78. Women in this group paid between ₵5,800.00 and ₵26,500.00 with a median cost of ₵13,950.00. Midwives delivered 51 of the women sampled in an orthodox health institution. For these women the mean cost of delivery was ₵50,698.039 with a standard error of ₵4,211.80. The total cost to these women ranged from a minimum of 10,000.00 to a maximum of ₵102,000.00.

The means of the total cost of delivery by place of delivery is illustrated below in figure 4.

Figure 4: Estimated total cost of delivery by place of delivery in the Kintampo district.

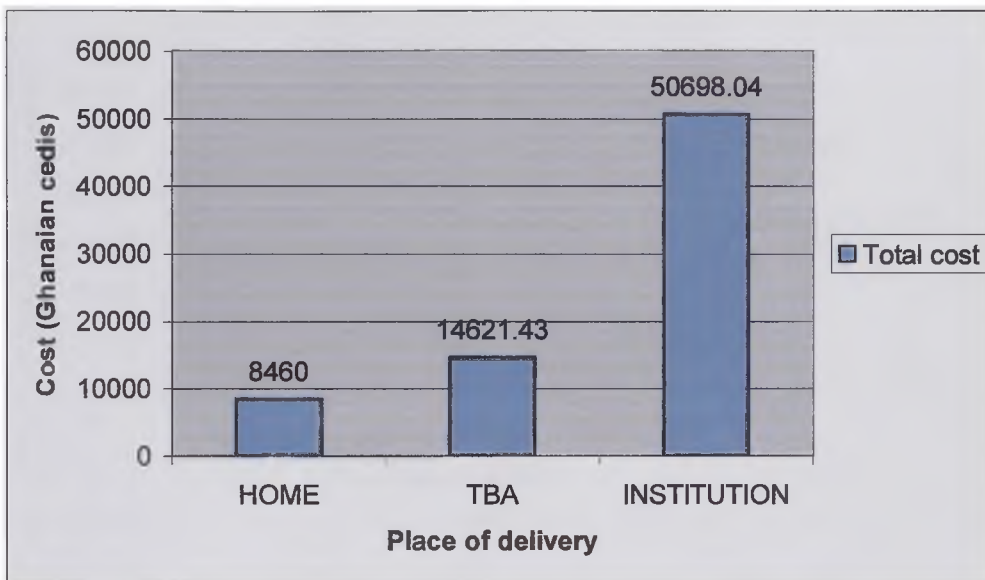
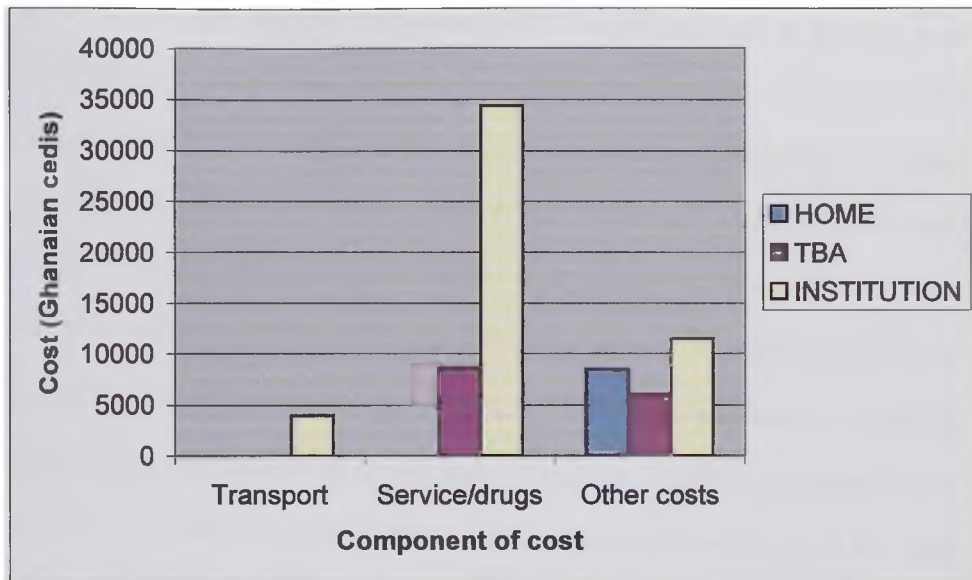


Figure 5 below show a break down of the various cost components of delivery services by place of delivery. The cost components could not be further broken down because patients are usually charged an overall fee after the service is provided and it was difficult for respondents to separate individual costs.

