

THE PRICE TO PAY FOR MATERNAL HEALTH CARE IN RURAL GAMBIA

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ABSTRACT

Title: The price to pay for maternal health care in rural Gambia

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Rationale for the study: The Maternal Mortality Ratio was estimated to 690 /100 000 in 2005. This lies above the average for the other countries with comparable income. (8) To reduce the MMR it is vital to increase the proportion of births attended by skilled health personnel. Currently, there is a significant difference in the socio economic status of the women who deliver with a skilled attendant, and those who do not. The total user costs may affect the use of health services and in order to improve the women's access to maternity care, it is essential both to identify what these costs are and to investigate means of reducing the cost for the most vulnerable in the Gambia.

Objectives: The objectives were to estimate the total household cost for deliveries in a health facility, to explore to what extent households opt out of institutional delivery services due to high cost, to look into the characteristics of the households that opted out of public delivery services due to cost and to look into the financial strategies of households to cope with health emergencies.

Materials and methods: This is a quantitative and observational study with both analytical and exploratory components. The study was conducted in Upper River Division and Central River Division of the Gambia between August and November 2007. Interviews were held of 323 women that had delivered a baby between January to July the same year and that lived in the catchment area of 4 preselected health centres. A total of 17 villages were selected by convenience and all eligible women in the village were interviewed using a structured questionnaire

Results: The median total cost when the user fee and transport is included was estimated at 112 Dalasi. The user fee is about 45% of this cost and transport is the second major expense at 22%. Removing the user fee as is now done in the Gambia will thus clearly change the price of utilizing the health facilities for deliveries.

'Poor' households frequent the health facilities less than households with a higher consumption capacity. However, only 13% of home deliveries claimed they did not use the health facility due to cost. Other risk factors for delivering at home were distance, previous experience with perinatal death and low education. More than half

of the women that delivered in a health facility did not have cash available when leaving for the facility, and mostly

borrowed money to be able to pay – the ‘poorer’ families more than the others.

Conclusion: Removing the user fee is a great step towards improving access to maternity services. However, efforts should still be made on getting delivery services ‘closer’ to the population- either by improving the availability of low cost transport or by further decentralizing appropriate obstetric care facilities.

ABBREVIATIONS

ANC:	Antenatal care
ATP:	Ability to pay
BI:	Bamako Initiative
CEDAW:	The Convention on the Elimination of all forms of Discrimination Against Women.
CHW:	Community Health Worker
CRD:	Central River Division
DHT:	Divisional Health Teams
DRF:	Drug Revolving Fund
DoSH:	Department of State for Health
FIDH:	International Federation of Human Rights
FP:	Family Planning
GDP:	Gross National Product
GDI:	Gross National Income
HF:	Health Facility
IMF:	International Monetary Fund
LRD:	Lower River Division
MCH:	Maternal Child Health
MDG:	Millennium Development Goal
MMR:	Maternal Mortality Ratio
NGO:	Non- governmental Organisation
PHC:	Primary Health Care
PPA:	Participatory Poverty Assessment
PRSP:	Poverty Reduction Strategy Paper
RH:	Reproductive Health
SMI:	Safe Motherhood Initiatives
SSA:	Sub-Saharan Africa
STI:	Sexually Transmitted Infections
TBA:	Traditional Birth Attendant
TFR:	Total Fertility Rate
UN:	United Nations
UNDP:	United Nations Development Program
UNFPA:	United Nations Population Fund
URD:	Upper River Division
VDC:	Village Development Committee
VHS:	Village Health Service
VHW:	Village Health Worker
WHO:	World Health Organisation
WTP:	Willingness to pay

The picture on the cover page shows the mobile Child Welfare Clinic in a village in Central River Division. Women come here for antenatal care and growth monitoring and vaccination of their children. (Photo Laila Løchting)

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1.0 INTRODUCTION

1.1 Introduction

Over 300 million women in the developing world currently suffer from short-term or long-term illness brought about by pregnancy and childbirth; 529 000 die each year, leaving behind children who are more likely to die because they are motherless (1) The health of mothers and children is an important public health priority. In 1995 the United Nations Fourth World Conference on Women affirmed women's right of access to appropriate health care services in pregnancy and childbirth. The WHO publication 'The world Health Report 2005 – every mother and child counts' states as well that women and child health is a matter of human rights (1, 2)

Access to adequate health services for pregnant women is essential in order to reduce maternal morbidity and mortality. Complications to deliveries are often unpredictable and may very fast become life-threatening (2). Proportion of deliveries by skilled attendant is a commonly used indicator for the quality and accessibility of reproductive health services and has been adopted as a leading indicator for maternal health by many agencies. *'Skilled health personnel refer to doctors, and/or persons with midwifery skills who can manage normal deliveries and diagnose or refer obstetric complications. Both trained and untrained traditional birth attendants are excluded'* (3). Skilled attendant at birth is also critical for the survival of the newborn (4).

In 1999, 179 countries signed an agreement at the United Nations (UN) International Conference on Population and Development in The Hague which had as a goal to ensure that 90 % of all births should be assisted by a skilled attendant by 2015 at the global level (4,5). In the Millennium Development Goals (MDG) that was presented by the UN in 2000, this is again emphasized and the Gambia has committed itself to achieve these goals (6)

The maternal mortality ratio (MMR) in the Gambia was in 2005 estimated at 690 /100,000 live births which signify a considerable reduction over the last two decades. However, this is still high and the aim in the Millennium Development Goals

is to reduce the MMR to 262/100, 000 by 2015. The neonatal mortality rate is also high at 46/1000 live births in 2000. (7)

Currently in the Gambia only 55% of the women deliver with a skilled attendant. However, there are great socioeconomic differences as it varies from 31% among the poorest to 81% among the richest.(8) It should be the right of every woman to have adequate assistance during delivery and it is a problem that underprivileged women have less access to this care. On the other hand, there are many reasons why women deliver at home, and why some actually prefer it. This study however, attempts to explore the accessibility to maternal health care with the eyes of the poor through identifying who and how many women wish to use the health facility for their delivery, but experience that they cannot afford the cost of using them. It will also calculate the actual cost of using the services and how the women manage to find the money to pay for it. By doing so, it will be possible to recognize areas to improve in order to achieve universal access.

1.2 Description of the context

1.2.1 Profile of the Gambia:

1.2.1.2 Geography

The Gambia is the smallest country on the African continent. It is situated on the West coast and extends about 400 km inland from the Atlantic Ocean. The north, south and east borders to the Republic of Senegal. The maximum width of the country is 28 kilometres and it has a land area of 10,689 square kilometres. The Gambia River flows for 322 km through Gambia on its way to the ocean. (9) The country is divided into regions; Western Region, North Bank region, Lower River region, Central River Region and Upper River Region, as well as the capital Banjul and Kanifing Municipal Council. The largest cities are Serrekunda and Brikama located in the Western Division. The map of Gambia is shown in Figure 1.

The Gambian climate is typical with a long dry season from November to May and a rainy season between June and October. Natural resources are limited as there are no known reserves of valuable minerals, oil or gas. (6)

Figure 1: Map of the Gambia



1.2.1.3 Demographics:

The Gambia is one of the most densely populated in Africa with 134 persons per square kilometre (10) and the population of 1,6 million people is estimated to be growing at an annual rate of 3,4 %. However, the total fertility rate (TFR) is reducing and was estimated at 4, 6 in 2006. (7)

Due to heavy rural – urban migration, 50% of the population now lives in urban areas compared to 37% a decade ago. The rural areas are dominated by farming and agriculture and the population drift to the coastal part of the country is attributable to the over concentration of economic activities in the Greater Banjul Area. Immigration from neighboring countries also contributed in the high urbanization rate. (10)

The Gambia is a multi-ethnic and a multi-racial society and the population is comprised of four major tribal groups: Mandinka (40%), Fula (19%), Wollof (15%), and Jola (11%). About 95% of the population are Muslim, the rest mainly Christians. (11)

High fertility rates and a decline in child mortality over the last years has resulted in a youthful population structure and about 42 per cent of the population is aged less than 15 years (10). Women comprises 51 % of the population, however '*The Gambia is a pro-natalist, male-dominated society where women have little decision-making power.*' (11) Early marriage, polygamy and illiteracy is common among Gambians, - women in particular. Life expectancy has improved but remains low at 59 years for both sexes. (7)

1.2.1.4 Health status of the population

'The people most affected by ill health and premature death are pregnant women and young children. The main causes of death and illness in The Gambia are infectious parasitic diseases, maternal and neonatal causes.' (12)

The Gambia compares positively with neighbouring countries concerning different health outcomes and there has been an improvement in reducing child -and maternal mortality rates over the past years. For example, the life expectancy at birth was raised from 33 years in 1973 to 53 in 1993 and the under-five mortality rate fell by 47% during the same period. (13) Nevertheless, as mentioned, it is still a long way to go to achieve the MDG targets and to diminish the large differences between regions and household wealth.

Malaria, acute respiratory infections, diarrhoeal diseases, helminthic infections and skin disorders are the leading causes of morbidity for both children and adults. These are in total responsible for over 50% of the outpatient and inpatient care delivered through public health care system. The HIV prevalence is currently still low, at around 2, 2 % of the general population

Even though the maternal mortality ratio has reduced from 1050/100.000 in 1990 to 690/ 100.000 in 2005, the country remains comparable to the poor performers in SSA. Most causes of maternal mortality in The Gambia are preventable. The leading cause of death is haemorrhage and anaemia (14), and also eclampsia and sepsis. (15) In a study performed in Farafenni, Gambia in 1999, it was also found that almost 60 % of pregnant women were anaemic and almost half of the women had childbirth related damage, such as displacements of genital organs and urinary incontinence. (16)

Table 1: Health indicators (7)

INDICATOR	YEAR		TREND
Life expectancy at birth	2006	56 years	↑
Crude death rate	2006	11/1000 population/year	↓
Under 5 mortality rate	2006	113/1000 live births	↓
Neonatal mortality rate	2000	46/1000 live births	
Maternal mortality ratio	2005	690/100.000 live births	↓
Crude birth rate	2006	36/1000 population/year	↓
Total fertility rate	2006	4,6 children/woman	↓ 1,4% (1990-2006)
Contraceptive prevalence	2002 – 2006	18%	
Antenatal care coverage	2002 – 2006	98%	
Institutional deliveries	2002 – 2006	55%	

1.2.1.5 Political situation

After over two centuries of colonial rule under the British, The Gambia gained full independence in 1965 and it formed a short-lived federation of Senegambia with Senegal between 1982 and 1989. There was a military take over of the government in 1994, but a multiparty system was restored in 1996. (17)

Despite claims from the International Federation of Human Rights (FIDH) about human right violations by the president (18), the Gambia describes itself as a country with high degree of religious and social tolerance, low crime rate, and with an environment of peace and civil tranquility. (19)The legal system is based on a composite of English common law, Coranic law and customary law. (17)

1.2.1.6 Economy

The Gambia was in 2007 ranked among the poorest countries in the world and is 155 out of 177 on UNDP's Human Development Index (20). The National Household Poverty Survey performed in 1998 showed that 61 % among the rural population and 48% among the urban population lived below the poverty line.

Agriculture, fishing and tourism is important for the Gambian economy, but as many African countries in the 1980's, there was an economic crisis which consequently led to the breakdown of health care systems. One reason was the collapse of prices for agricultural exports (21), e.g. Gambia suffered from the 40% fall in the world market price for groundnuts (13). Groundnut cultivation occupies 60% of the crop land and groundnuts account for an average of 9 per cent of total exports in the Gambia (11) The industrial sector contributes only 11 per cent to GDP. (19) Unemployment and underemployment rates remain extremely high. Agriculture employs 75% of the labor force, industry, commerce, and services 19%, and government 6 %. (17)

The Gambia has joined in several economic reforms over the past two decades, with the assistance of the World Bank and International Monetary Fund (IMF), starting with the Economic Recovery Program in 1985 and the Program for Sustained Development in 1989. Yet, per capita income barely increased during this period, one reason could be the rapid demographic growth or the unstable primary agricultural system with very little industrial activity. Over the year 2000 and 2001, the Gambia engaged in the process of preparing its Poverty Reduction Strategy Paper (PRSP), based on The Strategy for Poverty Alleviation (SPA) from 1991. Through this work, prioritized public actions were identified, resulting in five development objectives. One of them is: 'Improving Coverage of the Unmet Basic Needs of the Poor.' This includes the reduction of maternal and child mortality rates as well as educational enrollment. (22) However, the PRSP as a strategy of the World Banks have been criticized on a global level. The World Bank claims that PRSP will increase the financial resources for health. But, the PRSP have ceilings on public spending sectors and, according to the critics, contain most often an insufficient budget for health care. (23)

The Gambia has a high international debt, which constitutes more than double the annual income of the country. At the moment, the Gambian government is spending more than four times as much on debt payments (28% of the budget) than on healthcare (6%). (24) However, whenever good governance targets are met, the Gambia will be eligible for debt relief. See table 2 for selected economic indicators.

Table 2: Economic indicators (7,24):

INDICATOR	YEAR		TREND
GNI* per capita	2006	310 US\$	↓
Growth rate of GDP** per capita	1990-2006	0,3%	
Population below 1 US\$/ day	1995-2005	59%	

* Gross National Income

** Gross Domestic product

1.2.3 Poverty in the Gambia

Based on the information obtained in household surveys conducted in the Gambia in 1989, 1992/94 and 1998, as well as Participatory Poverty Assessments (PPAs) in the years after that, the Poverty Reduction Strategy Report have analyzed who are suffering the most from poverty in the Gambia and how poverty is perceived among the population.

It is clear that extreme poverty is concentrated in the rural areas. Around 35% fall below the food poverty line in rural areas, compared to 15% in urban areas.

Extremely poor households are measured as those with expenditure less than the cost of a basket of food providing 2700 calories per day per adult unit. Central River and Upper River have a population of 43% and 49% extreme poor according to 1998 data. A variable characterizing poor households is household size. Almost 20% of extremely poor households have more than 16 members, compared with just 4% of non-poor households. Over 91% of the members of extremely poor households worked in agriculture, and groundnut farmers distinguished themselves by having the highest rate of poverty in all three surveys. Additionally, there is a higher incidence and severity of poverty among women compared to men; this is being referred to as the feminization of poverty. Polygamous marriages and poor education can also be considered as risk factors of poverty. Finally, a high association between poverty and total fertility has been seen, ranging from 3.9 for women in non-poor monogamous relationships to 6.8 for extremely poor women in polygamous relationships. (22) In conclusion, if you are a women living in a rural area and are one of several wives of a non educated husband who works as a groundnut farmer, chances are that you are very poor. Unquestionably, many women will recognize themselves in this scenario in Upper and Central River Division of the Gambia.

Perception and understanding of poverty differs by region, ethnicity and gender etc. According to the PPA's , people in rural areas perceive poverty in terms of lack of farm inputs and implements, as well as limited access to infrastructure, facilities and services such as education, health and communications. Consequently, those most vulnerable to poverty are the landless and those without domestic animals and farming implements. The high dependency on their farm in turn makes people even more vulnerable or poorer in the wet season (July – October) before the harvest. Furthermore, more money is needed for health care as the wet season is the peak of the malaria season, and school fees are also due at this time. (22)

So how do the poor Gambian families cope, in a reality where it is normal to use more than 70% of their income on food? Social support in the Gambia is based on social and religious traditions and has been referred to as the 'F- connection'. This stands for 'family, friends, firms' and describes the extended family and the 'right' of family and friends to share income and work. (25) It is quite common to eat with your neighbors in the time of need, and maybe also reduce the numbers of meal per day. Overall there is a low level of social inequality in the Gambia, which can be contributed to the extended family concept as mentioned above. (22)

1.2.4 Women in the Gambia

The following is stated on the official website for the Gambian government: *'Gambian women are engaged in formal and informal employment, domestic chores, community work, childbearing and rearing during their lifetime; their womanhood is only defined by their latter role. They receive recognition for this single role and are not given the required support in it'*. (26) Other official Gambian documents continue to describe how women are considered a lower social status than men both culturally, socially and according to customary norms. (11, 22) Women in the Gambia have an unequal access to education, control over assets and decision-making. For example are 65.8 % of adult women illiterate as against 51.4 % of men, (18) and women cannot own land in rural communities and thus must forsake family properties in the event of the decease of their husband. Additionally women make up 4.9% of the qualified work force and 61.9% of the unqualified work force. In fact, 70% of the

agricultural workers are women and they are responsible for most of the food production in the country (22).

Men have the privilege of taking all economic and social decisions, including those relating to marriage and family size (11). Early marriage, as well as very low contraceptive rate is partly explaining the high number of women dying of pregnancy related cause, according to FIDH. This is also mentioned by the government in their Reproductive Health Action Plan. It states that the fact that the majority of mothers are poor, unhealthy and/or malnourished before they enter their reproductive life as well as harmful religious and traditional practices and lack of male involvement, are factors contributing to the maternal mortality. (27)

As mentioned above, the Gambian government has clearly recognised the difficult situation of its women and has in the last couple of decades signed and ratified a number of international treaties, i.e. the 1979 Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the African Charter on Human and People's Rights from 1983 (18). The government also approved the document 'National policy in favour of the advancement of women' in 1999 and moreover, in the government strategy Vision 2020 it is stated that they will focus on the eradication of all forms of discrimination against women and children. (19) A concrete example of pro- women policy is the implementation of free public primary schools for girls which has encouraged poor families to educate their daughters.

On the other hand, in the evaluation performed by FIDH in 2005 they argue the following: *'The Gambia has not integrated the legislative and legal provisions contained in the conventions it has ratified into its legislation. Its internal law is therefore in complete contradiction to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).'* (18 pp7) Although the Vision 2020 document explains that they are planning to gradually make laws that are compatible with the CEDAW, FIDH complains that no actual calendar has been proposed.