Figure 5:

Means of different cost components by place of delivery in the Kintampo district.



Home and TBA deliveries did not attract any transportation costs since TBAs generally live in the communities in which they operate and are within walking distance or sometimes go to the home of the mother to deliver her. The mean cost of transport for institutional deliveries was ₵3,947, and ranged from 0 to ₵58,000.00.

Home delivery did not attract any service or drug cost since the service provider was invariably a relative. TBAs on the average cost ₵8,571. (range 0 – ₵20,000.00) for their services/drugs whilst women paid ₵34,401.(range ₵7,000 – ₵46,000.) for services and drugs to deliver in an orthodox health facility. While it cost between ₵7,000. and ₵30,000. to have an institutional

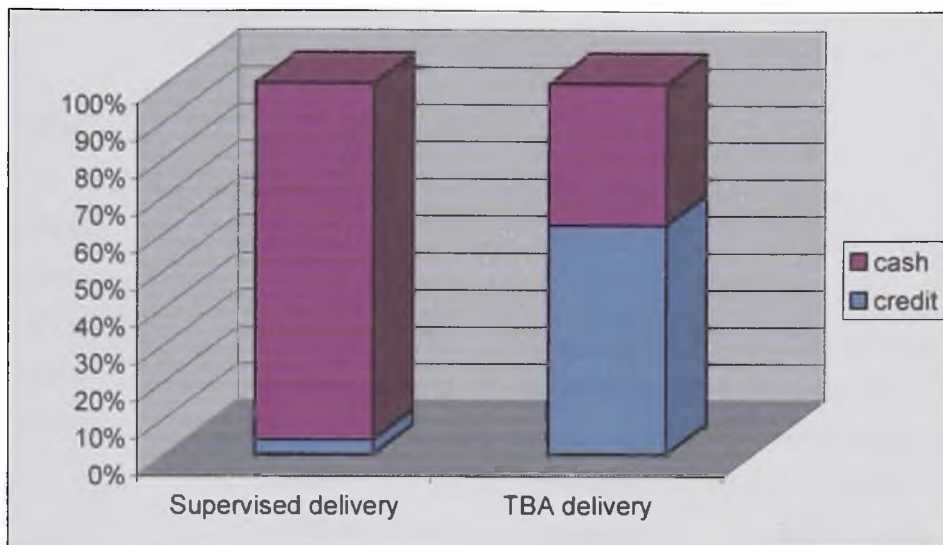
delivery in the New Longoro health centre, it cost between ₵28,000. and ₵46,000. to deliver in Kintampo hospital and between ₵30,000. and ₵42,000. to deliver in Ebenezer maternity home, a private maternity home in Kintampo. Other costs to women included the cost of items they had to buy for their delivery and other charges they paid aside those for transport and services/drugs. Generally the items women bought for deliveries were similar for all the services and included rags, dettol (a disinfectant), blades and soap. Those who delivered in health institutions had to additionally purchase sanitary pads. For home deliveries women paid ₵8460. whilst ₵6,050. and ₵11,500. was paid for TBA and institutional delivery respectively. It must be stated however that women delivered by TBAs also most often gave things in kind to the TBAs. As custom demands women have to give the head and skin of the sheep that is used for the naming ceremony of the baby to the TBA. The women however were unable to cost this and really did not see it as payment for her services.

There was only 1 woman who was delivered by Caesarean section in the Techiman hospital and paid a total of ₵316,500.

Payment mechanism.

Apart from the actual amount charged, the mechanism of payment of charges also affects utilization patterns. Whereas some users may not find the cost of the service itself as a deterrent, they may not immediately have the money to pay for the service at the time they use it. Figure 6 shows the access to payment by credit for women in the group studied by service utilised.