1.3 HEALTH POLICIES AND STRATEGIES

1.3.1 National Health Policies

Alma Ata Primary Health Care (PHC) strategy was adopted by The Gambia in 1979. The main aim was to make basic health services universally accessible to the population through three levels of care; primary, secondary and tertiary. (28) Based on this strategy, the Gambia developed several reforms through action plans and the national health policy in the late 1980s and early 1990's. These reforms contained, among other, decentralization of decision making power through establishing divisional health teams, expanding the number of health facilities and the introduction of user fees and the Bamako initiative. (12)

A new national health policy 'changing for good' was introduced in 2001. Promoting access to health care for the population, especially for the poor in the rural areas and selected urban areas was considered as one of the main focuses for the health sectors' contribution to poverty reduction. (28) It contained a five year plan with a special emphasis on health care financing and an Essential Health Care package within a decentralized health system. (12) The Essential Health Care Package represented a package of services necessary for addressing the common causes of morbidity and mortality, and had implications for planning and resource requirements. (9)

According to the country strategy report of the World Bank the Gambia's health policies have been, especially over the last years, *'pro-poor by focusing its priorities on primary health care, maternal and child health, and reducing the inequity in access to health care.'* An example is that there have been more infrastructure investments in health centres in the poorer, more remote divisions such as LRD, CRD and URD over the last years. (15)

The Gambia created the strategy Vision 2020 in 1996. This provides the long term aspirations of the country. It also signed the Millennium Development Goals in 2000. Both Vision 2020 and the MDGs advocate eradication of extreme poverty, universal primary education, empowerment of women, reduction of child and maternal

mortality, combating diseases, environmental sustainability and expanded partnerships. (6, 19)

1.3.1.1 National Reproductive Health policy:

The Gambia integrated the definition of Reproductive Health that was developed after the International Conference on Population and Development (ICPD) in Cairo in 1994: 'Reproductive Health is a state of complete physical, mental and social well-being and not merely absence of disease or infirmity in matters related to the reproductive system, its function and processes'. (27) Following this, The Gambia's first National Reproductive Health Policy was approved by Cabinet in December 2002 with the purpose of: 'Increased availability, accessibility and utilization of quality RH services and encourage people to take responsibility for their own Reproductive Health.' Routine Maternal Child Health and Family Planning services, Safe Motherhood Initiatives (SMI) and STI/HIV/AIDS programs constituted the key components of the Reproductive Health Program. (27)

Unfortunately, there has been a poor health budget allocated for the RH program, as well as declining donor support. (27) In 2007, there were still quite a few of the expected results that were not achieved. According to Cham, the failing of the Safe Motherhood Initiative can be attributed to i.e. the failure of the policy to train and incorporate Traditional Birth Attendants (TBA's), lack of political will and commitment, lack of availability and accessibility to Emergency Obstetric Care and the failure of health systems. (14) Thus many Gambian women still deliver at home or in very basic units with very limited skills available.

1.4 Health care delivery system

The management of the public sector health delivery system is under the responsibility of the Secretary of State and the Director of Health Services at the Department of State for Health (DoSH). However, as mentioned previously, management has also been decentralized through the Divisional Health Teams (DHT) in six health administrative areas. The DHT's main responsibility is day to day

administration, management and supervision of primary (village health services) and secondary level (major and minor health centers and dispensaries).

1.4.1 Primary level

The primary level provides for initial care and prevention through a network of village health posts. The village health services are currently providing PHC access through 396 village health posts to about 60- 70 % of the country's population. (12,15) These services include trained village health workers (VHW), trained traditional birth attendants (TBA), and village development committees (VDC) in 'PHC villages'. The VHW and the TBAs are not government employees, but should be supported by the VDC. However, they are supervised by the Community Health Nurse (CHN) from the local area. (12) The TBA attends to pregnant women and conducts normal deliveries while the VHW attends to minor ailments and promotes public health activities.

1.4.2 Secondary and tertiary level

The basic health care services are provided through 6 major and 29 minor Health Centres, with the major health centre as the first point of referral for the minor health centre. The health centres are equipped for routine preventive and curative services, as well as basic obstetric care and some minor surgical procedures. But, they are not able to provide adequate emergency obstetric care; these cases are referred to the hospitals. Appropriate evacuation of patients from one level of health care to another, however, faces serious difficulties due poorly maintained ambulances, fuel shortage and lack of capacity at the referral facility. (9)

There are currently 3 public hospitals in the country, located in Banjul, Farafenni and Bansang; with a fourth hospital is also on its way in Serrekunda. In addition to their specialized functions, they also carry out basic outpatient services to the communities they are located in. The public health system is complemented by 34 private and Non-Governmental Organization clinics (9)

1.4.3 Human Resources

'The Human Resources for Health situation in the Department of State for Health and Social Welfare – The Gambia has been very critical. The complexity and challenges

associated with human resources such as high attrition rates, shortage of skilled health workers, low morale among staff, deteriorating quality of care and other related problems are adequately captured in many of the reports and Government documents (...)(29 pp 3)

This statement from the Human Resources for Health strategic plan from 2004 shows that the Gambian government has recognized that the shortage of adequate health staff act as a major barrier to achieve accessible and quality health care for the population. Currently, there are mainly expatriate doctors working in Gambia, as the only medical school in Gambia has been functioning only 5-6 years. In 2001 there was one public sector doctor for every 5679 people; however, there are great rural/urban differences (12)

There is a very high attrition rate among the nurses in public sector, which has led to chronic shortage of nurses at all levels particularly the primary level. This is a major problem as nurses provide the bulk of clinical care at all levels of the public health sector. In 2001 the ratio of nurses was 1/1964. (12) Of the 263 midwives in 2001, more than 40% worked at the tertiary level, mostly in the capital city Banjul.

1.4.4 Maternal health services

The Maternal, Child Health and Family Planning Program, (MCH/FP Program), was established in 1975 primarily to provide care and services to women of childbearing age (15-49 years) and children 0-5 years old. Currently, mother and child health services are provided in 38 static health facilities and in over 188 outreach stations. (30) The outreach stations/trekking posts are visited by the mobile team regularly every month and are commonly visited by almost all women that are pregnant or have small children. The services offered in the MCH/FP program are antenatal and postnatal care, family planning, treatment of sexually transmitted infections (STI), referral services and a child welfare clinic that includes immunization, growth and development monitoring etc. The referral services mean ambulances that travel between the health centers and hospitals. Currently there are no ambulances or transport provided for patients to get from home to the health facilities.

Pregnant women in the Gambia used to pay a registration fee of five Dalasis (1 NOK = 3, 8 Dalasi currently) to obtain an antenatal care card. This should provide free consultation, medication and laboratory services until six weeks after delivery. In addition, the women should pay D 12.50 for delivery in a minor health centre or dispensary and D25.00 for delivery in hospital or major health centre. For caesarean section, the official prize was D50.00. For Non – Gambians there are different prizes, for example do they pay 600 Dalasi for a delivery in a health facility. In some cases, Gambian women without an ID card were asked to do the same. In August 2007, however, the President announced on national television that all maternity services should be for free for Gambian women. This was to be immediately put in place by all public facilities throughout the country.

1.4.4.1 Traditional Birth Attendants:

The PHC villages have Traditional Birth Attendants (TBA) that are trained on the recognition of complications, when to refer to health facilities, clean cord care and the administration of oral ergometrine tablets after delivery. (31) After the introduction of this program it was found that MMR reduced in the PHC villages. At the same time, however, transport availability increased considerably and the number of women that delivered in a health facility also increased. It was thus concluded that the TBA's may have had an effect on MMR by encouraging women to ANC as well as referring complicated deliveries. (32) On the other hand, some studies from other countries show evidence that TBA's have had little impact on maternal mortality, and that they actually contribute to the delay of women to reach the health facility (1) Nevertheless, it is recognised that TBAs are very essential in the Gambian rural society, not only as a health care provider, but also as someone who is engaged in the political, economic, cultural and religious matters in their community. (33)

1.5 Health care financing

The main sources of health financing in The Gambia are through government budgets, donor, NGO, and private out-of-pocket expenditures. Public health expenditure levels in The Gambia increased steadily throughout the 1990s, and were nearly 6 US\$ per capita in 2000. Nevertheless, this was only half of the WHO

recommended level of US\$ 12 to provide a minimum health care services (12) The current health financing mechanisms cannot adequately fund the health sector and the government is thus advocating for the development of cost sharing mechanisms for health delivery, as well as more involvement from the private sector. (12)

1.5.1 Drug Revolving Fund

The Drug Revolving Fund (DRF) was established as part of a Cost Recovery Program in August 1988, as the government found it increasingly difficult to offer an effective health care service with adequate provision of drugs and supplies. (34) User fees, i.e. payment of a set fee at the point of delivery, were implemented and the Drug Revolving Fund utilizes the user fees collected at the health facilities to cover the cost of drugs, other supplies and some running costs. The fee of 5 Dalasi for an outpatient visit should cover consultations and prescription of medicine for the patient. However when the health facility does not have the prescribed drug available, the patient must pay for the drug at a private pharmacy.

In Gambia the proceeds of the user fees are collected in the fund on a central level, and until a few years back, the fund was controlled by the Department of State for Finance (DoSFE) Presently, the Department of State for Health (DoSH) have more authority to allocate DRF revenues to priority areas within the health sector. (15) However, user fees was inadequate as a health financing mechanism, even with government subsidies. The reasons for the poor functioning of the DRF can be explained with lack of re-investment of resources into the system, poor accounting and reporting system as well as the low cost recovery itself. (12)

1.5.1.1 Bamako Initiative

The Bamako Initiative (BI) was introduced in the Gambia in 1993. Ten health facilities were included and the aim was to encourage local communities to play a greater role in the operation, management, and financing of health facilities. Committees comprising of members of the local community and government workers were given the authority to utilize the revenues from the user fees collected at the facility, without needing to remit it to the central government. (15) The main objective of the Bamako Initiative is to improve access to health care, particularly through the availability and

rational use of drugs, as well as community participation. The overall health delivery capacity has improved under the BI program. However, they have not been successful in improving the availability of drugs at the health centres. (15)

1.5.1.2 Exemption system

Since 1994 there has been an exemption system in place in the Gambia. First of all, patients suffering from certain diseases or high risk groups are exempted from payment of a set fee at the health facility. Emergency patients needing referral should also receive free treatment at the hospital level. Finally, members of the armed forces and the very poor should be exempted from outpatient fees. (12) In reality, however, it seems that whether or not someone receives exemption for being 'poor' is rather arbitrary, and dependable on the individual health care staff the patient meets. For example, the head of the facility is the one who defines who is 'poor enough' to receive exemption, based on each encounter. It is also recognized by the government that the exemption system is not optimal, as it states '*user charges and cost of transportation to health facilities may not always favor the poor, despite the exemption mechanism in place.*' (12 pp 39) Nevertheless, The 1998 Household Income and Expenditure Survey indicated that just 57 per cent of health consultations involved a user fee that was collected at the health facility. (12)

1.5.1.3 Household spending for health.

The 1998 National Household Poverty Survey estimated the household and per capita costs of using the health facilities in the Gambia. Some of the main findings were that the household spending for a health consultation in a public facility was much less than in a private facility or traditional healers. In 1998, the average Gambian household spent about 9 dalasi per health consultation (including fee, drugs and transport) in the public sector. This translated into 145 Dalasi annually for a household, which constituted on average 5% of household expenditures. However, some poor households had to spend up to 12% on their annual expenditure on health. At the other end of the ladder, the higher income households spent only about 2%. (15)

2.0 BACKGROUND

2.1 ACCESS TO HEALTH CARE

In the Alma Ata Declaration from 1978, they declared access to health for all (40) However, access is a complex concept with many definitions. Donabedian defines access as the ease with which people can obtain medical care, and Frenk describes it as the relationship between a set of obstacles and the ability of the population to overcome these obstacles. These obstacles are much of the same that are described by Penchansky and Thomas. They divide access into five dimensions (36):

Availability: The relationship of the volume and type of services to the clients' volume and type of needs.

Accessibility: The relationship between the location of supply and the location of clients, taking account of travel time and transportation resources.

Accommodation: The relationship between the manners in which the supply of resources are organised to accept clients and the clients' perceptions of their appropriateness.

Affordability: The relationship between the cost of services and the clients' ability and willingness to pay.

Acceptability: The relationship of clients' attitudes about the personal and practice characteristics of providers to the actual characteristics of the existing providers.

2.1.1 Measuring accessibility and equity

Access may be regarded as a feature of the individual or of the system. In the first case, any inequality of health outcome which resulted from under-utilisation of services would be the responsibility of the individual. However, when looking at access as provided from the health care system, unequal health outcomes that are a result from unequal utilization are considered failings of the health system, and thus interventions should be done at system level. This project is based on the view that access to health care is the responsibility of the health care system where equity is the goal.

Equity means equal treatment for equal needs, the devotion of equal resources to patients with similar conditions and equal access to care for people with equal needs. (42) Equity and accessibility can be measured by *inputs*: e.g. staff /population, hospital beds/population, expenditure, *process*: utilization e.g. admission rates, consultation rates and *outcomes*: e.g. mortality, health status, patient satisfaction. Monitoring 'outcome' of maternal health, i.e. measuring maternal mortality can be difficult. It has been seen as costly and less reliable. It has therefore become more common in safe motherhood evaluation to use process evaluation; e.g. proportion of births with skilled attendant. (38)

Accessibility can also be measured by evaluating the dimensions in the model of Penchansky and Thomas that is described above. This study is thus focusing mostly on one aspect, namely 'affordability'.

2.1.2 Access to health care in the Gambia

As mentioned earlier, most people in the Gambia live in a fairly close proximity to a defined health facility, much thanks to the Village Health Service (VHS) system that provides a Village Health Worker and a TBA in most larger villages (population >400). The average distance to basic health facility for rural population is 7.5 km.(8) Nevertheless, the use of governmental health facilities in the Gambia is considered lower compared to other countries with similar income, with a rate of 0, 7 visits to the outpatient department per person per year and inpatient admissions at 8 %. However, this is higher than most of the countries in West Africa region. (15).The population per major health centre was 185 000 in 2005 and there is 1 hospital bed per 1000 population. This has been evaluated as insufficient in the Gambia and additionally there are great rural/ urban as well as regional differences. (15)

The divisions where travel time to health services exceeded 30 minutes were poorer and reported more poor health outcomes. On the other hand, to consider only the actual travel time is not a correct way of measuring geographical access. Many areas do not have a well connected transport system and the waiting time for transportation will exceed the actual travel time by far for many villages.

As mentioned previously, there is a shortage of health personnel in the country. On top of that the 1998 National Household Poverty Survey also found that 'The

households with a better income level were more likely to use doctors, and the relatively less fortunate households were more likely to use other health workers, such as the Community Health Workers (CHWs).'(15) It was also found that the better off income households were more likely to use public facilities in general as compared to the relatively poorer households. This was noted as a concern for the Gambian government. (15). The reasons for the poor utilization of health services among the poor was explored through participatory studies and were explained as follows: *' long waiting times that encroached on farm and household duties (especially for women); low perception of service quality; drug shortages; and lack of qualified manpower, mainly doctors'(15 pp 96).*

2.1.2.1 Access to maternity care in the Gambia

The Gambian government has over the past year worked towards making women use improved maternal health services. Some goals have been achieved: The coverage of Tetanus Toxoid vaccine has increased beyond the average levels in Sub Saharan Africa and more than 90% of pregnant women receive some antenatal care through the mobile clinics (15) However, as mentioned before, there are differences between the rural and urban areas of the Gambia. People living in urban areas have more ANC visits and more deliveries attended by skilled personnel. One reason is the poor geographical access to the health facility in the rural areas, and the insufficient number of beds for emergency obstetric care outside of the main cities. (6, 15) Delivery assistance by skilled health personnel is also highest among the educated women and the women who are considered non-poor. As mentioned before; the national average for deliveries with skilled attendance is 55%, but it varies from 31% among the poorest to 81% among the richest. (6, 15)

There has been found a close link between levels of maternal mortality and proportion of births with skilled attendant. (39) However, the quality of the services offered at the health facilities also plays a vital role with regards to MMR. Major health centers in the Gambia still lack appropriate obstetrical care due to lack of resources such as essential drugs, medical supplies an equipment, lack of competent and motivated staff as well as a deficient referral system (14, 15)

2.2 REVIEW OF THE LITERATURE

2.2.1 Supply and demand of health care

Utilization of health care is a function of both supply and demand. '*Demand is about how willing consumers are to pay for different goods and services.*' (40 pp10) It is influenced by cost, and the lower the cost, the greater the quantity demanded. The demand is of course influenced by the preferences of the consumer as well as the income. The higher income, the higher is her ability to pay for a good. The greater her perceived utility of the good, the higher price she will be willing to pay for it. Her utility/preferences for the good are also influenced by i.e. cultural factors and traditions.

In the Gambia, health care provision is to a large extent provided by the government, and the prices of care are thus not free market prices. The demand for care is nevertheless influenced by the consumer's costs of obtaining care. These costs are comprised of both direct costs, such as user fees and indirect costs such as opportunity costs (time forgone for work when traveling to a health facility), transport costs and informal costs.(37) The government can thus influence the demand and the use of skilled delivery care by regulating the user fee and other costs.

2.2.2 User cost

There have been several studies looking at user fees and other costs related to seeking health care. User fees are fees paid by the patient on use of health services and were recommended by the World Bank in its strategy 'Agenda for Reform' in 1987. User fees were promoted for these reasons: mobilization of revenues, promotion of efficiency, equity, decentralization and sustainability (40). But, there have been several difficulties in obtaining these goals and user charges have as well been seen to be regressive. This means that they place a proportionately greater burden on those with lower incomes (41). There is also evidence that user fees reduce the demand for maternity services. It has been demonstrated a reduction in utilization of services after the introduction of user fees in countries like Nigeria, Tanzania, Kenya and Zimbabwe (41, 42).

Studies show, however, that user fees are only one part in the total cost of utilizing maternity services and there is a more extensive financial barrier for services use: In Tanzania, Kowalewski et al. found that the total costs are much higher than the user fee itself. For example did travel costs represent about half of the financial cost. Half of the women who participated in the study had also been asked to buy drugs and medical supplies for treatment, in addition to the standard delivery fee. The average total cost varied between 11 US\$ for antenatal consultation and up to 135 US\$ for a caesarean section. (43)

Unofficial charges were the main point of investigation in Nahar and Costello's article 'The hidden cost of free maternity care in Dhaka, Bangladesh'. (44) In Bangladesh there is just a small registration fee paid, and the low utilization rate had usually been contributed to cultural factors. In this study they collected both qualitative and quantitative data through interviews with women and husbands in the postnatal ward. They found that 65% of mothers had delayed seeking care and of these 38% of the mothers stated the main reason was that money was not readily available at home. The result of the study showed a mean cost for a normal delivery at 31 US\$ and 117 US\$ for a c-section. Main costs were medical supplies, as well as travel and food. This was 1-8 times more than the monthly income for 27% of the families interviewed.

USAID conducted a large study in five countries (Kenya, India, Peru, Egypt and Vietnam) in 2005 where one objective was to look at the actual cost for consumers of antenatal and delivery care, as well as assess to which degree informal costs constitute a barrier to services (45). In all countries there was a significant difference in the formal fee for delivery and the amount women reported as paying. In India they reported paying five times more the official charges. The informal fees contain mostly of medicines and other medical supplies. Another commonly cited informal payment for delivery services was payment to service providers and other paramedical staff. Staff members usually demand payment when the woman is to be discharged, but there were also some reports of having to pay to receive better treatment (45).

The cost of maternity services has also been briefly looked into in Central River Division (CRD) and Upper River Division (URD) in the Gambia. Cham performed a

verbal autopsy of 42 maternal deaths in order to explore the factors contributing to these deaths. Looking into household expenditure he found that it ranged between zero and 650 Dalasi. This expenditure included transportation, things asked to buy at the medical facilities and fees. The average total spending was D184.00; 16% of this was for transportation and as much as 70% was for buying things at the medical facilities. This included for example blood transfusions. 73% among those transfused had to pay money before blood was made available. Payment of under the counter fees was also testified (14).

2.2.3 Cost as a barrier to health care

The access to prompt and adequate treatment is directly related to maternal mortality (46). However, there are many reasons why women do not receive assistance by a skilled attendant during delivery. Thaddeus and Maine (19) have through literature review developed 'the three phases of delay' model, looking at the delay to receive care after the onset of complication. The phase I delay is 'Delay in deciding to seek care on the part of the individual, the family or both'. Phase II delay is 'Delay in reaching an adequate health care facility' and phase III is 'Delay in reaching adequate care at the facility'. Cost can be a factor contributing to delay in all three phases. Phase I, however, describes the factors that affect the decision to seek care and the ability to execute the decision. Thaddeus and Maine have recognized the following seven factors in phase I: distance, cost, quality, illness factors (recognition, severity), women's status, economic status and educational status. (46)

The abovementioned maternal mortality study by Cham in the Gambia found that the delay in decision making were related to the underestimation of the severity of the complication, cultural belief or previous experience with the health system (47). Poor transport possibilities, long distance, poor road conditions were also hindering factors. Lack of money was not identified as a factor contributing to the poor health seeking behavior. However, in 22 out of the 32 maternal deaths, the family had no money available when the complication developed. When the woman was taken to the health facility, a relative was left behind to raise money in the community. (47)

In Zambia in 2004 they used the 'three phases of delay' model to assess the factors that influences women's choices on where to deliver. The study result was that 96%

would prefer to deliver in a clinic, but only 54% actually did. Through logistic regression they found several risk factors for the low use of services. Among the respondents, user fees played a substantial role in the decision making (OR 2.7 (CI 1.7- 4.3)), and 59% found them not affordable. (48)

2.2.3.1 Willingness and ability to pay

'Willingness-to-pay (WTP) is used to estimate utility in monetary terms. Economic theory argues that the maximum amount of money an individual is willing to pay for a commodity is an indicator of the utility or satisfaction to her of that commodity'. (49 pp 154) Steven Russell describes in his literature review 'Ability to pay for health care: concepts and evidence' how *'Research and policy debates have focused on willingness to pay (WTP) for essential services, and have tended to assume that WTP is synonymous to ability to pay (ATP)'* (50 pp 219) On the other hand, it is well known that this is actually seldom the case - WTP does not reflect ATP. Russell reasons that this is because there is often limited knowledge about where households obtain resources to pay for care, and which consequences the strategies will have when payment difficulties arise. A 5% health expenditure/income ratio is a common benchmark of affordability of health care (4) and a 10% ratio is considered catastrophic (50, 51). However, lower levels can also be catastrophic as the timing of payment is also an issue, e.g. wet and dry season for farmers (50, 51, 52).

A study conducted in Tanzania in 1998 concludes that the vast majority find the means to meet the cost of admission, if the woman feels the health situation requires treatment at a health facility. For example did 90% of women with previous c-sections return to the hospital for their next delivery. (44) A different study in Tanzania, though, using data from the Tanzanian Human Resource Development Survey in 1994, shows that the poorest 20% were significantly less willing to pay than the richest even when desired quality of care is provided (53).

Gender relationship and the vulnerability of women have been looked upon in several studies. Often, the decision to seek care is often in the hand of the woman's spouse. He is also the one that usually have the cash available (41, 46, 54, 55). A study from the Gambia shows that most of the women utilizing delivery services had to ask

permission from husband, TBA, mother or mother in law (31). In Zambia, unmarried women, women with higher levels of education and women with formal employment have higher chances of using institutional delivery services (48). In Tanzania, Prata found that women who used the services were slightly younger and more educated. They also had fewer children and had experienced fewer child deaths (56). A study in Burkina Faso regarding willingness to pay for community based insurance suggests that men are willing to pay more than women, the old less than the young, and the poor less than the rich. (49) The 1998 Household Income and Expenditure Survey in Gambia indicates that Gambians, also the poor, would be willing to pay considerably more in consultation fees for perceived better quality care, for example at a private facility or a traditional healer (marabout). (12)

2.2.3.2 Coping mechanisms

Russell has written a review article on ability to pay and the strategies and responses encountered among people who does not have the money to pay for health care.

One strategy is that the person(s) continues to spend money for health care through borrowing, loaning, begging, delaying payment, selling assets/ crops or reduction of consumption.(50) These strategies are well documented in several countries. (44, 50, 51, 52, 56) In Tanzania 60% of households had to borrow money to afford maternity care services (53). As mentioned in a previous paragraph, the study from Gambia found that money for institutional deliveries was raised in the community when it was considered a need. (47).

The second strategy is to receive health care without spending cash. This can be by somehow avoid payment or seek exemption. However, an international survey of health service user fees found that 27 % of countries had no policy to exempt the poor. They discovered that even when an official policy existed there were numerous informational, administrative, economic and political constraints to effective implementation. (57)

Thirdly, some also delay or reduce consumption of health care in order to reduce the expenditure. This can either be by reducing attendance and/or length of stay, or by cutting the level of treatment or not completing the treatment regime. A decision can

also be made to only treat priority individuals within the household. The ultimate and last option is though to not seek health care at all, a last resort for many in the developing world.

3.0 AIM OF THE STUDY

3.1 RATIONALE FOR THE STUDY

It is proven that professional care at and after childbirth for all mothers, by skilled midwives, nurse-midwives or doctors, backed up by hospital care and financial and geographical access to these services is the way to go to make motherhood safer, and thus the right steps to achieve the MDG target. (1)

It is the aim of the public health system in the Gambia to provide health services to the women who needs and requests them and the low utilization by the poor has caused concern with the government. In August 2007, the user fee on maternal and child health services was removed, hoping that this would increase the utilization. It is still too early to see the effect of this. However, this study is not only looking into the user fee, but also additional costs encountered by the women e.g. cost of transport and medicines, as well as other factors that are acting as barriers and that are again aggravated by poverty.

The household spending on health care was calculated in the 1998 survey, but it was not done specifically on maternal health care. The cost of services as well as the financial situation of the households might also have changed considerably from that time. It is also important to investigate the consequences of health care costs and the mechanisms the households use to cope with them, in order to avoid that some falls into the 'medical poverty trap', a downward spiral of poorer health which leads to less learning, productivity and earning (8,51)

The results of this study might achieve a better understanding of the real cost for the women to use health facilities for delivery. With this information one should be able to identify where and how to implement strategies in order to reduce the cost and thus ensure equal access for all women. Secondly, it will try to identify the most vulnerable

fragments of the population that refrain from using health care and that may fall into further illness or poverty. These women should be the focus on further policy making in maternal and child health in the Gambia.

3.2 PURPOSE OF THE STUDY

The purpose of the study is to explore women's access to public health facilities for deliveries in rural Gambia, and more specifically to see to what extent cost of services are acting as a barrier for utilization.

3.3 OBJECTIVES OF THE STUDY

1. To estimate the total household cost for deliveries in a health facility.
2. To explore to what extent households opt out of institutional delivery services due to high cost.
3. To look into the characteristics of the households that opted out of public delivery services due to cost.
4. To look into the financial strategies of households to cope with health emergencies.

3.4 STUDY AREA

The study was conducted in Upper River Division (URD) and Central River Division (CRD) of eastern Gambia. The population in URD and CRD are 185,000 and 209,000 respectively (12) and it is situated from 300 to 400 km inland from the coastal area and the capital city Banjul. Traveling to and within CRD and URD can sometimes be difficult, as it includes several crossings of the river Gambia. The crossings are done by ferries that are operational only during day time. Both divisions are rural and consist mainly of farmers, but have semi urban towns, Basse in Upper River (pop >10000) and Bansang in Central River (pop>6000).

Extreme poverty in the Gambia is more concentrated in the rural areas. In CRD and URD more than 40% are living in poverty and the lowest per capita income has been measured here (8, 15) Additionally, these two regions has some of the worst health outcomes in the country; infant mortality, maternal mortality and total fertility rate is

among the highest. They also have the lowest proportion of deliveries attended by skilled personnel (8)

The core of this study is about poverty and the rights of the poor to equal access to health care. It was thus natural to conduct the study in an area with the most vulnerable population; More mothers are dying here than other areas in the country. They are very poor and most choose to deliver their baby at home. Within this context, the study's aspiration was to describe these women's situation as well as to be their voice.

The study will provide a picture of the situation in the selected villages in CRD and URD. It will not be representative for the country at large, but will describe a picture that is relatively universal all over the rural country.

3.4.1 Maternal health services in URD and CRD

There are in total 9 public facilities and 2 private facilities providing maternity care in CRD. In URD the numbers are 6 and 1 respectively. However, according to a study done by UNFPA in 2004 only two health centers in URD and one in CRD qualified as a Basic Emergency Obstetric Care unit. Bansang Hospital in CRD is the only facility providing Comprehensive Emergency Obstetric Care for the two divisions (12). However, the operation theater is not in an optimal condition and there is not always a surgeon or gynecologist present in the hospital. Overall, according to the standard health centre to population ratio, the coverage of health centers providing delivery services is 57% in CRD and 36% in URD. URD is in fact also reporting the worst coverage for Village Health Service and health manpower in the country. CRD and URD are also, together with Lower River Division (LRD), among the areas with longest average travel time for health care (> 40 minutes). (8)

Two health centers and their catchment areas in each division were pre selected before commencing the study; Bansang Hospital and Kuntaur Major Health Centre in CRD and Basse Major Health Centre and Fatoto Minor Health Centre in URD. All health centers conducted deliveries and had midwives present, but only Basse and Bansang had doctors. Deliveries with complications were referred with ambulance

from the minor health centre to a major health centre or hospital and from the major health centre to Bansang Hospital were they would normally be able to perform operations and blood transfusions. Blood transfusions could be done also in Basse health centre, but very erratically due to lack of adequate supplies.

Each health centre had a mobile Child Welfare Clinic that provided outreach ANC, vaccination and growth monitoring in the surrounding villages. In some cases, the only transport available for 'trekking' was the health centers ambulance and thus the ambulance and the midwife would be occupied in these activities during some of the week days.

4.0. METHODOLOGY

4.1 STUDY DESIGN

This is a quantitative and observational study with both analytical and exploratory components. Due to the time limit and the language barrier, qualitative methods were not added in this study.

4.2 STUDY POPULATION

Women within reproductive age (15-49 years) that gave birth between 01.01.2007 and 31.07.07 that live in Upper River Division and Central River Division were included. Both women who did utilize and women who did not utilize private or public health institutions on their last delivery will be included. All types of deliveries are also included.

Women who gave birth before January 1st 2007 were excluded in order to ensure that the recall period is not too long so that the memory of the situation surrounding the delivery is still high.

4.3 SAMPLE SIZE

Prevalence of home deliveries is about 70 %, and thus health facility deliveries are 30% in the two divisions. The standard calculation for sample size was used, estimating a precision of 5% and a 95% Confidence Interval (CI).

$$\hat{p} \pm 1.96 \sqrt{\frac{p(1-p)}{n}}$$

Using this standard, the sample size was estimated at 323 participants.

4.4 SAMPLE SELECTION

Based on the nature of the study and limitations in time and funding, the selection of the villages to be studied was done on convenience. They were not selected by random as many villages are very small, and the risk of not meeting a sufficient number of women eligible for participation in the study was high. The main criteria for selection were that there should be a difference in the distance to the health facility between the villages in each of the four catchment areas. This is due to the assumption that distance to the health facility was an important factor in the decision on where to deliver. The second criterion was the availability of transportation to the site for the research team.

Initially the plan was to identify the women through the child welfare clinics registers, and this was done in the first catchment area (Bansang). However, it was discovered that the registers were incomplete, and sometimes 'over registered' with women coming from neighboring Senegal to attend the services. Additionally, the subsequent catchment areas did also not have the address (name of compound) of the women in the Child Welfare registers, so it was very hard to locate them. A decision was thus made to go from house to house in the selected villages to identify eligible women. The card from the Child Welfare Clinic was present with all mothers and was used to confirm the date of birth of the baby. This change in the technique of sample selection should not have had an impact on the validity of the study as the process of opportunistic sampling was upheld with both methods. Opportunistic sampling is '*the process of including those individuals that are conveniently accessible*'. (34) It means that all women that met the inclusion criteria in each village were asked to participate in the study. Unfortunately it was not always possible to go back for follow up visits due to transport problems, so a few villages were not fully covered.

In the larger areas (Basse and Bansang) only part of the eligible population participated as the number of women present here was too large for the study. In Bansang, women that came to the Child Welfare Clinic that lived in Bansang town were invited and their address was identified for visit the next day. In Basse, house to house was visited in different parts of the town on different days. However, even if these external circumstances made the sampling methods different, it is based on a random convenience. No one has been systematically excluded from the study, except from households that experienced death of the mother and /or the baby. With both the techniques, it was unfortunately not possible to reach these women. Important information on the cost of such complicated deliveries has thus been lost.

Approximately 80 women were included from each catchment area. In Bansang and Basse catchment areas, half (40) was included from the larger towns and the rest from smaller and more distant villages.

4.5 DATA COLLECTION TOOLS

The data was collected through a structured questionnaire with mainly closed questions. The questionnaire was self- composed by the researcher, but some of the questions on income and expenditure were inspired by other Living Standard measurements surveys and the 1998 Household Poverty Survey in the Gambia. Although it is a structured questionnaire, it could not be self administered as there is a high illiteracy rate in the rural areas of the Gambia.

4.5.1. Pre testing of the questionnaire

Pre testing of the questionnaire was done in Brufut, a village on the coast of Gambia, not far from the capital Banjul. 10 women were interviewed over two days, and considerable changes were made according to the results of the pre testing. The questionnaire was also reviewed and discussed with a Gambian midwife with a degree in International health.

4. 6 DATA COLLECTION PROCEDURE

The data collection took place in peoples homes. The reason for this was that the questions preferably should be asked to both the mother with the husband or household head. This is due to the nature of the questions. In can be very hard for the woman to have information about household income and expenditure as this is a highly 'manly' matter in the Gambia. However, it was not always easy to find both the mother and a male counterpart at home at the same time. When possible, the team made a new appointment to visit the household, or other members of the household were asked to answer specific questions. However, privacy and confidentiality was a priority and the interview took place in a private room in the family compound with only the research team and participants present.

The researcher with one interpreter participated in every interview. It was important for the researcher to be there due to the complexity of the questionnaire as well as the limited experience of the interpreters. It might evidently create a bias to have a foreigner that look and speak differently visit the participants, but all efforts were made to form a good and easy atmosphere through lengthy greetings in local languages and to sit down and take the time to explain the purpose of the visit. Oral consent was thus asked, and an information letter with contact information of the researcher handed out. Only very few women refused to participate. If they did, it was based on lack of time and opportunity. The questionnaire took about 20-30 minutes to finish. Additionally, the village leader, the Alkali, was always visited and informed about the purpose of the study and he was asked his consent regarding whether or not we could perform the interviews in his village. The period of data collection was from September – November 2007.

4.6.1 Research assistants:

The research assistants/interpreters were assigned to the researcher by the Divisional health team or the manager of the health facility. It was not an easy task to identify somebody, as most staff was already were occupied and needed in their present work. However, one person was identified in each catchment area, and if this

person could not participate every day, it was possible to find a replacement. The assistant thus became more of an interpreter and it was thus essential that the researcher was present in each interview to clarify any misunderstandings regarding the questions. The interpreters went through the questionnaire several times with the researcher before commencing and they were also trained on how to conduct the interview, for example in not probing the answers and giving the participants good time to answer. All interpreters were relatively fluent in the three main languages in the Gambia; Wollof, Mandinka and Fula.

4.7 DATA HANDLING

The data analysis was performed using SPSS 14.0 for Windows. The variables had already been entered into the software and the questions coded before the start up of the study, so the data was entered into SPSS by the researcher in the evening on the same day that the interviews were held. The questionnaire was filled in by the researcher, so there were rarely any questions regarding the data to be entered. The filled in questionnaires were kept with the researcher at all times. The questionnaires had only an identity number and only the researcher had access to the names of the participants.

4.8 DATA ANALYSIS

The data generated through SPSS are simple descriptive data, as well as comparing groups (users and non users of the health facility) through parametric tests such as the Mann-Whitney test and cross tabulations. Finally the risk factors for not using the health facility for deliveries were identified through a logistic regression model.

4.9 ETHICAL CONSIDERATIONS

It is vital for any research study that it upholds proper ethical standards. This study was carried out according to the guidelines in the Helsinki declaration (35). Consent was sought before starting the interview; an information letter that contained information about the purpose and scope of the study, the types of questions that will be asked, the method of anonymization and how the results will be used and

reported, was read out loud in the local language and the woman was then asked to give her verbal consent. The woman was also ensured that the participation was voluntary and that she, in no way, would be penalized in case of refusal. Verbal, as opposed to written consent was asked, as the researcher learned that in general, people in the Gambia are hesitant or suspicious to signing documents.