Figure 6: Access to payment by credit by service utilised among study group.



Among the users of supervised delivery services only 2 out of 51 women received the service on credit forming 4% of the group while 13 out of 21 women delivering with a TBA received services on credit forming 62% of that group.

Focus group discussions.

Three focus group discussions (FGDs) were held in Kintampo, New Longoro and Atta Akuraa. Each of these comprised 8 participants who were women between the ages of 20 and 40 years and had delivered at least one child. There was one facilitator whilst the researcher acted as the recorder. In all the FGDs the discussion was lively and there was good participation.

Table 3 below is a matrix of the results of the FGDs.

Table 3: Matrix of results of FGDs.

Issue discussed	Kintampo group. (good access)	New Longoro (moderate access)	Atfa Akuraa (poor access)
What services are utilized by women in the community	<ul style="list-style-type: none"> •Hospital •Home •Private maternity home 	<ul style="list-style-type: none"> • Health centre • Home • Hospital when referred. 	<ul style="list-style-type: none"> • TBA • Home • Hospital when referred.
What factors influence their choices	<ul style="list-style-type: none"> •Fees charged •Our safety and that of our child •Staff attitudes •Familiarity •Distance 	<ul style="list-style-type: none"> • Fees charged • Safe delivery • Means of transport • Distance 	<ul style="list-style-type: none"> • Safe delivery • Money to pay for charges • Experiences with previous births
Ranking of factors by their importance in determining choice of service	<ul style="list-style-type: none"> • Safe delivery • Fees charged • Familiarity • Staff attitudes 	<ul style="list-style-type: none"> • Safe delivery • Fees charged • Means of transport • Distance 	<ul style="list-style-type: none"> • Safe delivery • Fees charged
Preferred place of delivery if cost were not an issue.	<ul style="list-style-type: none"> •Home •Hospital (no concensus)	<ul style="list-style-type: none"> • Hospital 	<ul style="list-style-type: none"> •Hospital

In general women either delivered at home, assisted by their family members, with TBAs or in health centres and hospitals. Utilization patterns however

differed based on the availability of services with women using the services available in their community.

Among the factors that determine the choice of where to deliver, women mentioned fees charged in institutions, consideration of how they will have a safe delivery, familiarity with the service, staff attitudes in health institutions, distance to travel to reach the point of service delivery, means of transportation to get to service and previous experiences with other births both by women themselves and those of their associates.

When asked to rank these factors mentioned in order of importance, women in all three groups were of the consensus that the most important factor in determining their choice was where they will be assured of a safe delivery. The second most important factor to all three groups of women was the fees charged for the service provided. Other factors, which were said to be important, are familiarity with the service staff attitudes and means of transport to get to delivery point. Women in the group in Kintampo could not reach a consensus on where they would prefer to deliver given that cost were not a problem. While five of them preferred to deliver in hospital, three preferred to deliver at home. The women in the other two groups however unanimously agreed that if cost were not a problem, they would prefer to deliver in hospital.

DISCUSSION

Utilization

The utilization of supervised delivery in the Kintampo district was estimated at 23.6%. When compared to 34.1% reported by the GDHS 1998 for rural Ghana, this figure is low. This is to be expected due to the poor staffing situation in the district, with only 4 out of the 7 sub-districts having midwives and the district hospital having only one medical officer. The utilization pattern shown in table 1 indicates that 76.4% of deliveries were unsupervised. This situation is probably responsible for the high maternal mortality rate of 870 per 100,000 life births reported for the district. (Kintampo district profile) Out of the 76.4% women who delivered outside health institutions, 8.2% delivered in the homes of TBAs whereas 68.2% delivered in their own homes. The available data in the database of the KHRC does not provide for determining who conducted the delivery and so it is difficult to break down the home delivery into those conducted by relatives and those by TBAs, trained and untrained.