Special consideration was made to the participants that were between 15-18 years of age. Their young age makes them vulnerable and it is essential to make sure that they have clearly understood the criteria above and that they in no way feel pressured into participating. According to the Helsinki declaration, when the subject is a minor, permission from the responsible relative replaces that of the subject in accordance with national legislation. However, when the minor is in fact able to give consent, which was the case here, the minor's consent was obtained in addition to the consent of the minor's legal guardian.

Applications for ethical clearance was submitted and approved by the Ethical Review Committee in Norway, as well as the Gambia Government/Medical Research Council Laboratories Joint Ethical Committee before commencing the study. Authorization to utilize clinic records was given by the Department of State for Health in the Gambia (DoSH). The final report of this study will also be provided to the DoSH and the Divisional Health Teams in CRD and URD.

4.10 LIMITATIONS AND CHALLENGES

It is evident that when starting a journey of conducting a study in a country and in a context the researcher has not experienced before, one will be faced with the unexpected and unplanned for. On the other hand, there were some limitations already identified in the planning phase. First of all, due to the restricted time and funding frame, it was not possible to add qualitative methods in this study. Clearly, focus group discussions and /or in depth interviews with the women in the villages would generate more information and a greater understanding of the issue.

Secondly, it was easy to find the women to include in their study through the children they had given birth to. However, this method excluded women that had experienced

stillbirth or death of the baby. The cases where the mother had died were also not possible to include. This was unfortunate as these women would represent deliveries with complications and it would have been interesting to investigate if these women had to face a higher cost burden than women that had a normal delivery.

The main challenges faced on the ground were, as previously mentioned, the change in sampling method due to the incomplete registers in the health facilities. But, all women that fit the criteria in the village were included with both methods.

Transportation possibilities were also limited, and it was not always possible to have a car. The idea was to go with the trekking (mobile) clinic, but on clinic day most women were busy in line for the clinic and the time spent by the team in the villages were often too short. When possible, the health facility provided a separate car or motorcycle. Public transport was also used when possible. Unfortunately, it was not always doable to return to the village in order to achieve a full coverage.

4.10.1 Validity

Validity means that the study measured what it intended to measure. When using the method of convenient sampling of villages the external validity will be low; the participants will not represent the wider population. It will, however, give us an idea about the situation in the selected villages and probably also other similar villages in that area.

A health facility study would probably have been easier to facilitate, but it was important for the validity of this study to include the non users, as well as both the woman and the husband or household head. Gambian women are not involved in the family finance and have very little knowledge of income or expenditure. If the husband or head was not at home, the research team would return when feasible.

There are also other validity issues with this study. The researcher realized on ground the big difference in rainy and dry season in the Gambia. The deliveries referred to in the study are from January to July which is the dry season, whilst the interviews were conducted from September to November which is the rainy season. Gambian farmers work very hard on the land during the rainy season, and

experience less income as there is less possibility for income generating work. Rainy season is also malaria season as well as the time to pay school fees for the children, thus the families are in a more difficult financial situation than in the dry season. Most families in the CRD and URD are farmers and get their cash income from sporadic casual work or petty trading, thus it was extremely difficult to estimate household income, as well as time cost. Based on these factors, the income calculation has been skipped, and the consumption expenditure have been used to establish the socioeconomic situation of the households. However, most questions were directed at how they experienced the situation at the actual time of delivery and would thus reflect that specific time period.

4.10.2 Reliability

Reliability indicates the extent of which a measure of a concept would deliver the exact same results no matter how many times it is was applied. One way of achieving this is through pre testing the instrument used in the study. Adaptations were done after the pre testing to make sure the questions were more understandable. The recall period was maximum 9 months and seemed to not cause a problem among the participants. A birth is a life changing event and is thus easily remembered. In a society with little cash flow, it is also simpler to remember how money is spent.

More than one interpreter was used in the study, but as they all were proficient in both English and local languages, a structured questionnaire were used and the researcher was present at all times, the reliability was still upheld.

5.0 RESULTS

5.1 DESCRIPTION OF THE TOTAL STUDY SAMPLE

Table 3: Background variables

BACKGROUND VARIABLES	GROUPS	NUMBER	%
AREA	Bansang catchment area(CRD):	80	
	Bansang	45	14 %
	Fula Bantang	5	2 %
	Sare Soffie	9	3 %
	Daru	7	2 %
	Kerr Ousman Boy	14	4 %
	Kuntaur catchment area (CRD)	82	

	Kuntaur	17	5%
	Sukuta	18	6 %
	Sait Mariam	12	4 %
	Ndownen	35	11 %
	Basse catchment area (URD)	81	
	Basse	41	13 %
	Dampha Kunda	21	6 %
	Kanubeh	19	6 %
	Fatoto catchment area (URD)	80	
	Fototo	18	6 %
	Suduwol	23	7 %
	Song Kunda	22	7%
	Jawo Kunda	17	5 %
	TOTAL	323	100%
AGE	15-24	146	45 %
	25-34	139	43 %
	35-45	37	12 %
NATIONALITY	Gambian	310	96 %
	Non-Gambian	13	4 %
MARITAL STATUS	Married	315	97 %
	Not married	8	3 %
	Only wife	180	57 %
	Polygamous marriage	134	43 %
HOUSEHOLD SIZE	1-4	19	6%
	5-10	151	47%
	11-20	97	30%
	>21	56	17%
NUMBER OF CHILDREN	1	66	20 %
	2-4	170	53 %
	5-7	74	23 %
	>7	13	4 %
EDUCATION	No education	60	19%
	Coranic school	198	61%
	Primary - partly	25	8%
	Primary - complete	11	3%
	Secondary - partly	18	6%
	Secondary- complete	10	3%
	Post- secondary	1	0%
WORK/EMPLOYMENT	Unemployed	4	1 %
	Wage employee, govt	2	1 %
	Wage employee, private	2	1 %
	Farmer/farmers wife	204	63 %
	Self employed	10	3 %
	Employer	1	0 %
	Petty trader	44	14 %
	Housewife	50	15 %
	Student	4	1 %
	Other	2	1%
PLACE OF DELIVERY	At a health facility	136	42%
	At home	182	56%
	On the way to the health facility	5	2%
TYPE OF DELIVERY	Normal	256	79%
	Breech	1	0 %
	Obstructed	17	5 %
	Instrumental	2	1 %
	C-section	4	1,2 %
	Twin	2	1 %
	Other self reported complications	41	13 %

5.2 ESTIMATION OF THE TOTAL HOUSEHOLD COST FOR HEALTH FACILITY DELIVERIES

The total household cost of utilizing a health facility for delivery is clearly more than just the user fee it self. The participants that delivered in a health facility (136 respondents) were asked about the user fee they were asked to pay (lump sum paid to the health facility), as well as purchase of food, medicines, dressing and bandages, syringes and needles and other medical material. They were also asked if they paid for blood transfusion and transport. There were no reports of people buying medical material so this is thus excluded from the calculations. The cost of home deliveries was also estimated for comparison (182 respondents). As the costs do not show normal distribution, the results will be presented in categories.

Four respondents (1, 2%) had undergone a caesarian section and three out of four had to pay for the blood transfusion. 250, 300 and 1000 Dalasi were paid for the transfusions.

Only three respondents reported to have been asked for any ‘under the table’ payment by the health facility staff. However, they all negotiated so that they did not end up paying anything. The three respondents all gave birth in Bansang hospital. Two were c-sections and the third were from a normal delivery.

5.2.1. Health facility cost

Table 4 Health facility costs by variables

PRICE:	USER FEE	MEDICINES	FOOD	OTHERS
0 Dalasi	9 (7%)	110 (81%)	62 (45%)	118 (87%)
1-25 Dalasi	69 (51%)	4 (3%)	28 (21%)	9 (7%)
26-50 Dalasi	34 (25%)	4 (3%)	15 (11%)	4 (3%)
51-100 Dalasi	12 (9%)	13 (9%)	22 (16%)	2 (1%)
>101 Dalasi	12 (9%)	5 (4%)	9 (7%)	3 (2%)
TOTAL	100%	100%	100%	100%

This table shows that among women that delivered in the health facility, only 7% did not pay any fee at all. These women were usually relatives of health centre staff. As many as 76% of the respondents paid from 1 -50 Dalasi. This was considered as ‘normal’ prices for a delivery. On the other hand, 18% paid even more than that as health centre fee. 13% also paid more than 50 Dalasi for medicines and 23% paid

more than 50 Dalasi for food. The category 'others' comprises of items like soap to wash the baby and candles as many health facilities did not have electricity during the night. Medicines and food are not bought at the health facility, but is bought on the private market to be used in the health facility. Therefore, these costs are included as health facility costs. The median of the user fee is 25 Dalasi (QR 25). Table 5 estimates the total cost for using the health facility with and without the user fee:

Table 5: Total cost of deliveries in a health facility

PRICE:	WITH USER FEE (MIN 0/MAX 2400)	WITHOUT USER FEE (MIN 0/MAX 1485)
0 Dalasi	4 (3%)	40 (31%)
1-100 Dalasi	77 (61%)	69(54%)
101-200 Dalasi	24 (19%)	8 (6%)
201-300 Dalasi	7 (6%)	5 (4%)
>301 Dalasi	14 (11%)	6 (5%)
Total	100 %	100%

There is a clear difference in the total cost of using a health facility with regards to whether a user fee is paid or not. This is shown through a Mann – Whitney test that gives a p-value of >0,001%. Almost 1/3 of the women did not have to pay anything when the user fee is excluded. The average proportion of user fee on the total cost is estimated at an adjusted mean of **45%**.

The costs for home delivery are much smaller than the cost for a health facility, even if the user fee is not included. The only expenses for a home delivery is gift to the TBA (this is optional, fee was never charged), and purchasing medication if needed. However, more than half of the women that delivered at home did not give anything to the TBA and 85% did not buy any medicines. Thus 85% used less than 50 Dalasi in total on their home delivery.

Table 6: Differences in the median cost of home deliveries and deliveries in a health facility (HF).

VARIABLE	GROUP	MEDIAN (QR)	P- VALUE
Place of delivery	Home	7,5 (34)	< 0,001
	HF (with fee)	75 (115)	< 0,001
	HF (no fee)	25 (88)	< 0,001

5.2.2 Transport costs

Table 7: Total transport costs

PRICE:	COUNT
0 Dalasi	68 (51%)
1-50 Dalasi	25 (19%)
51-100 Dalasi	22 (16%)
>101 Dalasi	18 (14%)
Total	100%

More than half of the respondents did not spend any money for transport. One can assume that this is because they live within walking distance to the health facility. 5 km has been set as a limit for walking distance. When this is controlled for it is evident that the transport costs are higher for women living further than 5 km away from the health facility. Even if only 38 women (28%) are in this category, it shows clearly in table 7 that the costs encountered when you live further away are higher. This is also shown through the median. For transport costs when < 5 km distance the median is 0 dalasi (QR 50). For distance > 5 km, the median is 60 Dalasi (QR 150)

Table 8: Total transport costs by distance to the health facility

PRICE:	< 5 KM	>5 KM
0 Dalasi	55 (58%)	13 (34%)
1-50 Dalasi	20 (21%)	5 (13%)
51-100 Dalasi	17 (18%)	5 (13%)
>101 Dalasi	3 (3%)	15 (44%)
Total	95 (100%)	38 (100%)

Mann – Whitney U: p-value <0,001

All in all, the cost of using the health facility increases substantially when transport is included. In fact, more than 50% of the women have a total cost of more than 100 Dalasi for their delivery when both the user fee and transport is included (see table 7). It is thus a significant difference in total cost of using the HF, with and without the transport cost. (p- value < 0,007). The median for the total cost including the user fee and transport is 112 Dalasi (QR 175). When the user fee is removed, there is still a difference in the median values when transport costs are considered. Median total cost without fee or transport is 25 Dalasi (QR 88), and when transport is included the median rises to 70 Dalasi (QR 145). The average proportion of transport on the total cost is 22%.

Table 9: Total health facility and transport cost

PRICE	COUNT
0 Dalasi	3 (2%)
1-100 Dalasi	56 (45%)
101-200 Dalasi	30 (24%)
201-300 Dalasi	14 (11%)
301-500 Dalasi	11 (9%)
>501 Dalasi	11 (9%)
Total :	100%

5.2.3 Proportion of health facility costs on general consumption expenditure

In order to calculate the proportionate burden the health facility costs lay on the households, it is essential to first describe the two groups and the general consumption expenditure capacity of the households per month. Consumption means here what the household spent on essential items like food, clothes, housing etc the previous month. As shown in the table below, the households that used the health facility for their delivery has a significantly higher consumption capacity than the households that had a home delivery (p- value < 0,014). The medians are 1970 Dalasi (QR 1893) for home deliveries and 2475 Dalasi (QR 3062) for the health facility group.

Table 10: Household consumption expenditure

CONSUMPTION EXPENDITURE/MONTH	WOMEN THAT DELIVERED AT HOME	WOMEN THAT DELIVERED IN THE HEALTH FACILITY
150-500 Dalasi	14 (8 %)	7 (5%)
501-1000 Dalasi	17 (9%)	16 (12%)
1001-2500 Dalasi	86 (47%)	46 (34%)
2501-4000 Dalasi	38 (21%)	28 (21%)
4001-5500 Dalasi	20 (11%)	22 (16%)
>5501 Dalasi	7 (4%)	17 (12%)
Total:	100%	100%

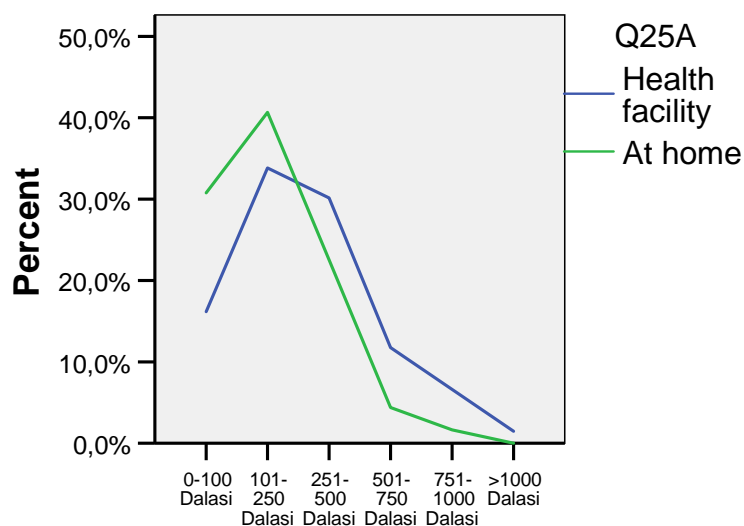
A better way to estimate the consumption expenditure capacity is by 'unit consumption'. This is because the household size differs to a great degree. Large households may have more than one income, but the income must be shared among many. When the total expenditure is divided by the household members, it gives a more correct picture of the consumption possibilities for each individual in the household.

Table 11: Consumption expenditure per unit

CONSUMPTION EXPENDITURE PER UNIT	WOMEN THAT DELIVERED AT HOME	WOMEN THAT DELIVERED IN THE HEALTH FACILITY
0-100 Dalasi	56 (31%)	22 (16%)
101-250 Dalasi	74 (41%)	46 (34%)
251-500 Dalasi	41 (22%)	41 (30%)
501-750 Dalasi	8 (4%)	16 (12%)
751-1000 Dalasi	3 (2%)	9 (7%)
>1001 Dalasi	0 (0%)	2 (1%)
TOTAL	100%	100%

This figure shows that only 6% of the ‘home delivery’ group had more than 500 Dalasi to spend per person per month, whilst among the ‘health facility’ group, the figures are higher; 20% of this group had more than 500 Dalasi. The difference between the two groups is showed with a p- value of < 0,001. The median of consumption expenditure per unit for the home delivery group is 166 Dalasi (QR 202), and 251 Dalasi (QR299) for the other group. The difference is also illustrated in the figure below:

Figure 2: Line chart: Consumption expenditure/unit



Totalexpunitcat

Based on these figures it is possible to estimate the proportion of health facility cost on the total consumption expenditure, meaning an estimation of how much of her monthly consumption the woman used for her delivery. Different scenarios are

estimated as the user fee now is abolished and transport cost is not an issue for all women. Nevertheless, even if these variables are excluded there are still a significant number of women who is spending more than 100% of their consumption expenditure for that month. The number increases obviously when the fee and/or transport are included. The last column that estimates the proportion of cost without the user fee, but with transport can be seen as a predictor for the total cost burden that some will encounter even after the user fees are removed

Table 12: Proportion of the cost of delivery in a health facility on consumption unit /month

	HEALTH FACILITY COST WITH USER FEE	HEALTH FACILITY COST WITH USER FEE AND TRANSPORT	HEALTH FACILITY COST WITHOUT USER FEE OR TRANSPORT	HEALTH FACILITY COST WITHOUT USER FEE AND WITH TRANSPORT
0-10 %	25 (20%)	17 (14%)	66 (52%)	38 (30%)
10,1-25%	27 (22%)	20 (16%)	22 (17%)	28 (22%)
25,1-50%	23 (18%)	28 (22%)	18 (14%)	25 (20%)
50,1-100%	25 (20%)	29 (23%)	8 (6%)	14 (11%)
>100 %	25 (20%)	31 (25%)	14 (11%)	20 (16%)

The proportionate costs are evidently also much higher for health facility deliveries than for home deliveries. The median proportion of home delivery is 0, 4% (QR 1, 8) for households and 3, 7% (QR18, 6) per unit.

When looking separately at the four catchment areas (Bansang, Kuntaur, Basse and Fatoto), there are no significant difference in the proportion of health facility costs, whether with or without the user fee.