Table 2 shows the patterns of utilization in the different settings chosen for the study. It is not a reflection of the utilization pattern in the district and should not be compared to table 1. It is interesting to note from the trends in the use of the services in this table that mothers are more likely to use whatever services are available. This was shown in New Longoro sub-district where about 90% of women in the town used the health centre for delivery because it was the only service available. They claimed all the TBAs had

grown old and died. 77.8% of women in Kintampo also used health institutions. In Babator where health services are not available only 16.7% of women utilized that service. The available services, TBAs and Home delivery together accounted for 83.3% of all deliveries in Babator. This finding is interesting because it suggests that by providing adequate health facilities in all communities their level of use will be increased. This is in keeping with the findings of Senah et al³⁰ in the Akuapim South District of Ghana where the provision of a health centre led to the use of the facility even before community education activities started.

Cost:

It must be stated that because deliveries at home and with TBAs are usually normal deliveries, only supervised deliveries that were normal and spontaneous were included in the comparison of charges. The cost of accessing the various delivery services was found to be very different among the services. As stated, these charges are the mean charges paid by women. On the average therefore it cost a woman between 3.5 to 6 times more have a supervised delivery than to deliver with a TBA or at home.

As shown in figure 6, the bulk of payment was made for services and drug charges. It is difficult to explain the variability in the charges in the two public institutions since they are expected to provide the same range of services. It is also interesting to note that charges in the private institution, which is a profit making institution, are comparable to those in the hospital. The scope of this study however did not allow for an investigation into the reasons for this variability. There is the need to focus on this and a detailed itemisation of the

cost in another study. Since there are no specific expensive equipment or consumables used in delivery in these institutions, it is surprising that charges are this high especially in this largely rural district. In sub-districts with health facilities, within walking distance almost nothing was paid for transport. The average cost of materials bought for delivery, such as soap, disinfectants, cloths etc, were comparable for all the services. The differences in cost therefore were mainly for the services provided. Whereas there was no service cost for home delivery, TBAs charged about ₵8,500.00 for delivery whereas health facilities on the average charged almost ₵35,000 for services as shown in figure 5. Since this charge forms the bulk of the cost of institutional delivery, any adjustments to be made to the total cost of supervised delivery should be targeted at the service charges in Kintampo district. Generally health facilities were found not to give services on credit as compared to TBAs.(see figure 6). As shown by Waddington and Enyimayew, the method of payment is important to consumers and flexibility in payment terms is appreciated. The findings in this study are similar to theirs in which they found that it was generally not possible to get credit at a government health institution, but other providers were more flexible in their payment mechanisms²³.

Effect of Cost on Utilization

In all the FGDs held, the women were of the opinion that the most important factor in deciding where to deliver is their safety. They also acknowledged that it was safest to deliver in a hospital. This means that all things being equal the women sampled favour having a supervised delivery. As put by one

woman in the Kintampo group," *if you go to deliver at home or with a TBA and there is any problem, they will send you to the hospital so why not go there in the first place*". The second on their priority list was the cost of the service. In fact in one discussion cost was initially mentioned as the most important determinant of service utilization and it was only after a lengthy debate that it was pushed to the second place. One of the participants in Atta Akuraa stated, *"For us in the village cost is very important. You see, here our husbands do not give us any money so you have to work hard yourself even when you are pregnant to get some money to buy your things and there is no money left to go to hospital"*.

Since the cost of supervised delivery is about 4-6 times higher than home and TBA delivery, cost serves as a major disincentive for the use of the services even where it is available. This finding is similar to that of Young, 1981¹³ but is in contrast to those of Egunjobi, 1983¹⁴ and Nnadi and Kabat, 1984¹⁵. In a rural setting where money is difficult to come by, cost of services is likely to play a major role in its utilization. Also since most women deliver at home and have a safe delivery, families may not see childbirth as a serious condition to justify the expenditure of high fees, which they do not have anyway.