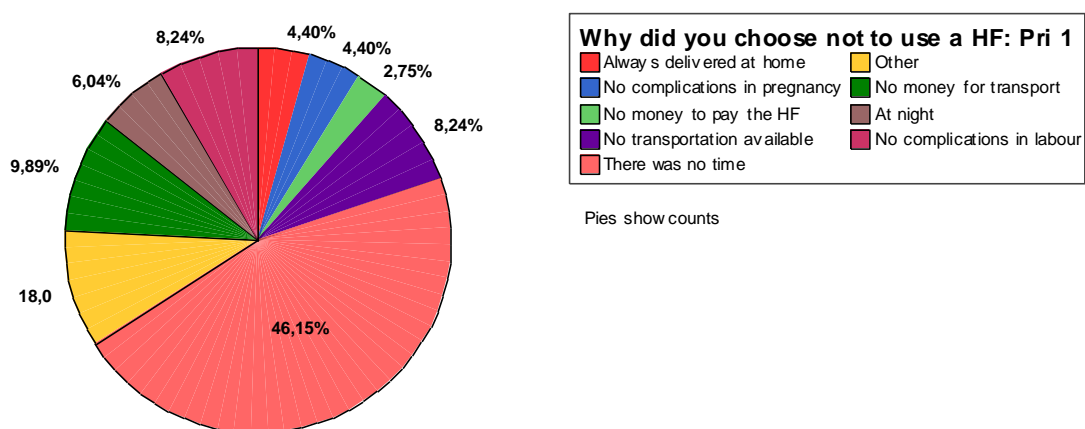
5.3 THE EXTENT OF WHICH HOUSEHOLDS OPT OUT OF INSTITUTIONAL DELIVERIES DUE TO HIGH COST

When asked why they chose to deliver at home, 23 out of 182 (13%) home deliveries answered that they did not have the money either for the cost at the health facility or for transport. Transport cost was actually the main reason for 18 of the 23 women. When looking at the total sample (323), 7% can be described as opting out due to the high cost.

5.3.1 Reasons for home delivery

The table below shows the reasons, as expressed by the women, for delivering their baby at home. There are many reasons, but many are related to the fact that the women have a hard time getting organised to travel from the home to the health facility.

Figure 3: Reasons for home delivery



Of the 136 women that delivered in the health facility, as many as 73 (54%) said they did so because it is safer to deliver in a health facility. One can assume that women that some of the women that delivered at home also believe this, but they were not able to make it. The second main reason for delivering in a health centre was that they had complications in labour (13%) or the pregnancy (7%). On the other hand, 13% of the women that delivered at home also reported complications. These were often anaemia, dizziness, malaria or severe stomach pain.

5.3.1.1 Expectations of cost

The expectations of the total cost of a health facility delivery were also explored to see if the women had unrealistic ideas of what the real costs were. What was found was that the median cost expectations for women that delivered at home were 100 Dalasi (QR200) and 150 dalasi (QR 375) for women that delivered in a health facility. This is not so far from the reality when transport is included. However, it is interesting to see that women that used the services actually had a higher expectation. On the other hand, the cost expectations are quite dispersed as seen below and there is no statistical significant difference between the two groups.

Table 13: Cost expectations

COST:	EXPECTATIONS OF HEALTH FACILITY COSTS FOR WOMEN THAT DELIVERED AT HOME	EXPECTATIONS OF HEALTH FACILITY COSTS FOR WOMEN THAT DELIVERED AT THE HEALTH FACILITY
0-10 Dalasi	9 (5%)	12 (8%)
11-50 Dalasi	55 (30%)	33 (23%)
51-100 Dalasi	39 (21%)	25 (18%)
101-300 Dalasi	51 (28%)	29 (21%)
301-600 Dalasi	23 (12%)	27 (19%)
> 600 Dalasi	8 (4%)	15(11%)
Total	100%	100%

5.3.1.2 Affordability and Reasonability

When women were asked about whether they felt they could afford using the health facility for their delivery, or whether they found it difficult to afford; more than 1/3 in each group said that it was difficult to afford. The number was slightly higher among the home deliveries, 41% compared to 35%. Moreover, around half in each group, 53% among home deliveries and 46% among health facility deliveries said that they thought it was expensive to deliver in a health facility.

5.3.1.3 Preferred place of delivery

Above it is described the reasons for delivering at home, either explicit or not. With this it is also interesting to look at where the women actually prefer to deliver. Some women do desire to deliver in the privacy of her own home, surrounded by family helpers. Actually, 31% of the home delivery group and 21% of the health facility group prefers home delivery. However, if this is turned around; as many as 69%, that is 126 women who delivered at home, would actually prefer to deliver in a health centre. It is crucial to find out why these women ended up not going. What is

interesting is that among these 126 women, 60% says it is difficult for them to afford going to the health facility.

5.3.2 Prioritization and willingness to pay

The households in rural Gambia have usually small monetary incomes, and as seen in a previous survey, to buy food is the main priority when money is at hand. The women were asked what they would spend the money on if they had 1000 dalasi extra one month. The ‘others’ category consists of i.e. education, soap and buying domestic animals. The two groups are quite similar in this matter and only 7% in both groups wanted to prioritize to spend money for health care. This does thus not seem to influence the decision on whether to use the health facility or not.

Table 14: Expenditure prioritization

ITEM	HOME DELIVERY GROUP	HEALTH FACILITY GROUP
Food	74 (41%)	43 (31%)
Clothes	35 (19%)	31 (23%)
Business	36 (20%)	35 (26%)
Health care	13 (7%)	9 (7%)
Others	24 (13%)	18 (13%)
Total	100%	100%

On the other hand, the women were also asked how much they would be willing to pay for a delivery if there was a very high quality maternity department in their village. It was found that they were willing to pay a substantial amount for quality services; the median was 100 Dalasi (QR 274) for the health facility group and 50 Dalasi (QR 75) for the home delivery group. The women that delivered at home are willing to pay a significantly lower amount (p-value < 0,001) than the other group. As seen in table 16, the highest consumption group is willing to pay more for maternal health care; 65% among the richest are willing to pay more than 50 Dalasi whilst only 29% of the poorest are willing to pay the same amount. Chi square is 0,095

Table 15: Willingness to pay by consumption –groups

	GROUP I (150-1000D)	GROUP II (1001-2500D)	GROUP III (2501-4000D)	GROUP IV (>4001 D)
0 Dalasi	7 (13%)	9 (7%)	5 (8%)	6 (9%)
1- 25 Dalasi	11 (20%)	28 (21%)	16 (24%)	7 (11%)
26-50 Dalasi	20 (37%)	32 (24%)	17 (26%)	10 (15%)
51-100 Dalasi	4 (7%)	32 (24%)	11 (16%)	16 (24%)
>100 Dalasi	12 (22%)	30 (23%)	17 (26%)	27 (41%)
Total	54 (100%)	131 (100%)	66 (100%)	66 (100%)

5.4 CHARACTERISTICS OF THE HOUSEHOLD THAT OPTED OUT OF PUBLIC DELIVERY SERVICES DUE TO COST

The group of women that opted out due to cost (23) is too small to give a clear statement of their characteristics. Due to this, the whole groups of home deliveries have been used to make comparison between women who delivered in a health facility and women who did not. Below is a summary of the main findings, and in annex 1 there is a table that describes these two groups, as well as the 23 women that opted out and the home deliveries that prefer using the health facility as the fourth group. There were not vast differences among the three home delivery groups. Summary of the main findings:

- The women that delivers at home tend to be older than the women that uses the health facility (Chi-square 0,03)
- Marital status and polygamy is of little importance
- 17% of the health facility group has secondary education, whilst only 4 and 5% of the home groups. 19 out of 23 women that opted out have either none or only coranic school. (P-Value 0,10)
- Almost twice as many women in the home groups are farmers compared to the women that delivered in the health facility. Additionally, as many as 26% of the health facility group has income generating work (including petty trade), as opposed to 13% and 12 % in the home groups. (P-value <0,01)16 of the 23 women that opted out are also farmers.
- There are more women that come from large households that deliver at home than in the health facility (p-value 0,007)
- As previously described, households that used the health facility have a higher monthly consumption than the others. (p-value 0,014)

- Most women with obstructed labour (that delivered a live baby) seem to manage to get to the health centre. (p-value 0,01) However, there is more or less the same proportion of women with self- reported complications (anaemia, malaria, severe stomach pain) that delivers at the health facility and home.
- There is a significant difference in number of live children between the two groups (p-value <0,001). More primiparas deliver at the health facility and women with many children tend to deliver at home.
- Twice as many women that have a previous experience of perinatal death, delivers at home than in the health facility. As many as 53 (16%) of the total group of women has experienced perinatal death at some point in their life.(p-value 0,03)
- 2/3 of the women that delivered at home lived further than 5 km away from the health facility. Only 1/3 of the health facility group lived further than 5 km.(p-value<0,01)

Additionally, the table below shows that there is a difference in the socio economic status (here represented through the expenditure consumption groups) among women that delivered at home and in the health facility. 57% among the 'poorest' and 41% of the richest deliver in at home. Chi Square is ,014

Table 16: Place of birth by consumption groups.

PLACE OF BIRTH	GROUP I (150-1000D)	GROUP II (1001-2500D)	GROUP III (2501-4000D)	GROUP IV (>4001 D)
Home	31 (57%)	86 (65%)	38 (58%)	27 (41%)
Health Facility	23 (43%)	46 (35%)	28 (42%)	39 (59%)
Total:	54(100%)	132 (100%)	66 (100%)	66 (100%)

5.4.1 Risk factors for not using the health facility for the delivery

Based on the findings above, some variables were selected to be included in a regression analysis. Multiple regression shows how much of the variance in the dependent variable -place of delivery- can be explained by the independent variables. It also gives an indication of the relative contribution of each independent variable. (65) All variables were first analyzed categorically. Due to the continuous nature of the categories, they were then analyzed numerically as shown here. The

variables that did not prove significant in the crude odds ratio were omitted from the adjusted odds ratio.

Table 17: Regression analysis of risk factors for home delivery

VARIABLE	UNIVARIATE ANALYSIS		MULTIVARIATE ANALYSIS	
	Crude OR (95%CI)	P-value	Adjusted OR (95%CI)	P-value
Age	1.660 (1,175-2,345)	,004	1,131 (,666- 1,920)	,649
Education	,545 (,408 - ,727)	<0,001	,586 (,415- 828)	,002
Employment	1,254 (,870 – 1,808)	,224		
Expenditure	,655 (,503 – 852)	,002	, 691 (,504- ,947)	, 021
Perinatal death	2,665 (3,050- 8,063)	<0,001	2,025 (,882 – 4,652)	, 096
Distance	4,959 (3,050-8,063)	<0,001	4,103 (2,330 – 7,223)	<0,001
Affordability	1,275 (,804 – 2,022)	,303		
Reasonability	1,318 (, 841- 2,063)	,228		
Number of children	1,723 (1,264 – 2,349)	,001	1,323 (,814 – 2,152)	,258
Household size	1,490 (1,134 – 1,958)	,004	1,280 (,901-1,818)	,168

According to this analysis, the most important characteristics that increase the ‘risk’ for delivering at home are distance > 5 km from the health facility and previous experience with perinatal death. High education and high household expenditure capacity are key protective factors. The health facility costs could not be included in this analysis as there is no health facility cost data for the ‘home delivery group’. However, based on previous findings there are reason to believe that the cost of accessing the health facility influence the decision on where to deliver.

Additionally, the variables above was used in a multiple linear regression model trying to estimate whether they would act as predictors for the total cost of using the health facility, i.e. which factors are influencing the amount of Dalasi used. The variables that gave a small adjusted R- square and thus did not influence the result were excluded. The variables that that resulted in the highest adjusted R- Square (,033) and thus can be predictors for the health facility costs were distance to the health facility and household size. The total cost variable does not have a normal distribution, so a logarithm transformation was done. Finally, it was converted back to a normal scale as shown in the table below.

Table 18: Predictors of the total cost

	B COEFFICIENT	CI	P- VALUE
Distance to the health facility	1,32	(0,89- 1,94)	0,197
Household size	0,97	(0,95-1,00)	0,013

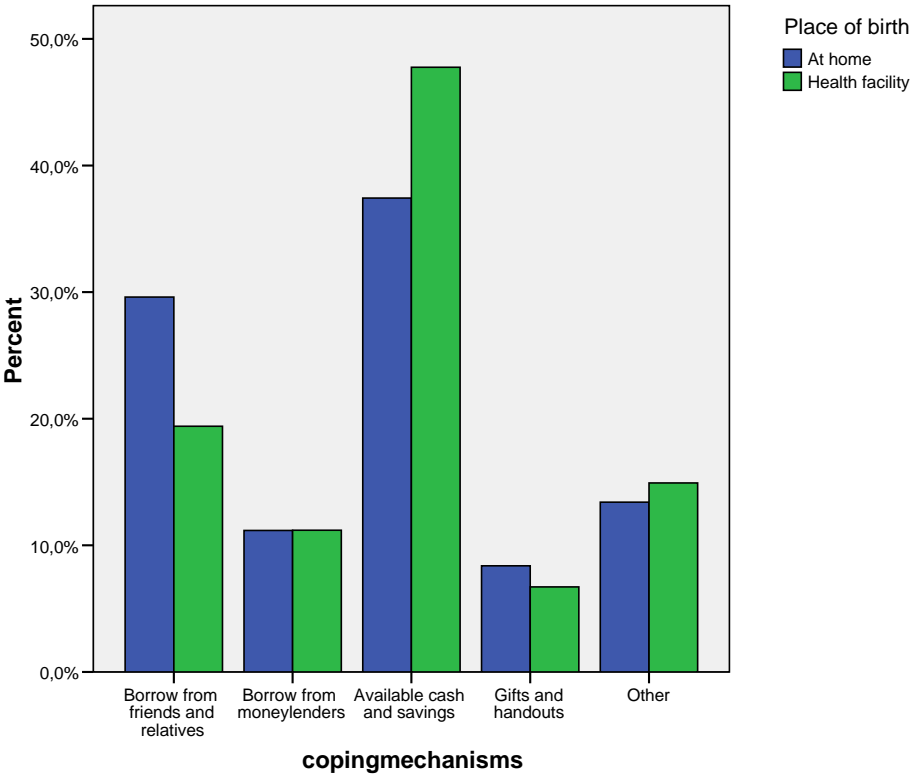
This shows us that by increasing the distance by one kilometre or household by one person, the price goes up according to the coefficient, i.e. the amount rises 1,32 Dalasi for an increase of one km. Distance influences the total cost the most and this is most probably represented through the transport cost. The p-value does not show significance, but as distance is the main risk factor for home delivery, it does seem that the transport cost would also influence the decision on where to deliver.

It is more difficult to explain why household size would influence the cost. One speculation is that the very large extended families tend to reside in more distant and remote areas, and thus transport cost is an issue also here. This should however have been covered through the distance variable. That larger household's pay more is a problem as we know that large households are associated with poverty.

5.5 FINANCIAL STRATEGIES OF HOUSEHOLD TO COPE WITH HEALTH EMERGENCIES

When using the health facility you are willing to pay the cost of both getting there and the use it self. It does not, however, mean that you are able to pay the money. The households were asked how they managed to find the money to pay for using the health facility. The women that delivered at home were asked how they would find the money if they had gone at the time of delivery. The responses are displayed in the figure below:

Figure 4: Financial strategies:



This table shows that more than half of the households with women that delivered in a health facility had to find alternative methods to gather money for the delivery. The number is somewhat higher for the households with home deliveries, but the difference is not significant. Additionally, out of 41 households that had to borrow money to pay for the last delivery in the health facility group, 13 (32%) had not been able to pay the money back.

Table 20 shows the financial strategies by consumption groups. Group I has the lowest consumption capacity and group IV highest. There is a difference among the 'poorest' and 'richest'. For example does 59% of the poorest depend on borrowing money or receiving handouts, while only 31 % among the 'richest'. Said in a different way, 57% among the richest has cash available at the time of need, but only 24 % among the poor. However, the difference between the two groups is not significant with a chi square of 0,126

Table 19: Coping mechanisms by expenditure groups

	EXPENDITURE GROUP I (LOW)	EXPENDITURE GROUP II	EXPENDITURE GROUP III	EXPENDITURE GROUP IV (HIGH)
Borrow from fiends and relatives	18 (33%)	35 (27%)	15 (22%)	11 (16%)
Borrow from moneylender	7 (13%)	13 (10%)	8 (12%)	7 (11%)
Available cash and savings	13 (24%)	52 (41%)	28 (42%)	38 (58%)
Gifts and handouts	7 (13%)	7 (5%)	7 (11%)	3 (4%)
Other	9 (17%)	20 (16%)	8 (12%)	7 (11%)
Total	54 (100%)	127 (100%)	66 (100%)	66 (100%)

6.0 INTERPRETATION OF FINDINGS

6.1 HOUSEHOLD COSTS

As described in a previous chapter it is well documented that the cost of health care may influence the demand and in many countries the introduction of user fees has deterred utilization. (41, 42). This was probably recognized by the President in the Gambia, when he declared in August 2007 that health care for women and children should be for free of charge, i.e. the user fee was removed. However, many studies show that the total cost for the patient does not only entail the user fee (43, 44, 45), and this is confirmed again by this study in the Gambia. This study shows that the former user fee comprised of less than half the total cost incurred by the women and her household.

The participants in this study were asked specifically about what they paid for their last delivery. If the woman was not able to answer, the husband or the person who accompanied the woman to the health facility would answer the question. Although the event happened a few months past, it did not seem to introduce any recall bias as the households were quite clear about the amount of money they had used.

This study was not able to really explore to what extent the women themselves had a say in household spending for maternity care but in a previous study done in rural Gambia about ANC attendance, 99% of women reported asking permission, mainly

from the husband, to go for ANC. The husbands were also the ones paying the 5 Dalasi for the ANC registration card. Only 2% of the women paid by themselves. (31)

6.1.1 Total cost

The total consumer cost for a delivery in a health facility is a combination of mainly the user fee, medicines, transport, food, informal cost and time costs. When all this is combined more than 50% has to pay more than 100 Dalasi for the delivery. Eleven women even paid more than 500 Dalasi. This is considered a very high amount in the Gambia which will be explained more when it will be compared with the expenditure capacity of the households.

Looking only at the costs met at the health facility there are 14 women who had to pay more than 300 dalasi only in health facility costs. It is essential to try to see why these women had to pay such a high amount, and some features were identified; They were all from either Bansang or Basse Catchment area, only 3 were non-Gambians and 8 out of the 14 deliveries had complications (2 c-sections, 3 obstructed labour and 3 with self reported complications). For many of these women there is thus little reason for this very high cost, and therefore there should be further control of the payment procedures as these facilities.

6.1.2 User fee

The deliveries that are included in this study are from the period before user fees for deliveries were eliminated in the Gambia. Official fees were at that time 12, 5 Dalasi at a minor health centre and 25 Dalasi at a major health centre or hospital. However, hospitals have a more semi-autonomous administration and would often state the price of 50 Dalasi. This should normally be the price of a c – section. All medicine and medical procedures should be included in this fee and the user fee was defined as a lump sum paid after the delivery to the health facility. No one reported paying only 12, 5 Dalasi and the median user fee were estimated at 25 Dalasi. However, 40 % of the women reported paying more than 25 Dalasi and some even paid more than 100 Dalasi for deliveries that did not require caesarean section. On the other hand, some women also mentioned a bed fee of 25 Dalasi that would be added on top of

the fee for the delivery. This bed fee is thus included here as a part of the user fee at the health facility.

The women that paid more than 25 Dalasi were mainly from the facilities that managed more complicated cases that thus would need more treatment and that would stay a longer time in the facility. Therefore one can assume that this is the reason for the increased payment. On the other hand, the set fee should not change according to the level of the women's complications, unless there is a need for a c-section. Looking at these cases, it is confirmed that many of the women had complications. Nevertheless, 33 out of 53 women (60%) had a normal delivery and 43 women (81%) spent only half a day or one day in the health facility.

Women that are not from Gambia should pay a fee of 600 Dalasi for a delivery and these are also included in the statistics above. But, there were only 7 out of 13 non-Gambian women that delivered in the health facility and two negotiated to pay the normal fee of 25 Dalasi. So, even when these women are excluded, the number of Gambian women that pay an increased price was still considerable. It is not easy to estimate why some women are asked to pay more than others. This study did also not look into the payment procedures in each health facility. Many women and their husbands told that they thought the price of medicines and bed fees was included in the total sum they were asked to pay. Gambian women that could not show a national ID card were also in some cases asked to pay the non-Gambian price of 600 Dalasi. This is very problematic as these women probably in many cases will avoid going to the facility because of the risk of being charged this amount. This was also discussed as a problem in a focus group discussion previous year in a different region in the Gambia. (59) The price of obtaining a national ID card is also considerable (125 Dalasi) and is thus not available for everyone. Efforts should be made by the government to ensure that all Gambian women have ID cards so that they do not fear or even avoid the health facilities due to unpredictable and unfair high cost.

When user fee is excluded from the calculations, almost 1/3 does not spend any money at the health facility compared to only 4% when user fee is included. This indicates that eliminating the user fee, which is now done in the Gambia, will have an

effect on the household costs as the analyses show that there is significant difference in the costs with and without the user fee

To conclude, one can say that the user fee was very unpredictable, and in turn it made it hard for families to plan for their expenses when going to the health facility. On the other hand, one can still question whether the removal of the user fee will eradicate all health facility costs, or if some will still remain. What is important is that the communities are informed and educated about their rights and that they know what to expect when arriving at the health centre or hospital. It is also essential that the quality of the maternity services is upheld after the user fee is removed. We know that the revenue recovered from user fees is not always substantial and is not necessarily put in use again at the point of collection, but the Gambian government need to make sure that the funding does not reduce. It is essential not to risk shortages in drugs and medical supplies, and to reduce the risk of an increase in informal charges. (42) To conclude, efforts should still be done to increase the quality of the services as we know that quality, as well as cost, influence the utilization. Additionally, care should also be taken to ensure that the 'very poor' receives the same standard of care as other patients.

6.1.2.1 Exemption from the fee

Nine respondents reported that they did not pay any fee at the health facility. Eight of these had family or friends that worked at the health facility and was thus freed from the charges. Only one woman reported that she was exempted because she was not able to pay the costs of her c- section that was performed in Banjul. Transport was also provided to her for free. It seems that there is very little knowledge of the exemption system and this woman told that she would have delivered at home because she could not afford using the health facility had she not experienced severe complications.

The exemption system in the Gambia seems not to be functioning optimally, but it seems that this is the case in most developing countries. As mentioned previously, an international survey of 26 low and middle income countries found that 27% of countries had no policy to exempt the poor. However, many countries had

exemptions for health workers as in Gambia. The abovementioned study also found that even when an official policy existed, there were numerous informational, administrative, economical and political constraints to effective implementation. (62) All the countries with an exemption policy used means testing. This is also the method that is used in the Gambia where the manager of the health facility is the one who gets to decide exemptions upon request. The study found that means testing are often accompanied by weak eligibility criteria's and guidelines, e.g. that the patient is 'very poor'. Additionally, there is a lack of information on people's income and the staffs do not have the skill or time to make a proper evaluation. It might also not be in their own interest to exempt someone. The exemption is thus inconsistent and very subjective. At the same time some patients may not want to ask for exemption as they have little information about their right, the procedure is difficult and they may feel stigmatized. (57) One can probably assume that the situation is similar in Gambia as it is described here.

6.1.3 Medical supplies, medicines and blood transfusions

All health facility costs such as medical supplies, medicines and bloods transfusions should be included in the user fee of 25 or 50 Dalasi. However, in some developing countries it has been documented that that the women have to purchase supplies such as bleach, bed sheets, gloves and gauze for their delivery. (42) This was not the case in the health facilities included in this study but quite a few women reported that they were asked to buy candles and soap. There is a need for candles as most health facilities do not have electricity and light available throughout the whole night. The soap was used to wash the baby or also as a gift to the person who attended the delivery. The total amount for candle and soap were usually 10 Dalasi.

Other studies have also shown that the cost of medicines is usually quite high. In Bangladesh, where maternity care is for free, as many as 97% had to spend money for medicines. (44) The number in this study in the Gambia is not quite that high; 31 women (23%) that delivered in a health facility had to purchase medicines. This was equally distributed between Bansang, Basse and Fatoto, but only two women reported this in Kuntaur catchment area. This does not mean that they bought the medicines at the health facility, but that the health facility did not have the drugs

needed available to the patient. It was thus necessary to purchase the medicines at private pharmacies which are relatively expensive. 23 of the 31 women had to pay more than 50 Dalasi for medicines. Among these four health facilities, only Basse major health centre is a part of the Bamako Initiative. However, these numbers does not demonstrate a higher availability of drugs here, as is one of the goals of the BI.

Blood transfusions can be vital for the survival of the mother in many cases. Especially in a country like the Gambia where anaemia is very prevalent among women and haemorrhage is a common cause of death for women in labour. There have been reported many problems with blood transfusions in the area under study. Cham investigated the situation in Bansang Hospital in 2002 and found that there was no systematic recruitment of blood donors so blood were mostly acquired on a cash and carry basis. (14) There has assumingly been some improvements after this but still it was found that blood was not always available in the blood bank. In Basse they also had problems with the supply of blood bags. The policy of 'replacement' blood was also still upheld where the relatives had to find someone to donate blood to replace the blood given to the women. The families where often not able to donate themselves as it is common that the accompanying persons are a grandmother or an old parent. The solution would then be to pay someone for donating. In this study three persons reported that they have had to pay for blood transfusion, and the amount paid is very high; 250, 300 and 1000 Dalasi. This includes not only 'buying' a donor, but two participants also reported having to give money directly to the laboratory technician. Hopefully, this kind of behaviour will be strongly discouraged by the management in the future.

6.1.4 Transport costs

The National Health Policy in the Gambia recommends that all persons should have access to the nearest health facility within a maximum of 5 km, estimated as one hour walking distance (12). This can include a dispensary or a health post and is to a certain extent upheld. However, considering the distance to the nearest health facility that have delivery services there are many who live in village further away than 5 km. 38 women that delivered in a health facility and 125 women that delivered at home lived further away than 5 km. This makes a total of 50%. However, this number is

rather arbitrary as it is based on the site selection by the researcher that aimed to include villages both close and far from the health facility. On the other hand, they were all villages within the catchments areas of the health facilities and do show that many people in rural areas need to travel long distances in order to reach a health centre or hospital. There is a clear difference in the distance to the health facility between the two groups and this will be further discussed later.

Half of the respondents did not pay for transport to the health facility. It means that they either walked or they had their own horse or donkey cart. Money was paid either for a private taxi, public taxi/minibus that frequented the main road at a set route at daytime, buying of fuel for a private car or renting a horse/donkey cart. The prices were normally 5 dalasi for the 'bus', but could easily be more than 50 -100 dalasi for a 'town trip' in a private taxi. The prices for fuel were around 30 dalasi per litre.

The median travel time for all women to the health facility was 30 minutes (QR50); however the average travel time on foot was 57 minutes and with a horse-or donkey cart 110 minutes. This is a considerable length of time and five women reported that they delivered the baby on the way to the health facility. The cost of transport increased invariably with the distance. Women that lived further away than 5 km had a median transport cost of 60 Dalasi and as many as 2/3 of these women experience some sort of payment for transport. Looking at transport as a proportion of total cost, the mean is 22%. This is quite similar to what is found in other countries, e.g. 28% in Burkina Faso, 25% in Brazil and 27% in UK. (40, 51, 60) On the other hand, for more than 20% of the women, the transport costs were more than 50% of the total cost.

It is clear that the cost of transport can act as a barrier to utilization of services and long distance to a health facility is also a major risk factor for home deliveries. This means that even if the health facility costs may be significantly reduced after the removal of the user fee, the households may still be met with a high cost. As we have seen, the median total cost without fee or transport is 25 Dalasi (QR 88), but when transport is included the median rises to 70 Dalasi (QR 145)

6.1.5 Food

Food should normally be provided to the patients in a health centre or hospital, but very often this is not done and the patients need to buy their own food in the market. 54% of the women that delivered in the health facility bought food by themselves to eat in the facility. The costs include the amount paid for both the woman and the persons accompanying her. 37% paid more than 25 Dalasi for food whilst admitted and as many as 10% paid more than 100 Dalasi. This means that also the cost of food is quite substantial for the women.

6.1.6 Informal costs

The participants were asked if any one at the facility asked them for any additional fees, meaning any under- the- table fees. Only 3 respondents confirmed this, but they also said that they had refused to pay and this had passed without any consequences. According to studies done in other developing countries, unofficial costs are often the rule and not the exception in health facilities, and have been described as one of the main reasons to avoid or delay hospital. (54,63) It is very uplifting if the results from this study in the Gambia give a correct picture of the situation, however there are some reasons to be cautious. Firstly it can be that the question has not been very clear. It is also a difficult subject to discuss as the respondents may fear repercussions. The question may thus introduce bias. Secondly, it is found that when formal fees exist among informal payments, the distinction can sometimes be blurred. (61) This study did not investigate the payment procedures, so it is not clear whether they were given receipts, if they paid at the official cash window etc. It is therefore hard to know whether informal fees are incorporated within a large 'official user fee'. That is, that the women believed that the 'official fee' they were asked to pay was due to the policy at the health facility and not as part of a 'bribe'.

6.1.7 Time costs

'Time costs mean opportunity costs of foregone wages by the patient and time spent on travel, waiting and treatment' (53) To measure the income lost when seeking health care in a rural area is not easy, as a price has to be set on the woman work at the farm, control for the seasonal differences etc. Unfortunately this was not possible

to do in this study. However, it should be noted that in Tanzania they found that time costs contribute between 32% of the total cost of a normal delivery in a hospital. (58) In this study 18 women (13%) spent two days or more in the health facility. Almost all women had someone accompanying her to the facility, but in most cases it was parents/ in-laws or friends and relatives. Only 11% came with their husband. 40 % came with two people or more. Distance is also a factor of time cost and this has proven to be essential in the women's decision making process. One can as a result assume that the time cost in this area would also be considerable. In the Gambian national population policy paper this is actually recognized; *'Women form about 50 per cent of the farming population in The Gambia and their frequent pregnancies are one of the main factors adversely affecting their productivity due to impairment of their health and reduction in time available for both leisure and productive activities'*. (11)

6.1.8 Cost of a complicated delivery

There are reasons to believe that women that experience complications with their delivery meet higher costs. This is shown slightly through the description above but it has to be said that this study looked at costs in general and not specifically at costs when complications. When there is a report of obstructed labour or instrumental delivery etc this has not been confirmed and checked with registrars at the maternity unit. The self reported complications such as dizziness, stomach ache etc may also not have had any influence on the management of the delivery itself. Women with complications that had fatal outcomes such as the death of the mother or the baby are also not included here. Consequently, it is difficult to make any conclusion regarding this. On the other hand, the 4 women that had a c-section reported paying 0, 50, 800 and 2400 Dalasi respectively. Among the 13 women that reported obstructed labour, 6 paid more than 100 Dalasi at the facility (Median 95 (QR 187)). This is higher than when looking at the average cost of the total sample, but the figures are too small and insecure to be reliable. More research should be done on this, especially the high cost surrounding c-section. The latter household that paid 2400 Dalasi remembered the amount with certainty as they were still trying to pay off their debt. They said however, that they didn't really know what they were paying for.

6.1.9 Costs of a home delivery

When assuming that the costs of delivering in a health facility play a part in hindering women to utilize the health facility, it is also interesting to see what costs women meet when delivering at home. It was found that the median cost for a health facility delivery was 10 times higher than a home delivery. The expenses women meet when delivering at home are gifts given to the TBA and purchasing medicines. However, only 15% bought any drugs at the private pharmacy as most medicines needed are given for free by the TBA. The TBA does also not charge any fee, and it is therefore common to show appreciation by giving a gift – either money or an item like soap, piece of clothes etc. When the latter was done, the price of the items was calculated to be included in this analysis. However, of the participants in this study less than 50% gave any gift to the TBA. It is quite reasonable to assume that this shows something about the families' inability to pay, and not their willingness to pay. The median gift to the TBA, after excluding the women who didn't give a gift, is 25 Dalasi.

6.1.10 Household expenditure capacity

As mentioned earlier, the expenditure capacity is chosen as a proxy for income in this case as it is not as prone to underreporting and the seasonality of income. This was also used in the 1998 Household poverty survey in the Gambia. The households were asked how much money they spent on food, clothes, vehicles, electricity, health care, transport and house rent in the month passed. This is a standard taken from other Living Standard Measurement Surveys. The advantage is that people easily remember how much they spend, for example do the household have a specified amount to use on food every day. This is called 'fish money'. The disadvantage, however, is that when just looking in to one month of expenditure some seasonal variations will come up. In this case, it was the peak of the malaria season so many had higher health expenditure than the rest of the year. It was also the festival at the end of Ramadan so many had saved money to buy clothes for the festival.

A household was defined as a family that eats together and accepts one member as the household head. In rural Gambia, many live with a big extended family so the household size differs to a great extent. As a consequence, it is also important to look

at the expenditure capacity per household unit – meaning how much money does the household have to spend on each individual. Evidently, the researcher knows little about the intra household resource allocation within each household, and there are reasons to believe that this is not equally distributed between the men, women and children. However, to keep it simple all household members have been weighed equally. It still shows us that when the cost is higher than the expenditure capacity per unit or in this case, for the woman, someone else or something else in the household must suffer the consequences.

Other variables that could describe the socioeconomic situation of the households were also collected, i.e. size of land, number of animals etc. It was however more meaningful to use expenditure as a way of categorizing the socioeconomic situation of the respondents as cash availability is more essential in terms of managing delivery costs.

When looking at the expenditure capacity in the two groups, home deliveries and health facility deliveries, it is evident that the households that opted for delivery in a health facility do have a higher expenditure capacity. The difference is on average 500 Dalasi per month for the households or 85 Dalasi per unit. This confirms previous studies in the Gambia and other developing countries that show that there is a lower level of institutional deliveries or deliveries with a skilled attendant among the lower income groups than the higher. (15,62) However, there are also other reasons that can explain lower utilization among the 'poor', i.e. physical access to the health facilities. The interaction between these two variable and others will be further looked into in chapter 6.3

6.1.11 Health facility costs as a proportion of expenditure

The Gambian Household Poverty Survey in 1998 estimated that the household health expenditure comprises of much higher proportion of total household expenditure in the poor households than in the better-off households. (15) At that time food clearly accounted for the highest proportion of expenditure, with clothes at second place. (15) This is similar with findings in this study and furthermore most of the respondents would also prioritize buying food if they had extra money. Only 7% in each group would prioritize health care (see table 15)

According to Russell a 10% expenditure on health is considered catastrophic for the households. (55) When looking at households in this study more than 1/3 of the respondents encountered this catastrophic high expenditure. Elimination of the user fee reduces the proportionate costs for the households, but even when this is considered 17% experience catastrophic expenses for their delivery in a health facility. This should obviously be a concern for the Gambian government. Although the first step towards reducing the cost of maternal health care is taken, there are still a substantial number of households that most probably will encounter severe consequences after paying for a health facility delivery. Additionally, in a study conducted in Tanzania in 1998 it was found that an increase in the cost of maternal health care as a proportion of total household expenditures decreases the likelihood of using safe motherhood services (ANC and institutional deliveries) (44).

There is evidence that women *'generally find it harder to mobilise resources for their own health care needs within a household'*. (42) This is assumingly the case also in the Gambia as we have seen that very often they will ask the husbands permission and the husband is the one who pays, i.e. decides whether or not to spend the money on the woman's maternal health care. However, if considering the spending capacity per household member very pragmatically, and thus assuming that the mother to be has an equal share as the others, it is still found that a quarter of the women spend more than a 100%, meaning more than her share for that month for the delivery only.

6.2 HOUSEHOLDS OPTING OUT OF INSTITUTIONAL DELIVERIES

When asked a direct question about why they delivered at home, 13%, i.e. more than 1 out of 10 women answered that they did so because they could not afford the cost of the health facility or transport. However, this question is not really an easy question. Some might feel ashamed or even guilty and try to search for the 'right' answer. Considering also that there very possibly is more than one answer, it is essential to search for other explanations to why so many Gambian women deliver at home.

6.2.1 Reasons for home delivery

The main problems identified by the women were mostly organisational problems. Considering that almost 70% of the women that delivered at home would prefer to deliver in a health facility, but could not, shows us that a lot can be done in assisting these women to actually reach the health facility. First of all, most women complain that there was no time to reach the health facility. There can be two reasons for this; some older women with many children might have a very swift delivery with very little time from the first symptoms and until the baby comes. The regression analysis in chapter 5.3.1 shows us that these women have higher odds for a home delivery than younger mothers. However, considering that women that delivered at home usually live a longer distance from the health facility and that many also mentioned lack of availability or money for transport, one can not overlook the time it might have taken these women in organising the trip to the facility. It takes time to find transport; it takes time to find the money to pay for the transport and it takes time to reach the facility. Facing these challenges the organisation of the delivery might be overwhelming, especially for the poorer households and the poorer villages. Some of the villages visited in this study had neither private vehicles nor public transport. The horse carts could also not be used during night time or if the dirt roads are in bad condition. Some of these villages had almost 100% home deliveries. Therefore, one can only speculate if women that encountered severe complications here were able to receive assistance on time or if some died in the village.