Chapter 5

CONCLUSION AND RECOMMENDATION

In Kintampo district only 23.6% of pregnant women utilise supervised delivery serviced. The vast majority, 76% either deliver at home or with a TBA. In this district cost plays an important role in determining where women choose to deliver. Women use the service that are available, can ensure their safety and are affordable to them. Supervised delivery costs 4-6 times more to the woman generally, most of the cost being for the service provided and not for transportation or other costs. These findings suggest that a downward review of this cost will make supervised delivery an attractive option for women in the Kintampo district. This however doesn't mean that a downward review of fees will make supervised delivery universal because there are still other factors that prevent many women from accessing the service such as transportation, distances and poor staff attitudes.

Recommendations

From the findings in this study, it has been established that in the Kintampo district, cost plays a major role in determining the utilization of supervised delivery. The service/drug charges are very variable ranging from ₵7,000. to ₵46,000.00 . This wide range suggests that no uniform mode of establishing charges for supervised delivery are followed and institutions may be charging fees which may not reflect the inputs that go into providing the service. Also pregnant women in this district are more likely to use a service that is available to them and is perceived as effective.

It is therefore recommended that:

1. The DHMT should review the fees charged by all health institutions in the district for delivery and streamline them to make them more affordable to women in the district. If a safe normal spontaneous vaginal delivery can be conducted in one sub district at a cost of ₵7,000. to a woman there should be no reason why a similar procedure should cost ₵46,000. to a woman in another government health institution, the Kintampo hospital.
2. The DHMT should consider using some of the funds provided by the government for free antenatal treatment to subsidise the charges for supervised delivery.
3. The DHMT should look into the retraining of public health nurses in service in midwifery. These nurses the DHMT should then be placed in communities with poor access to maternity services to boost supervised delivery.

Appendix 1: Data collection tools.

Field Data Collection:

Questionnaire.

Date: _____

Identification

Number _____

1. Personal Information

Educational Status _____

Age: _____

1a Number of children _____

1b Date of last delivery

1c Place of residence _____

1d Place of delivery

1e Estimated distance between residence and point of delivery

0 –5km 5 –10km 11-20km 21-40km 41km +

2. Delivery

2a Type of delivery Normal vaginal Vaginal with episiotomy Vaginal with forceps/suction Caesarean section

Other (specify) _____

2b Length of stay at delivery point: Less than 12hours 12 – 24 hours

_____ days

2c Person conducting delivery

Medical Officer Family member Nurse/midwife Other TBA

(specify) _____

3. Estimated Cost

3a How much did you have to pay for:

Transportation _____

Services/drugs _____

Lodging _____

Feeding _____

3b did you have to buy any thing specifically for that delivery? Yes No

List: i. _____ Cost. _____

ii. _____ Cost. _____

iii. _____ Cost. _____

iv. _____ Cost. _____

3c Other cost incurred.

Outline below.

i. _____ Cost. _____

ii. _____ Cost. _____

iii. _____ Cost. _____

3d Mechanism of payment: Cash Credit Kind

Other. _____

Did you have to pay anything in kind? Yes

No

State: _____

3f was payment a problem for you?

Elaborate _____

3g Would you prefer some other form of payment? Yes No
Specify

3f. Person who paid (source of funds) Self Spouse
(tick all sources) Family member
Other. _____

3g Were the costs stated above important in determining your choice of service?

Very important
Important
Not important

3h What other factors did determine your choice of service? List.

1. _____
2. _____

3. _____

4. _____

5. _____

In your view what should be done to make more people to deliver in hospitals?

Thank you

Focus Group Discussion Guide.

- Introduction of facilitator and recorder
- Self introduction of participants

Introduction of topic.

Questions/Issues:

- In this town/village where do women usually deliver?
- When women are ready to deliver what things do they take into consideration before deciding on where to deliver?
- What role does distance play? Probe its relation to time /cost.
- What role does availability of transport play?
- Would you consider who was going to conduct the delivery? Why?
- What role does cost of the service play? How much were you expecting to pay and how much did you pay? (probe for each service)
- Rank these factors discussed so far in order of importance
- Where would you feel more comfortable giving birth? Why?
- If cost were not a problem where would you choose to deliver? Why?

Thank you.

Record of discussions.



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