These factors above contribute to Thaddeus and Maines' phase 1 and phase 2 delays. Previous studies in the Gambia are also emphasizing this, e.g. lack of transport, prolonged transportation and bad roads. (31, 48, 59, 63) This is not only an issue in the Gambia, for example has studies in Zambia, Tanzania and Sierra Leone (43, 58, 52) showed evidence for the importance of these factors.

Long distance to the health facility, lack of transport and lack of money to pay for transport is clearly a result of poverty and these factors contribute to lower health facility attendance among poor women. It was also assumed that health facility costs, which have been estimated as quite considerable in the previous chapter, were a contributing factor. However, only 5 women stated as their main reason that they did not have money to pay the health facility. This might again be due to the 'directness'

of the question, but it might also be that most women and their families see the cost as necessary and are willing to pay the amount needed to receive proper care. As will be described later, this does not mean that they have the money readily available at the time they have to leave for the health facility.

The willingness to pay and the expectations of costs seems to be quite close to the real situation. However, women that delivered in the health facility are willing to pay significantly more than the home delivery group. This might have influenced their decision to seek care. The 1998 Household poverty survey found evidence that Gambians are willing to pay more for a perceived better quality of care. In Tanzania, the willingness to pay increased significantly for reduction in waiting time and reliable availability of drugs. Therefore, achieving better quality of the maternal health care services is essential. On the other hand, the poor are willing to pay less than the households in the richest category so this should also be considered.

The last 'group' of reasons to deliver at home was that the women had no complications during pregnancy or labour and or 'they had always delivered at home without problems'. These women most probably prefer delivering at home and do not see the added value of a health facility delivery. However, studies investigating maternal deaths in the Gambia found that underestimation of the severity of the problem were a contributing factor to women dying. (47,63) Education and information of the women, as well as the husbands, is important to ensure recognition of danger signs. One study in the Gambia found that the decision to go to the health facility was sometimes made up to 48 hours after labour started. (31) This might be both due to organisational challenges and/or not recognising the signs of complications.

6.2.2 Affordability of health care

There is no accepted definition of 'affordability' in economics. 2-5% is a typical household health expenditure/income ratio found by large-scale surveys, so this has sometimes been regarded as an affordable level. Another relevant operational definition of affordable health care expenditure is one which has no lasting adverse

effects on the health, economic or social status of the household. (51) This is, however, more difficult to measure.

Women's perception about whether maternity care is affordable or not, did not seem to have an influence on their decision to seek care in this study. There is only a slight difference between the two groups. However, that more than 1/3 of the women find it difficult to afford – meaning that it may have adverse effects on the health, economic or social status of the households, should be a cause of concern for the policy makers. Additionally, if looking at the 126 (70%) women that delivered at home but that would prefer a health facility delivery, as many as 60% claims that it is difficult to afford. This shows that perceptions of affordability may be an influencing factor. Also, to be directly asked whether you can afford something or not, may seem a bit provocative and may have produced some biased responses. In Zambia, it was found a strong correlation between the perceived affordability of user fee and attendance. (48)

6.3 HOUSEHOLD CHARACTERISTICS

Twenty three women stated that they chose to deliver at home because they could not manage the cost. This is not sufficient with regards to making statistical analysis. Therefore, the whole group of home deliveries were included in the analysis. The main findings from the difference in characteristics between the groups have been listed in chapter 5.3. The groups did not differ significantly when it came to marital status, polygamy, nationality and ANC attendance.

Age: The higher age, the higher odds for delivering at home. The age category 35-45 has actually a three times higher chance of home delivery than the younger categories. This can for example be explained by the women's previous experience. Maybe they have delivered many children before without complications, or perhaps is the labour so speedy that there is no time to reach the health facility – as many women explained. On the other hand, one can also speculate that the households need to prioritize their spending and that they might not be so willing to allocate their resources on these women. But, bearing in mind that age and parity is also

considered at risk factors for delivery complications and maternal deaths, it is essential that also these women reach the health facility. However, when using the adjusted odds ratio, the significance of age is greatly reduced – other variables are more important than age.

Education: Education is clearly a protective factor. The higher the education, the less risk of delivering at home. This can be attributed to increased knowledge and an improved understanding of information. Educated women may also have a larger decision making power within their household. Women with higher education are probably also used to travelling and might live in a regional centre close to the health facilities. Nevertheless, when controlling for distance and other factors, education remains significant.

Employment: The employment categories analysed are 'no work', 'farmer' and 'income generating work'. What stand out as the main risk factor are clearly the farmers. A farmer has almost 6 times higher odds of a home delivery than a woman that is earning her own income. Employment is very much linked to finance and according to a poverty profile presented in the PRSP, the very poor in the Gambia are most commonly a woman working in agriculture, most likely in as a groundnut farmer. (15) This can thus be linked to the assumption that the poor women cannot manage the cost of accessing maternity care. However, the findings are not significant and were excluded from the multivariate analysis.

Expenditure capacity: As it is concluded previously, the groups with a high expenditure capacity have a lower chance of delivering at home. In fact the chances of a home delivery are reduced threefold from the 'poorest' category to the 'richest.' This could of course be explained by the fact that 'richer' households may live closer to the facilities or have easier access to transportation means. Even when all this is controlled for, the protective factor remains more or less the same. This means that household finances and thus the ability to pay transportation and the health facility costs, does influence the decision on place of delivery.

Perinatal death: The second largest odds ratio is among women that have a previous experience of a still birth or death of the baby within seven days after the

birth. These women have higher odds for home delivery. This seems strange as you would assume that these women would want to deliver in a setting where professional health staff could better look after themselves and the newborn. Only 12 out of 50 women (24%) that had experienced perinatal death at some point in their life delivered at the health facility for their last delivery. On the other hand, almost half of the women delivered at the health facility when their baby died. This can possibly have something to do with lack of trust in the health facilities, but it may also be a result of poverty. Poverty can contribute to a poorer health status of the mother and consequently the baby, whilst at the same time accessibility to the health facility is harder. Similar findings have been made in Tanzania where women who used the health facility had experienced fewer child deaths. (55) The adjusted OR remains high, but the significance is somewhat reduced in the multivariate analysis.

Distance: Distance to the health facility is clearly the variable that explains the most about why some women choose to deliver their baby at home – it has a very high and significant crude OR as well as adjusted OR. When a woman lives more than 5 km from the health facility, she increases the risk of having a home delivery by almost 5 times. As discussed previously this may again be linked with availability of time, transport and finances; e.g. distance was the main predictor of the total cost of a health facility delivery. In order to reduce the prevalence of home deliveries, the most obvious priority should be to either bring safe maternity care closer to the people, or ensure availability of transportation to take them there on time.

Distance to the health facility can be associated both with level of education and expenditure capacity. Therefore distance was controlled for individually with these two variables. However, the OR for distance was still high at respectively 4, 78 and 4,72.

Affordability and reasonability: People that find maternity care difficult to afford and/or expensive have obviously a higher risk for home delivery. However, the results were not significant and are therefore not included in the further analysis.

Parity: Women that had delivered before have a higher chance at delivering at home than women who are delivering for the first time. This is also according to national

guidelines that state that all primiparas should deliver in a health facility. However, women that have eight children or more increase the risk for a home delivery 11 times! This is in line with the results that older women also deliver at home. This is not something unique in the Gambia, many studies from Sub-Saharan Africa show that attendance decreases when parity and age increases. (5, 55) The 1998 Poverty Survey in the Gambia showed a high association between poverty and total fertility – meaning that very poor women have more children than the non – poor. (15) This fact can also influence the result. However, parity does not remain significant as a risk factor when other variables are controlled for.

Household size: A large household is considered as a determinant for poverty in the Gambia. (15) It is therefore not surprising that a women living in a large extended family increased her chances for a home delivery. The more household members, the higher risk. A large household can be associated with both lower proportion of expenditure capacity per household member as well as strong traditional family structures that may not encourage health facility deliveries. However, this variable is also not significant as a risk factor when controlled for other factors. It was however significantly contributing to the total cost of a health facility delivery, which shows that the more household member, the higher cost – and a higher risk for home delivery.

To conclude, the main risk factors for home deliveries are identified as distance > 5 km, previous experience with perinatal death, low education and low expenditure capacity. Furthermore; high parity, high age and large household size can also have some impact. This result can be of help to identify some interventions that must be focused on in order to increase institutional deliveries and thus deliveries with a skilled attendant. To reduce the geographical distance and the cost of reaching and utilizing the health facility has already been discussed. But, it is also interesting to see that improving women's education, which is already on the governments agenda, is very crucial.

6.4 FINANCIAL STRATEGIES

'One of the constraints to use of maternal health care in the presence of user fees is households inability to access cash at the time of need, especially in rural areas

where subsistence farming is characterised by temporal or seasonal inability to pay. The issue was reportedly a major constraint for between 40-50% of households in West Africa'. (42 pp1459) The need to find alternative strategies in order to pay for maternal health care is according to this statement a problem in many countries in the area. Gambia is unfortunately no exception. We also know now that the user fee is only half the total expense, and that the need for money for transport and other costs, are equally important. This study found that more than 50% of the respondents did not have cash available at the time of need. To borrow money from a more well – off relative or even a moneylender such as the local shopkeeper, seems to be a quite common coping mechanism in the Gambian community – not only when seeking health care. The next main coping strategy was asking for gifts and handouts. Only few respondents answered that they had to sell crops, animals or other assets, or to take up extra work before the delivery. To sell food crops is on the other hand much more common in other countries like Sierra Leone, Uganda, Nigeria and Burundi, but borrowing from friends- not moneylenders was the major strategy also here. (56)

We also know that the time spent finding money may delay the decision to seek care as well as access to adequate care on time. (42, 46, 47) As already mentioned, a previous study in the Gambia found that the decision to go was made between 20 minutes and 48 hours after labour started. (31) This can be very hazardous for the woman's health. Delaying health care consumption may also be done because of worry that the costs are higher if they come early. After the introduction of user fees in Zambia in 1991, women expecting difficult deliveries left their admission to the last minute for fears of paying more. When fees was introduced in Zimbabwe the same year, babies born before arrival increased by 10% (56) One can also assume that women and their families may choose to get discharged before it is due time, in order to save money this way. In this study, five women delivered on the way to the health facility, but we know very little about how these abovementioned strategies are influencing the women's health seeking behaviour in the Gambia.

Many respondents have said that they are willing to pay and did pay a quite substantial amount for their health facility delivery, but it is important to consider the implications that this has for the families. There is a clear difference between the different expenditure groups meaning that the poorer families would suffer more from

debt after the delivery (see table 18) This study were not able to look deep into the long term effects, but for example in Uganda it was common to withdraw children from school so that they could save on school fees and so that children could help on the farm while parents seek temporary jobs to pay off loans for hospital bills. (52, 64) There is also well known in the Gambia that the rural population has less cash availability during the rainy season as there are little other casual income generating work and everyone are busy on the farm. A delivery during the rainy season may thus have more severe implications than what is described here. In Sierra Leone, it was found a decrease of about 30% in the utilization of primary health care units in a follow up survey during the rainy period. About 1/3 of the decrease was found to be reduced physical access, while the remainder was most likely due to reduced availability of money. (52)

All in all it seems that few households save up money to prepare for the delivery. Most probably, the search for money for transport and to pay the health facility starts after the labor has begun and the decision to go has been taken. This can cause dangerous delays. Borrowing money for health care will also put an increased burden on the most poor and vulnerable – and may to the utmost consequence cause that the most poor avoid seeking care altogether.

7.0 CONCLUSION AND RECOMMENDATION

The government of Gambia has recognised through the Millennium Development Goals as well as national policies that the reduction of the maternal mortality ratio is an important goal for the country. They have also recognized that one way of doing this is to increase the number of women that delivers with a skilled attendant and thus focused on bringing health care closer to the population as well as recently abolishing the user fee for services provided to pregnant women. These are all steps to improve the situation for Gambian women.

Improving access can be achieved either by reducing barriers to uptake of existing services or increasing the demand for existing services by improving quality or providing incentives for use. Finally, extending service coverage to previously underserved areas will also contribute to an increase in access. (65) This study has

focused on cost as a barrier to use of services, and it has shown that the cost of utilizing the services may still remain as an obstacle even after the user fee is removed.

The user fee contributed to 45% of the total cost of utilizing a health facility for delivery. On the other hand, the cost of transport, medicines and food at the health facility thus represent the other half, and some families will still experience catastrophic expenditure levels even after the removal of the fee. The government are accordingly in the position of reducing the cost even further. Ensuring the availability of free drugs and provision of food in the health facilities- as is its current intent- will not only reduce the costs but also make the costs more predictable to the households. Additionally, the high price associated with c-sections and blood transfusions must be dealt with both on a national and local level.

Transport is also a matter of cost, but furthermore a matter of availability and distance. It is important to stress again that the majority of women that delivered at home would prefer to deliver in the health facility. The problem, however, was that it was just not feasible to get there on time. Cost alone was the main reason for 13%, but many of the women were simply unable to find transport and/or they did not have the time to reach the facility. One answer can be to extend the duties of the existing ambulances i.e. by reallocating some of the car park of the management towards ambulance services that can travel to and fro the villages and the health facility when needed. Solutions can also be found outside of the health sector; improving the road network, public transport and public communications is essential. Other countries have also implemented different projects regarding community assistance with transport to the facility, community loan funds, insurance etc (60). An insurance scheme and mobile clinic for deliveries was tried in West Kiang of the Gambia in the 1990's. (66) These kind of options should be investigated further.

Lack of planning and the woman's poor decision making power can also contribute to the lack of time, money and transport, and an in depth study on households priority on women's health as well as male involvement would be interesting.

The poor and uneducated living in remote villages are more likely to deliver at home. This is not a surprise but it is nevertheless very important. Education and information of women is a key task of health care workers. Moreover the work must continue to enhance the status of Gambian women. Poor households are also more at risk for having to borrow money to be able to afford health care. Further study on the long term impact of 'health care debt' is important.

It will be very interesting to see whether more women will use the health facility for their delivery now that the user fee is removed. Experience from South Africa showed that the staff attitude towards free care, such as overuse and suspicion that the women would resell free drugs, held back patients' utilization of the services. (67) It is therefore vital that the frontline staff understand the purpose of the removal of the fee. Poor service quality and the persistence of unofficial payments have also contributed to low increase in utilization in some countries. (41) However, there has been seen an increase in utilization as well as a dramatic reduction in the maternal mortality ratio in other countries, e.g. Algeria and Malawi after the fee was waived. (68)

In the Abuja Declaration of April 2001, African leaders pledged to set a target of allocating at least 15% of the annual budget to the improvement of the health sector. (23) The Gambia is still only half way there, and it is thus important to remind the decision makers about the following: *'If all women were to receive ANC and safe delivery care, the maternal and infant deaths averted would save the costs associated with poor maternal health outcomes, such as costs to health services, costs to families for health services, productivity losses of the mother and other family members, morbidity and mortality of other family members as a result of the mothers death, and immediate and future costs of disability'* (50)

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Annex 1: Household characteristics

VARIABLE	GROUPS	ALL FACILITY DELIVERIES (136)	WOMEN THAT OPTED OUT TO COST (23)	ALL HOME DELIVERIES (182)	HOME DELIVERIES THAT PREFER THE HEALTH FACILITY (126)
Age	15- 24	72 (53%)	9 (39%)	73 (40%)	47 (37%)
	25-34	56 (41%)	10	80 (44%)	59 (47%)
	35-45	8 (6%)	(43%) 3 (13%)	28 (15%)	19 (15%)
Nationality	Gambian	129 (95%)	22	176 (97%)	121 (96%)
	Non- Gambian	7 (5%)	(96%) 1 (4%)	6 (3%)	5 (4%)
Marital status	Married	131 (96%)	21	179 (98%)	123 (98%)
	Not married	5 (4%)	(91%) 2 (9%)	3 (2%)	3 (2%)
	Only wife Polygamous NA	76 (56%) 54 (40%) 5 (4%)	10(43%) 11(47%) 2 (9%)	102 (56%) 77 (42%) 3 (2%)	67 (53%) 56 (44%) 2 (2%)
Education	No education	20 (16%)	5 (22%)	37 (20%)	31 (25%)
	Coranic school	71 (52%)	14(61%)	123 (68%)	77 (66%)
	Primary partly	14 (10%)	1 (4%)	11 (6%)	9 (7%)
	Primary completed	7 (5 %)	2 (9%)	4 (2%)	3 (2%)
	Secondary partly	13 (10%)	0 (0%)	5 (3%)	5 (4%)
	Secondary compl. Post secondary	8 (6%) 1 (1%)	1 (4%) 0 (0%)	2 (1%) 0 (0%)	1 (1%) 0 (0%)
Work/ employment	Unemployed	3 (2%)	0 (0%)	1 (0%)	1 (1%)
	Farmer	57 (42%)	16(69%)	142 (78%)	97 (77%)
	Self employed	6 (4%)	0 (0%)	4 (2%)	2 (2%)
	Housewife	36 (26%)	3 (13%)	14 (8%)	11 (9%)
	Student	2 (1%)	2 (9%)	2 (1%)	2 (2%)
	Petty trader	25 (18%)	2 (9%)	19 (10%)	13 (10%)
	Wage employee	4 (3%)	0 (0%)	0 (0%)	0 (0%)
	Employer	1 (1%)	0 (0%)	0 (0%)	0 (0%)
	Other	2 (1%)	0 (0%)	0 (0%)	0 (0%)
Household size	1-4	13 (10%)	1 (4%)	6 (3%)	6 (5%)
	5-10	70 (51%)	11(48%)	80 (44%)	56 (44%)
	11-20	35 (26%)	8 (35%)	58 (32%)	38 (30%)
	>21	18 (13%)	3 (13%)	38 (21%)	26 (21%)
Total expenditure for the household	150-500 D	7 (5%)	2 (9%)	14 (8%)	9 (7%)
	501-1000 D	16 (12%)	2 (9%)	17 (9%)	10 (8%)
	1001-2500 D	46 (34%)	12(52%)	86 (47%)	55 (44%)
	2501-4000 D	28 (21%)	4 (17%)	38 (21%)	33 (26%)
	4001-5500 D	22 (16%)	3 (13%)	20 (11%)	14 (11%)
	> 5001 D	17 (12%)	0 (0%)	7 (4%)	5 (4%)
ANC attendance	0	0 (0%)	0 (0%)	1 (0%)	1 (0%)
	1-3	39 (29%)	9 (39%)	38 (21%)	30 (24%)
	4-6	80 (59%)	13(56%)	120 (66%)	79 (63%)
	>6	23 (12%)	1 (4 %)	23 (13%)	16 (13%)
Type of delivery	Normal	94 (69%)	17(74%)	158 (87%)	106 (84%)
	Obstructed	15 (11%)	1 (4%)	1 (0%)	1 (1%)

	Complications	18 (13%)	5 (22%)	22 (12%)	19 (15%)
	Other	5 (4%)	0 (0%)	0 (0%)	0 (0%)
	C -section	4 (3%)	0 (0%)	0 (0%)	0 (0%)
Previously experience death of baby at birth or within one week	No	123 (90%)	16(69%)	142 (78%)	97 (77%)
	Yes	13 (10%)	7 (30%)	40 (22%)	29 (23%)
Number of children	1	45 (33%)	4 (17%)	21 (11%)	16 (13%)
	2-4	58 (53%)	12(52%)	109 (60%)	70 (55%)
	5-7	31 (23%)	4 (17%)	41(22%)	32 (25%)
	≥8	2 (1%)	3 (13%)	11 (6%)	8 (6%)
Distance to nearest health facility	<5 km	95 (70%)	7(30%)	61 (33%)	50 (39%)
	> 5 km	38 (28%)	16(69%)	121 (66%)	76 (60%)
Expected cost of HF delivery	0-10 Dalasi	12 (9%)	0 (0%)	9 (5%)	8 (6%)
	11-50 Dalasi	33 (24%)	6 (26%)	53 (29%)	32 (25%)
	51-100 Dalasi	25 (18%)	0 (0%)	38 (21%)	24 (19%)
	101-300 Dalasi	29 (21%)	6 (26%)	51 (28%)	34 (17%)
	301-600 Dalasi	27 (20%)	8 (35%)	23 (13%)	20 (16%)
	> 600 Dalasi	10 (7%)	3 (13%)	8 (4%)	8 (6%)
Affordability	Difficult to afford	48 (35%)	20(90%)	73 (40%)	50 (40%)
	Affordable	88 (65%)	2 (9%)	105 (58%)	74 (59%)
Reasonability	Expensive	62 (46%)	19(86%)	94 (52%)	67 (53%)
	Reasonable	73 (54%)	3 (14%)	84 (46%)	57 (45%)
Preferred place of delivery	At home	28 (21%)	3 (13%)	58 (32%)	126 (100%)
	The health facility	108 (79%)	20(87%)	126 (69%)	

QUESTIONNAIRE

USER COSTS OF MATERNITY SERVICES IN RURAL GAMBIA

QUESTIONNAIRE IDENTIFICATION NUMBER |_|_|_|_|

INTERVIEWER:

VILLAGE:

DATE INTERVIEW: /___/___/___/

Introduction: ‘My name is.....and I am a researcher in a study done through the University of Oslo. We are interviewing women that have given birth in 2007 about the costs attached to giving birth in this area and to what extent this influenced your decision on where to deliver. It is essential that everybody who needs and wants to deliver in a health facility have the opportunity to do so. It is therefore important to investigate if the costs of using the health facilities act as a barrier for women in this area. You are eligible to participate in this study and I want to ask if you wish and have the opportunity to participate’

Read the form for informed consent aloud.

Agreed to participate: Yes No Reason for refusal (if given):.....

If the participant agrees to participate, decide together a time to meet that is convenient for her. As there will be questions regarding household finances she should bring her husband and/or head of the household to help answer these questions.

Find a private place so that you can speak without being disturbed.

In case you need to make a new appointment: Date ___/___/___/, Time ___ o'clock

BACKGROUND INFORMATION

1. How old were you at your last birthday? /_____/ years

2 a) Are you a national Gambian? No (0) Yes (1)

b) If no, how long have you lived in the Gambia? /_____/ years

3 a) Are you married? No (0) Yes (1)

b) If yes, how many wives does your husband have in total? /_____/ wives

4. What is your level of education?

- No education (0) Primary –partly (1) Primary – completed (2)
 Secondary- partly (3) Secondary – completed (4) Post-secondary (5)
 Coranic (6)

5. What is the level of education of the head of household?

- No education (0) Primary –partly (1) Primary – completed (2)
 Secondary- partly (3) Secondary – completed (4) Post-secondary (5)
 Coranic (6)

6 a) What is your regular work/employment?

- Unemployed (0) Wage employee, by govt (1) Wage employee, private (2)
 Farmer/farmers wife (3) Self-employed (4) Employer (5)
 Petty trader (6) Housewife (7) Other, please specify (8):

If housewife or unemployed – go to question 7

b) How many days a week do you spend on this work? /_____/ days

c) How many hours a day do you spend on this work? /_____/ hours

d) If you earned wages or had income in the last month, how much did you earn on this work last month? /_____/ Dalasi

e) Is this what you normally earn in a month? No (0) Yes (1)

f) If no, how much do you usually earn on an average month? /_____/ Dalasi

HOUSEHOLD CHARACTERISTICS

7. How many people in total live together in this household? /_____/ people

8. How many children 15 years or below live in this household? /_____/ children

9. How many in the household have income generating work?
(Providing cash income on a regular basis) /_____/ people

10 a) What were the total wages available for the household last month?

(All household members included) /_____/ Dalasi

b) Is this the same amount that is normally available for the household in a month?

No (0) Yes (1)

c) If no, how much is usually available in an average month? /_____/Dalasi

11 a) Do you have a land that you cultivate? No (0) Yes (1)

If no, go to question 15 _____

b) What size is the land? /_____/ acres

12. What is your main crop?

Peanuts (1) Maize (2) millet (3) rice (4)

Sorghum (5) other, please specify (6) :.....

13 a) What is the main staple food in the household?

Peanuts (1) Maize (2) millet (3) rice (4)

Sorghum (5) other, please specify (6):.....

b) Do you have to buy it in the market?

No (0) yes (1) sometimes (2)

14 a) Which crops do you sell on the market?

None (0) Peanuts (1) Maize (2) millet (3) rice (4)

Sorghum (5) other, please specify (6):.....

b) How often do you sell it on the market?

Never (0) Once a year (1) 2-3 times in a year (2)

Every second month (3) Monthly (4) 2-3 times in a month (5)

Weekly (6) 2-3 days in a week (7) Daily (8)

c) How much did you earn from selling crops last month? /_____/ Dalasi

d) What is the average income from selling crops in a year? /_____/ Dalasi

.....

15. How many domestic animals do the household own?

(Write the number in the brackets)

a) Horses /____/

b) Donkeys /____/

c) Cattle /____/

d) Pigs /____/

e) Goats /____/

f) Sheep /____/

g) Chicken /____/

h) Other, please specify:.....

16. How much income did the household get from selling animals last year?

/_____/ Dalasi

17 a) How often do you eat meat or fish?

- Hardly ever (0) 1-3 times in a month (1) once a week(2) 2-3 times a week(3)
 almost every day (4)

b) Do you buy it in the market? No yes

18 a) Are there any members of this household who does not live here (or any other persons) who send money to the household? No (0) Yes (1)

b) If yes, estimated amounts last year? /_____/ Dalasi

19 a) Did the household have any other sources of income last year?

- None (0) State pension (1) Social security payment (2) Inheritance (3)
 Sale of land (4) Other income, please specify (5):.....

b) If yes, estimated amounts last year? /_____/ Dalasi

20 a) How much did the household spend on the following items last month?

	Name	Dalasi
a	Groceries (including food, toiletries and household essentials)	
b	Clothing	
c	Cars, motorbikes (incl. petrol)	
d	Electricity	
e	Health care (dispensary, hospital, drugs, medical supplies)	
f	Transport by bus/taxi	
g	House rent	

b) Would you say the estimates for last month arethan an average month?

- The same (0) Lower (1) Higher (2)

c) How much did the household spend on education (uniforms, school fee, books) last year? Amount in Dalasi /_____/

21. If you received 1000 Dalasi extra this month, what would you spend it on?

(Unprompted question, range the appropriate answer(s) from 1-2, 3)

- ___ Food (1)
 ___ Clothing (2)
 ___ Health care (dispensary, hospital, drugs, medical supplies) (3)
 ___ Education (school fees, uniforms) (4)
 ___ Electricity (5)
 ___ Ceremonies (wedding, burial, circumcisions, tabaski, eid) (7)
 ___ House rental/maintenance (8)
 ___ Transport by bus/taxi (10)

____ Other:.....(11)

22 a) Did your household slaughter a goat for the last Tabaski? No yes

b) Did you buy new clothes for the last Tabaski? No (0) Yes (1)

23. How do you consider your household income in relation to the other households in the village?

Lower (1) normal – as the others (2) Higher (3)

INFORMATION RELATED TO THE DELIVERY

24. When was your last delivery?

January (1) February (2) March (3) April (4) May (5)
 June(6) July(7)

25. Where did you give birth?

At home (1) Family/relative house (2) TBA's house (3)
 Dispensary (4) Public health centre (5) Public hospital (6)
 Private health centre (7) Private hospital (8) NGO facility (10)
 Other, please specify (11).....

26. What type of delivery was it?

Normal, vaginal delivery without complications (1)
 Breech delivery/ bottom first (2)
 Obstructed labour/ difficult getting the baby out (3)
 Forceps or vacuum extraction or episiotomy (4)
 C-section (5)
 Complications, please specify (6)_____

27 a) Did you receive antenatal care during the pregnancy? No (0) Yes (1)

b) If yes, how many times? / ____ / times

28. Did you live in the same area now as when you had your last delivery?

No (0) Yes (1)

29 a) Would you say that you have the same financial situation now as when you had your last delivery?

No, the situation is better (1) No, the situation is worse (2) Yes, the same (0)

30. How many children do you have? Number of children: / ____ /

31 a) Have you ever lost a child /children during birth or within one week of birth?

No (0) Yes (1)

If no, move to part A or B _____

b) If yes, how many years ago was this? / ____ / years

c) Did you live in the same area as now? No(0) Yes (1)

d) Would you say that you have the same financial situation now as back then?

No, the situation is better (1) No, the situation is worse (2) Yes, the same (0)

e) Did you deliver in a health facility with maternity services?

No (0) Yes (1)

→ If the delivery took place in a health centre or a hospital, go to Part A.
(Question 32- 50)

→ If the delivery took place outside a health centre or hospital, go to Part B
(question 51- 60)

Part A

32. Why did you choose to deliver in a health facility?

(Unprompted question, range the appropriate answer(s) from 1-2, 3)

- ___ Complications during the pregnancy (1)
- ___ Complications during labour (2)
- ___ History of complicated deliveries (3)
- ___ The health facility is close to home (4)
- ___ It is safer to deliver in a health facility (5)
- ___ Were close to the health facility when the labour started (6)
- ___ Advised to go by the ANC nurse (7)
- ___ Advised to go by the TBA (8)
- ___ Advised to go by husband or other family members (10)
- ___ Other, please specify.....(11)

33. How far is it to the health facility where you delivered? / ____ / km

34. What kind of transportation did you use to reach the health facility?

- By foot (1) By bus (2) Own car (3) Borrowed car (4) Taxi (5)
- Donkey/horse cart (6) Ambulance (7) Other, please specify(8):.....

35. Did you have to go to more than one health facility before you delivered?

- No (0) Yes, the first one was closed (1) Yes, the first one did not have staff (2)
- Yes, I was referred due to complications (3)

36. How long time did it take you to reach the health facility?

/ ____ / hour and / ____ / minutes

37. How much did you pay for transportation to the health facility (incl. accompanying person(s))? (If more than one health facility, calculate the total cost) /_____/ Dalasi

38. How much did you pay for transportation back from the health facility (incl. accompanying person(s))? /_____/ Dalasi

39 a) How many people accompanied you to the health facility? /_____/

b) Who were they?

- Husband (same as head of household) (1)
- Husband (not same as head of household) (2)
- Head of household (other than husband) (3)
- Siblings (4)
- Parent (5)
- Co-wives (6)
- Mother/father in law (7)
- Other, please specify:.....(8)

40. How long time did you spend in the health facility? /_____/ days

41 How much was the official fee you paid for the delivery? /_____/ Dalasi

42. Did you have to pay additionally for any of these following items?

	<u>Price in Dalasi</u>	
(a) <input type="checkbox"/> Dressings and bandages	/____/	
(b) <input type="checkbox"/> Needles and syringes	/____/	
(c) <input type="checkbox"/> Medicines	/____/	
(d) <input type="checkbox"/> Food and drinks (For both woman and accompanying persons)	/____/	
(e) <input type="checkbox"/> Blood transfusions	/____/	
(f) <input type="checkbox"/> Other medical material (Sutures, IV sets etc)	/____/	
(g) <input type="checkbox"/> Other, please specify:.....	/____/	Total /____/

43 a) Where you asked by the staff to pay any additional fee? No (0) Yes (1)

If no, go to question 44

b) If yes, did you pay? No (0) Yes (1)

c) If yes, why did you pay the fee? (Unprompted, tick the appropriate answer(s))

- I was told that I had to pay (1)
- I was told that I/my wife would receive some benefits (2)
- They refused to care for me/my wife if I didn't pay (3)
- They didn't tell me why I had to pay (4)
- Other, please specify:.....(5)

d) Did you pay to more than one person? No (0) Yes (1)

e) What was the total sum of this extra fee? /_____/ Dalasi

44. Before the delivery, how much did you anticipate that the costs related to the delivery would be? (In total including transport, food etc)? /_____/Dalasi

45 a) To gather the money to pay for the costs of the delivery, did the household ...?

1	Reduce expenditure and consumption in anticipation of the costs	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
2	Sell farm produce	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
3	Sell farm animals (if yes, ask b)	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
4	Sell other assets (if yes, ask c)	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
5	Borrow money from friends and relatives (if yes, ask d)	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
6	Borrow money from money lenders (if yes, ask d)	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
7	Take on extra work	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
8	Use available cash and savings	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
9	Use gifts and handouts	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
10	Other, please specify:	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)

If answer yes to 3-6, ask the appropriate follow up question:

b) Have you been able to buy back the animals that you had to sell? No (0) Yes (1)

c) Have you been able to buy back the items that you had to sell? No (0) Yes (1)

d) Have you been able to repay the money you borrowed? No (0) Yes (1)

46. Did the amount used to pay for the delivery have a negative impact on the household's ability to get by on a day-to-day basis?

Not at all (0)

To some degree (1)

Yes, it has (2)

47. Would you say that the costs related to delivering in a health facility is for the household

Almost impossible to handle (1) Hardly affordable (2)

Affordable (3)

Quite affordable (4)

Not a problem (5)

48. Would you say that the costs related to delivering in a health facility in general is....

Really too expensive (1) Little expensive (2)

reasonable (3)

very reasonable (4)

inexpensive (5)

49. How much would you be willing to pay for a delivery in an optimal setting (e.g. optimal quality, staff, short distance from home)? /_____/ Dalasi

50. Where do you wish to give birth if you get pregnant again?

At home (1)

Family/relative house (2)

TBA's house (3)

Public health centre (4)

Public hospital (5)

Private health centre (6)

Private hospital (7)

NGO facility (8)

Other, please specify :.....(10)

Part B

51. Why did you choose to not use a health facility for your last delivery?

(Unprompted question, range the appropriate answer(s) from 1-2, 3)

- ___ Always delivered at home without problems (1)
- ___ Had no complications during the pregnancy (2)
- ___ Don't like/trust the health facilities (3)
- ___ Advised to deliver 'at home' by husband or other family members (4)
- ___ Advised to deliver 'at home' by the TBA (5)
- ___ Too costly to deliver in a health facility (6)
- ___ I didn't have the money to pay the health facility (7)
- ___ Too far to reach a health facility (8)
- ___ There was no transportation available (10)
- ___ Didn't have a ANC card (11)
- ___ There was no time to reach the health facility (12)
- ___ Other, please specify:.....(13)

52. How much did you pay for the things listed below (related to the delivery)?

Price in Dalasi

- a) Fee to the TBA /___/
- b) Gift of appreciation to the TBA and/or other helpers /___/
- c) Purchase of medicines /___/
- d) Purchase of medical materials /___/
- e) Other, please specify:..... /___/

53. How far is it to the nearest health facility with maternity services? /___/ km

54. If you had delivered in a health facility, how much money do you think you would have had to spend? /___/ Dalasi

55. If you would have to deliver in a health facility; would the household have to to pay for the delivery?

a	Reduce expenditure and consumption in anticipation of the costs	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
b	Sell farm produce	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
c	Sell farm animals	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
d	Sell other assets	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
e	Borrow money from friends and relatives	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
f	Borrow money from money lenders	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
g	Take on extra work	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
h	Use available cash and savings	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
i	Use gifts and handouts	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
j	You would not be able to gather the money	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)
k	Other, please specify	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)

57. Would you say that the costs related to delivering in a health facility would be for you

- Almost impossible to handle (1) Hardly affordable (2) Affordable (3)
 Quite affordable (4) Not a problem (5)

58. Would you say that the costs related to delivering in a health facility in general is....

- Really too expensive (1) Little expensive (2) reasonable (3)
 very reasonable (4) inexpensive (5)

59. How much would you be willing to pay for a delivery in an optimal setting (e.g. optimal quality, staff, short distance from home)? /_____/ Dalasi

60. Where do you want to deliver if you get pregnant again?

- At home (1) Family/relative house (2) TBA's house (3)
 Dispensary (4) Public health centre (5) Public hospital (6)
 Private health centre (7) Private hospital (8) NGO facility (10)
 Other, please specify (11) _____

Thank you very much for your time!